ADEM

ALABAMA
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July 2, 1993

Patrick Tobin, Acting Regional Administrator
Region IV, U.S. Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, GA 30365

Dear Mr. Tobin:

I request that, in accordance with Section 4005(c) of Subtitle D of the Resource Conservation and Recovery Act, you review our permit program to determine whether it is adequate to ensure compliance with the 40 CFR Part 258 standards pertaining to municipal solid waste landfills. To facilitate your review, I have enclosed our application. I believe you will find this application demonstrates that the State of Alabama has a permitting program that is adequate. The Alabama Department of Environmental Management has been designated lead agency for this program.

Should you require further information concerning the application, please contact Mrs. Sue R. Robertson at (205) 271-7730. Thank you for your assistance.

Sincerely,

Leigh Pegues
Director

LP:SRR:mah:LR235

AL-001

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PROGRAM APPLICATION COMPLETENESS CHECKLIST

1. _X_ **TRANSMITTAL LETTER (with signature)**

   _X_ Designation of Lead Agency (the Alabama Department of Environmental Management)

2. _X_ **NARRATIVE DESCRIPTION**

   _X_ Jurisdiction and Responsibilities of State/Tribal Implementing Agencies

   _X_ Number of Landfills

   _X_ Staff Resources for MSWLF Permit Program Implementation

   _X_ Permitting Procedures

   _X_ Demonstration of Compliance with Part 258 Criteria

Subpart A - General

_X_ §258.1 Purpose, Scope, and Applicability

_X_ §258.2 Definitions

_X_ §258.3 Consideration of Other Federal Laws

Subpart B - Location Restrictions

_X_ §258.10 Airport Safety

_X_ §258.11 Floodplains

_X_ §258.12 Wetlands

_X_ §258.13 Fault Areas

_X_ §258.14 Seismic Impact Zones

_X_ §258.15 Unstable Areas

_X_ §258.16 Closure of Existing MSWLF Units

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Subpart C - Operating Criteria

X	§258.20	Procedures for Excluding the Receipt of Hazardous Waste
X	§258.21	Cover Material Requirements
X	§258.22	Disease Vector Control
X	§258.23	Explosive Gas Control
X	§258.24	Air Criteria
X	§258.25	Access Requirements
X	§258.26	Run-on/Run-off Control Systems
X	§258.27	Surface Water Requirements
X	§258.28	Liquids Restrictions
X	§258.29	Recordkeeping Requirements

Subpart D - Design Criteria

X	§258.40	Design Criteria

Subpart E - Groundwater Monitoring and Corrective Action

X	§258.50	Applicability
X	§258.51	Groundwater Monitoring Systems
X	§258.53	Groundwater Sampling and Analysis Requirements
X	§258.54	Detection Monitoring Program
X	§258.55	Assessment Monitoring Program
X	§258.56	Assessment of Corrective Measures
X	§258.57	Selection of Remedy
X	§258.58	Implementation of the Corrective Action Program

Subpart F - Closure and Post-Closure Care

__X__ §258.60 Closure Criteria

__X__ §258.61 Post-Closure Care Requirements

Subpart G - Financial Assurance Criteria - Not Included; State Requires Statutory Authority

__X__ Compliance Monitoring

__X__ Enforcement Authority

__X__ Intervention Authority

3. __X__ **LEGAL CERTIFICATION LETTER (with signature)**

__X__ Legal Authority

_____ Guidance (if applicable)

4. __X__ **COPIES OF ALL STATE/TRIBAL STATUTES, REGULATIONS, AND GUIDANCE CITED IN THE APPLICATION**

5. _____ **COPIES OF STATE/TRIBAL AGREEMENTS (IF INCLUDED IN APPLICATION)**

ALABAMA'S PROGRAM DESCRIPTION

I. INTRODUCTION

Prior to the Solid Waste Disposal Act of 1969, the Alabama Department of Public Health (ADPH) responded to open dumps on a complaint basis. Normally these complaints involved vector problems or public nuisances. For many years, this task was accomplished by two, or at times, less employees of the ADPH. On September 12, 1969, the Solid Waste Disposal Act was passed with an effective date of September 12, 1971. A statewide survey performed by ADPH personnel revealed approximately 412 open burning dumps handling all types of wastes. By September 1971, 30-40% of these burning dumps had been abolished. The remaining were issued Notices of Violations (NOV) and required to obtain a letter of approval to operate from the ADPH. The remaining approved dumps were required to operate in compliance with the 1969 Solid Waste Disposal Act. In 1980, formal permits to operate were issued to landfills by the ADPH. The Solid Waste staff at that time included approximately six employees. In 1982, a comprehensive program of environmental management for the State was established with the enactment by the Alabama Legislature of the Alabama Environmental Management Act. The law created the Alabama Environmental Management Commission and established the Alabama Department of Environmental Management (ADEM), which absorbed several commissions, agencies and programs that had been responsible for implementing environmental laws. Disposal of solid waste was transferred from the ADPH to ADEM. Collection, storage and transportation remained with the ADPH. ADEM regulations were adopted and the Solid Waste Disposal Act has been amended on several occasions. ADEM has permitted sanitary, inert, and industrial landfills from 1982 until present. The Division 13 Solid Waste Regulations have also been revised on numerous occasions. ADEM currently has authority over disposal and incineration of solid waste only. However, current pending legislation, if passed, would expand ADEM's authority to management of solid waste and include disposal, treatment, composting, recycling, transfer stations, etc. Collection and transportation would remain with the ADPH. Regulation and statutes are currently being revised to meet the minimum Subtitle D requirements which become effective October 9, 1993. Copies of the statutes, proposed regulations, and checklists are found in Attachments F. and G.

Act 89-824 (passed in May 1989) required each county and/or municipality to submit to ADEM a plan for the management of solid waste generated within its boundaries. The plans at a minimum were required to include the following:

(1) Describe and explain the general origin, and weight or volume of solid waste currently generated within the jurisdiction's boundaries.

(2) Identify current methods of collection and haulage of solid waste within the jurisdiction.

(3) Identify and describe the facilities where solid waste is currently being disposed or processed and the remaining available permitted capacity of such facilities and the capacity of such facilities and the capacity which could be made available through the reasonable expansion of such facilities.

(4) Provide a description of current or planned recycling programs and an analysis of their impact on waste generated within the jurisdiction.

(5) Address the requirements proposed under Subtitle D of the Federal Resource Conservation and Recovery Act, 42 U.S.C. Section 6941 as amended and identify and explain those actions the jurisdictions should take to assure proper management of its wastes under these requirements; thus, counties are required to address and take into consideration Subtitle D while developing their 10 year solid waste management plans.

(6) Propose procedures for the identification and elimination of unauthorized dumps in the jurisdiction.

(7) Describe and explain the general origin and weight or volume of solid waste reasonably expected to be generated within the jurisdiction annually during the next ten years.

(8) Provide for the development or expansion of solid waste management systems in a manner that is consistent with the needs of the area; taking into account planning, zoning, population and development estimates, and economics of the jurisdiction and the protection of air, water, landfill and other natural resources.

(9) Identify any current agreements between the jurisdiction and other units of local government or public authorities for the joint use of solid waste processing or disposal facilities and evaluate the need for and feasibility of entering into such agreements in the future.

(10) Identify any current contractual agreements with private entities for the collection, processing or disposal of solid waste and evaluate the need for and feasibility of entering into such agreements in the future.

(11) Identify the general location within a county where solid waste processing or disposal facilities and recycling programs may be located, and identify the site of each facility if a site has already been chosen.

(12) For any facility expected to serve the jurisdiction's future needs that is located or is proposed to be located outside the jurisdiction, the plan shall explain in detail the reasons for selecting such a facility.

(13) The plan shall include such other information as ADEM may require by regulation.

II. JURISDICTION AND RESPONSIBILITIES

The Alabama Department of Environmental Management as established by §§22-22A-1, et. seq., Code of Alabama 1975, is the sole agency responsible for the disposal of solid waste, except within the boundaries of the designated tribal land of the Poarch Band of Creek Indians in Escambia County. The Alabama Department of Public Health has sole authority over the collection, storage, and transportation of solid waste; however, ADPH and ADEM share a role in regulating and abating illegal or unauthorized disposal areas.

ADEM is centrally located in Montgomery with field offices strategically stationed in Decatur, Birmingham, and Mobile. Thus, the core functions of Alabama's solid waste program lie within the central office, with support functions available from the field offices.

The Land Division of ADEM is responsible for the Solid Waste program which is placed within the Solid Waste Branch. The Solid Waste Branch's functions include the regulation of medical wastes and promotion of recycling activities as well as the compliance and enforcement activities for landfills. The Engineering Services Branch provides support for the permitting of landfills. The Hydrogeology support is provided by the Groundwater Branch of the Water Division. Legal support is provided by the Office of General Counsel. Organization charts illustrating ADEM's and the Land Division's organization are provided in Attachment A.

Responsibilities for the Solid Waste Program are defined below:

(a) **Land Division Chief** - responsible for all permitting and compliance activities/decisions. Makes final recommendations to the Director concerning permits and compliance issues. Further responsible for new legislation and regulation revisions. Directly supervises Branch Chiefs.

(b) **Solid Waste Branch Chief** - responsible for coordination between the Solid Waste Branch, Engineering Services Branch, Field Operations and Groundwater Branch. Oversees compliance inspections, Special Waste Unit and advises Land Division Chief concerning compliance issues, new legislation and regulations revisions. Supervises Compliance Section Chief and Solid Waste Branch Staff.

(c) **Compliance Section Chief** - Mostly responsible for supervising field inspectors. Also supervises Special Waste Unit Chief. Advises Solid Waste Branch Chief concerning compliance issues and trains compliance staff.

(d) **Special Waste Unit Chief** - Coordinates and supervises the Special Waste Unit. Responsible for approving non-hazardous industrial waste for disposal and implementing the Medical Waste Program. Medical Waste Program includes both compliance and permitting issues. Inspectors in this unit are trained to perform landfill inspections.

(e) **Field Operations Division** - Provides field support for sampling monitoring wells, sedimentation ponds, leachate ponds, etc. at existing and proposed landfills.

(f) **Office of General Counsel** - Provides legal interpretations of existing statutes, serves as hearing officers during ADEM public hearings and defends the Solid Waste Branch in case of legal suits. Also advises on legal issues concerning new legislation and regulations.

(g) **Engineering Services Branch** - Implements the permitting programs for landfills. Gives technical guidance concerning compliance matters, performs on-site reviews to observe construction and operation of landfills, and coordinates with Solid Waste personnel. Also advises Land Division Chief concerning permitting decisions.

(h) **Hydrogeology Unit** - Provide reports and recommendations to the Solid Waste Branch and Engineering Services Branch concerning the geology and hydrogeology of existing and proposed landfills.

III. NUMBER OF MSWLFS

There are currently 95 MSWLFs (sanitary) permitted to receive household solid waste. Projections show that 75-85 of these MSWLFs will close or cease accepting household municipal solid waste by October 9, 1993. Three existing MSWLF's may meet the Subtitle D design criteria at this time. Three new regional MSWLFs have been permitted and should also meet Subtitle D. In 1969, 412 open burning dumps were inventoried. It is not clear if they all were accepting municipal solid waste.

IV. STAFF RESOURCES FOR MSWLF PERMIT PROGRAM IMPLEMENTATION

There is a total of 26 solid waste work years devoted to the entire solid waste program. This includes legal, clerical and field support. The following illustrates the core personnel that support the permitting, compliance, and enforcement aspects of Alabama's solid waste program.

LAND DIVISION CHIEF
SUE R. ROBERTSON, B.S.ChE., M.S.ChE., P.E.

	Work Years
Solid Waste Branch	
Chief, Russell A. Kelly, B.S.C.E., P.E.	1.0
Solid Waste Compliance Section	
Chief, John Narramore, M.P.A.	6.0
Walter Nichols, M.P.A. (Recycling and Compliance Field Inspector)	
Allen Shehane, B.S. (Compliance Field Inspector)	
Archie Pennington, B.S. (Compliance Field Inspector)	
Andy Baker, B.S. (Compliance Field Inspector)	
Jeannie Birks, B.S. (Compliance Field Inspector)	
Special Waste Unit	
Chief, Lindsay Mothershed, B.S.	3.5
Ben Norman, B.S. (Petroleum Contaminated Waste)	
Yvette Williamson, B.S. (Special Handling Waste)	
Bruce Garrett, B.S. (Medical Waste)	
Engineering Services Branch	
Chief, Wm. Gerald Hardy, B.S.ChE., P.E.	5.3
Glen Smith, B.S.C.E., P.E.	
Rao Malladi, B.S.C.E., M.S.C.E.	
Bill Wood, B.S.E.	
Gary Hawkins, B.S.A.E.	
Scott Hutchinson, B.S.C.E., E.I.T.	
Hydrogeology Unit (Water Division's Groundwater Branch)	2.25
Chief, Fred C. Mason, B.S., Geology	
Enid Bittner, Ph.D., Geology	
Joel Payton, B.S., Geology	
Dale Case, B.S., Geology	
Ron Hicks, B.S., Geology	
David Lavoy, B.S., Geology	
Dennis Hallman, B.S., Geology	
Kathy Keller, B.S., Geology	

Additionally, the following two persons perform solid waste inspections but work from the Birmingham Field Office:

	Work Years
Brian Laney, B.S.	2.0
Mike Griffin, B.S.	

V. PERMITTING PROCEDURES

ADEM's solid waste disposal facility (landfill) permitting program was initiated with ADEM's formation in 1982. Prior to that date, solid waste disposal facilities had been regulated by the Alabama Department of Public Health. The landfill permitting program established that the effective life of a permit was not to exceed five years. Thus, most existing landfill permits were reissued in 1987 that would be effective until 1992.

In 1988, ADEM revised its solid waste regulations to incorporate many of the provisions of the proposed Subtitle D regulations at that time. These revisions included siting standards, the requirement for a single liner and leachate collection system, groundwater monitoring provisions, closure/post-closure, etc. Therefore, new landfills for MSW after 1988, were required to comply with these requirements.

As previously discussed, in May of 1989, the Alabama Legislature passed a law erecting a two year moratorium on the siting of any new solid waste management facilities. During this two year moratorium, ADEM was required to develop a comprehensive statewide solid waste management plan that was to address the solid waste management needs of all counties for a ten year period.

Upon promulgation of the Subtitle D regulations on October 9, 1991, ADEM Land Division was faced with the necessity of educating the regulated community on the new requirements. To educate the regulated community, ADEM held two one-day seminars beginning in November 1991 on the requirements of "Subtitle D". This included permitting procedures for new, expired and expiring landfill permits (see Attachment B.). Also, a form letter was developed (see Attachment C.) to be sent to all existing permitted MSW landfills requesting a permit renewal. This letter outlined the basic requirements and time frames for submitting revised permit applications and/or closure plans.

In August 1992, after learning that EPA would allow vertical expansions of existing MSW landfills, ADEM mailed a form letter (see Attachment C.) to all existing permitted MSW landfills. This letter outlined the procedures for requesting a vertical expansion. The letter also stated the requirements to be met in order to be a candidate for vertical expansion and explained the liabilities to be incurred by disposing of MSW on an existing landfill after October 8, 1993.

The statewide elections held in November 1992 resulted in many new officials being elected to office at the local, city, and county level. In an effort to educate these "new" officials and others, ADEM again held a series of seminars on solid waste management issues (see Attachment B.). These one-day seminars included a discussion of the status of Subtitle D as well as a discussion of the solid waste permitting procedures.

The solid waste permitting procedures developed by ADEM's Land Division in 1991 are included in Attachment D. These procedures include each step in the process and a conservative time estimate for the completion of each step.

VI. COMPLIANCE MONITORING REQUIREMENTS

Overall statutory authority for the regulations is shown in Rule 335-13-1-.02, pursuant to the Code of Alabama 1975, §§ 22-27-7, 22-22A-5, and 22-22A-8. Compliance monitoring is conducted in accordance with standards set forth in Division 13 regulations pursuant to the Solid Waste Disposal Act of 1969. Rule 335-13-6-.01 of the ADEM Administrative Code, Division 13, provides for the unannounced periodic inspections of all solid waste facilities as well as right-of-entry. Additionally, Rule 335-13-4-.12 requires that design plans, operational reports for construction, maintenance, operation, and closure be prepared in accordance with Rule 335-13-5-.02. This information is part of a permit application and is on record with the permit file. Other records required are groundwater monitoring reports, 335-13-4(4); explosive gas monitoring reports, 335-13-4-.16(6)(b); and records of average daily volume, 335-13-4-.22(18). Additionally, industrial wastes disposed of at permitted landfills must be certified non-hazardous. These records are kept on file; renewal is annually. Rule 335-13-4-.26 describes procedures for the management and disposal of special wastes, including industrial wastes.

An inspection will include checking for compliance with the operational and management requirements under Rules 335-13-4-.14, 335-13-4-.16, 335-13-4-.19, 335-13-4-.21, 335-13-4-.22, 335-13-5-.02, and 335-13-5-.05. A copy of the checklist is shown in Attachment E. The filed inspection, combined with file reviews, insures that compliance monitoring is adequate in determining obedience with program requirements. Under current regulations, monitoring for explosive gas is done annually unless otherwise required. Results must be submitted to the ADEM for evaluation. Under current regulations, groundwater monitoring is performed bi-annually; however, the regulations will be modified to be consistent with Subtitle "D". Monitoring parameters are specified in the permit, and proposed Rules 335-13-4-.14 and 335-13-4-.27. Also, additional testing and sampling may be done if review of submitted data or field conditions reveal the need. These activities are usually coordinated with the ADEM Field Operations Division in order to insure that proper techniques are used and the chain of custody is maintained.

Enforcement Authority

Proposed Federal Section 239.8(a) & (b)

Section 22-22A-5(10), Code of Alabama 1975 authorizes the Alabama Department of Environmental Management (ADEM) to "issue, modify, suspend or revoke orders, citations, notices of violation, licenses,

certifications or permits". Orders issued under authority of this subpart (i.e., orders without civil penalities) may be issued immediately without a prior hearing. Section 22-22A-5(12) authorizes ADEM "to enforce all provisions of law identified in subdivision (1) of this section [which include Article 1 of the Solid Wastes Disposal Act], and to file legal actions in the name of the department. . . ." (Bracketed material added).

Section 22-27-2(6), Code of Alabama 1975 defines an unauthorized dump as "any solid waste disposal site which does not meet the regulatory provisions of the [Solid Wastes Disposal Act]". Section 22-27-4(b) declares unauthorized dumps to be a public nuisance per se and a menace to public health that may be enjoined through an action by ADEM in circuit court. Section 22-22A-5(19) also authorizes ADEM to commence a civil action to enjoin the violation or threatened violation of any provision of law, any rule, regulation or standard promulgated by ADEM, any provision of any order, or any condition of any permit, license, certification or variance issued by ADEM.

Next, section 22-27-7 grants ADEM such regulatory control over the management of solid wastes as may be necessary to enforce the requirements of ADEM, and it authorizes ADEM to adopt such rules regulations as may be needed to meet the requirements of the article.

Proposed Federal Section 239.8(c)

Section 22-22A-5(18)(a) authorizes ADEM to issue an administrative order assessing civil penalties (up to $25,000.00 per violation) for a violation of any provision of law, any rule, regulation or standard promulgated by ADEM, any provision of any order, or any condition of any permit, license, certification or variance issued by ADEM. Additionally, section 22-22A-5(18)(b) authorizes ADEM to commence a civil action to recover a civil penalty for the violation of any provision of law, any rule, regulation or standard promulgated by ADEM, any provision of any order, or any condition of any permit, license, certification or variance issued by ADEM. Finally, section 22-22A-5(20) authorizes ADEM to take any action necessary for the implementation and enforcement of this Chapter.

Intervention in Civil Enforcement Proceedings

Section 22-22A-5(18)(b), which authorizes ADEM to commence a civil action to recover civil penalties for any statutory or regulatory violation or the violation of any permit, order, license, certificate, standard or variance, allows any person having an interest which is or may be adversely affected to intervene in the civil action as a matter or right. Section 22-22A-5(17), which authorizes ADEM to commence a civil action to enjoin any of the aforesaid violations, allows any person having an interest which is or may be adversely affected to intervene as a matter of right.

Section 22-22A-7(c) entitles any person aggrieved by an administrative action (i.e., the issuance, denial, modification, or revocation of a Notice of Violation, order, permit citation, licenses, certification, or variance) to an administrative hearing before the Environmental Management Commission.

Finally, Rule 24(a) of the Alabama Rules of Civil Procedure is virtually identical to Rule 24(a), F.R.C.P.

VII. DEMONSTRATION OF COMPLIANCE WITH PART 258

Subpart A - General

Section 258.1 Purpose, Scope, and Applicability

The purpose of this subpart is to establish minimum national criteria under the Resource Conservation and Recovery Act (RCRA or the Act), as amended, for all municipal solid waste landfill (MSWLF) units and under the Clear Water Act, as amended, for municipal solid waste landfills that are used to dispose of sewage sludge. These minimum national criteria ensure the protection of human health and the environment.

ADEM Administrative Code Rule, 335-13-1-.01 Purpose. states "The purpose of this Division is to establish minimum criteria for use under the Act, as amended, for the processing, recycling and disposal of solid waste and the design, location and operation of solid waste disposal facilities". ADEM Administrative Code, Rule 335-13-1-.02 Statutory Authority. states "The Department is authorized to promulgate these rules and regulations under and by virtue of authority granted in the Code of Alabama 1975, §§22-27-7, 22-22A-5 and 22-22A-8".

ADEM current regulations apply to all landfills including municipal solid waste, construction/demolition debris and non-hazardous industrial waste landfills. Subtitle D applies to MSWLF's only. Design criteria, operational criteria, monitoring criteria, etc. are different for the three types of landfills under ADEM regulations; however, they do apply to some degree. Subtitle D allows for some exemptions (i.e., small quantity, annual interruptions, 25 inches or less annual rainfall). These exemptions are not allowed under ADEM regulations. Closure for landfills receiving waste after October 9, 1991, but stop receiving waste before October 9, 1993 are similar under Subtitle D and ADEM regulations. This includes post-closure care and monitoring.

Section 258.2 - Definitions

Definitions under Subtitle D §258.2 are similar to definitions found in current ADEM Administrative Code R. 335-13-1-.03. Any definitions in §258.2 not found under Rule 335-13-1-.03 are currently being added. Major language differences are also being corrected in ADEM's proposed revised regulations in an effort to be consistent with Subtitle D §258.2.

A comparison of the definitions can be found with the attached checklists to the legal certification letter found in Attachment F., and proposed revised regulations located in Attachment G.

Section 258.3 Consideration of Other Laws

Both the Clear Water Act and Clean Air Act must be considered during the permitting and operation of solid waste disposal facilities. Under the Clean Water Act, a facility or practice shall be located so as to protect water quality. The ADEM Administrative Code R. states:

> Rule 335-13-4-.01(3)(b). A facility or practice shall not cause a discharge of pollutants into waters of the State, including wetlands, that is in violation of the requirements of the National Pollutant Discharge Elimination System (NPDES), Alabama Water Pollution Control Act, Code of Alabama 1975, §§22-22-1 to 22-22-14.
>
> Rule 335-13-4-.01(3)(c). A facility or practice shall not cause a discharge of dredged materials or fill material into waters of the State that is in violation of the requirements under Section 404 of the Clean Water Act, as amended.
>
> Rule 335-13-4-.01 (3)(d). A facility or practice shall not cause non-point source pollution of waters of the State, including wetlands, that violates any requirements of an areawide and Statewide water quality management plan that has been approved under the Alabama Water Pollution Control Act.
>
> Rule 335-13-4-.01(4). A facility or practice shall not allow an unpermitted discharge to the waters of the State as defined by the Alabama Water Pollution Control Act.
>
> Also, new stormwater regulations require additional stormwater runoff permits for landfills accepting industrial waste and general permits for construction of sites larger than five acres. A wellhead protection program for the State of Alabama has been approved by EPA. This program encourages and will eventually require that all water systems develop a wellhead protection plan.

Rule 335-13-4-.21(1). Open burning of solid waste at any landfill, sanitary landfill or other disposal facility shall not occur unless approved by ADEM.

The Air Division of ADEM regulates/permits emissions from municipal solid waste incinerators, solid waste air curtain destructions, etc.

Subpart B - Locational Criteria

(1) **§258.10 - Airport Safety**

Rule 335-13-4-.01(5) - prohibits siting any MSWLF unit within 10,000 feet of any airport runway end. The 5000 foot buffer for piston-type aircraft is not allowed under ADEM regulations. The 10,000 foot buffer is required for both turbo-jet and piston-type aircraft.

(2) **§258.10 - Floodplains**

Rule 335-13-4-.01(1) is consistent with §258.10.

(3) **§258.12 - Wetlands**

Existing Rules 335-13-4-.01(3)(e) and (3)(f) prohibit disposal facilities in wetlands. Subtitle D allows for mitigation of wetlands under certain conditions.

(4) **§258.13 - Fault Areas**

Rule 335-13-4-.01(6) - This rule is proposed to be modified to reflect Subtitle D language.

(5) **§258.14 - Seismic Impact Zones**

Rule 335-13-4-.01(6) - This rule is proposed to be modified to reflect Subtitle D language.

(6) **§258.15 - Unstable Areas**

Rule 335-13-4-.01(6) - This rule is proposed to be modified to reflect Subtitle D language.

(7) **§258.16 Closure of Existing Units**

Rule 335-13-4-.20 - Closure is very similar under ADEM and Subtitle D. There are some language differences and ADEM regulations are proposed to be modified to reflect the minimum Subtitle D requirements.

All of the location restrictions under ADEM apply to construction/demolition debris landfills and industrial landfills in addition to municipal solid waste landfills. Subtitle D applies only to MSWLF's. ADEM regulations, where deficient, are being revised to reflect minimum Subtitle D criteria. ADEM regulations are also more stringent in some areas concerning location restrictions (i.e. Rule 335-13-4-.01(4)(a)). The bottom elevation of solid waste liner systems shall be a minimum of five feet above the seasonal high groundwater table or bedrock or as determined by ADEM under Rule 335-13-4-.01(7). Facilities shall not be located in archaeologically or historically sensitive areas as determined by the Alabama Historical Commission.

Subpart C - Operating Criteria

(1) **§258.20 Procedures for Excluding Hazardous Waste**

These requirements are essentially the same as current ADEM regulations; however, they are proposed to be modified to include PCBs. Current ADEM regulations also set forth additional reporting information for permittees receiving waste from outside the State.

(2) **§258.21 Cover Material Requirements**

Rule 335-13-4-.22(1)(a) is consistent with §258.21; however, ADEM is more stringent in not allowing the granting of waivers from the regulations due to seasonal weather conditions since the climate of this State does not exhibit extreme seasonal climatic changes.

(3) **§258.22 Disease Vector Control**

Rule 335-13-4-.22(12)is being modified to be consistent with §258.22.

(4) **§258.23 Explosive Gas Control**

Rule 335-13-4-.16 is being modified to be consistent with §258.23. This Rule is more stringent than Subtitle D in that explosive gas monitoring is extended to C/DLFs and ILFs.

(5) **§258.24 Air Criteria**

Existing Rule 335-13-4-.21(1) is consistent with §258.24(b). Rule 335-13-4-.22(23) is proposed to be added to be consistent with §258.24(a).

(6) **§258.25 Access Requirements**

Existing Rule 335-13-4-.19 is proposed to be modified to be consistent with §258.25.

(7) **§258.26 Run-on/Run-off Control**

Rule 335-13-4-.17 is proposed to be modified to be consistent with §258.26; however, ADEM is more stringent in adding language to include closed portions of the landfill, as well as the active portions.

(8) **§258.27 Surface Water Requirements**

Existing Rule 335-13-4-.01 is consistent with §258.27.

(9) **§258.28 Liquids Restrictions**

Rule 335-13-4-.22(20) is proposed to be added to be consistent with §258.28.

(10) **§258.29 Recordkeeping Requirements**

Rule 335-13-4-.29 is proposed to be added to be consistent with §258.29.

Subpart D - Design Criteria: §258.40

The design criteria for MSWLF's in Alabama will be the same as Subtitle D in the proposed revised regulations. The major areas where Alabama will be more stringent will be in specifying a minimum 5 foot separation between the bottom of the liner system and the top of bedrock and/or the seasonal high groundwater elevation. The other more stringent area is in the requirement for liners. The proposed revised regulations will state that multiple liners, including composite liners, may be required if determined necessary by ADEM.

Subpart E - Groundwater Monitoring

ADEM is being more stringent by establishing the applicability date for groundwater monitoring compliance to be October 9, 1993. Existing regulations have required groundwater monitoring at sanitary (MSWLF) landfills since 1988.

The following Rules are proposed to be added to be consistent with §§258.50-258.58 as follows:

§258.50 Applicability	Rule 335-13-4-.27(1) through (6)
§258.51 Groundwater Monitoring System	Rule 335-13-4-.27(7) through (10)
§258.53 Groundwater Sampling and Analysis	Rule 335-13-4-.27(11) through (19)
§258.54 Detection Monitoring Program	Rule 335-13-4-.27(20) through (22)
§258.55 Assessment Monitoring Program	Rule 335-13-4-.27(23) through (32)
§258.56 Assessment of Corrective Measures	Rule 335-13-4-.27(33) through (36)
§258.57 Selection of Remedy Rule	Rule 335-13-4-.27(37) through (41)
§258.58 Implementation of the Corrective Action Program	Rule 335-13-4-.27(42) through (48)

Subpart F - Closure and Post-Closure Care

ADEM is proposing to modify the existing regulations to be consistent with §258.60 and §258.61 under Rules 335-13-4-.20 and 335-13-4-.29. ADEM is more stringent than Subtitle D in applying closure and post-closure care requirements to all landfills, not just MSWLFs.

ADEM's existing regulations are more explicit and/or stringent than Subtitle D in the following ways:

(1) Rule 335-13-4-.20(3) describes final soil cover grading fully to include slope requirements.

(2) Rule 335-13-4-.20(4) disallows deep rooted vegetation as a form of vegetative cover.

(3) In the proposed regulations, ADEM will not allow an owner or operator to stop managing leachate as set forth under §258.61(a)(2).

(4) In the proposed regulations, ADEM will require detail design drawings for closure of existing and proposed landfill units.

Subpart G - Financial Assurance Criteria

The effective date of the federal regulations under §258.70 is April 9, 1994 (except state and federal sites which are exempt). There are no State sites in Alabama and there are four federal sites presently operating (Anniston Army Depot, Ft. McClellan, Redstone Arsenal and Ft. Rucker). Ft. McClellan is the only federal facility that will remain open after October 9, 1993. All other facilities in Alabama will be subject to Subpart G on April 9, 1994.

At this time, ADEM is reserving Rule 335-13-4-.28 for financial assurance until statutory authority is obtained. All references to financial assurance in ADEM's proposed regulations defer to the federal regulations.

LR#242

LIST OF ATTACHMENTS

A. Organizational Charts

B. Subtitle D Meeting Agenda
Solid Waste Meeting Letter and Agenda

C. Letter on Permit Renewal Requests
Letter on Vertical Expansion

D. ESB Permitting Procedures

E. Inspection Checklist

F. Legal Certification Letter and Checklists

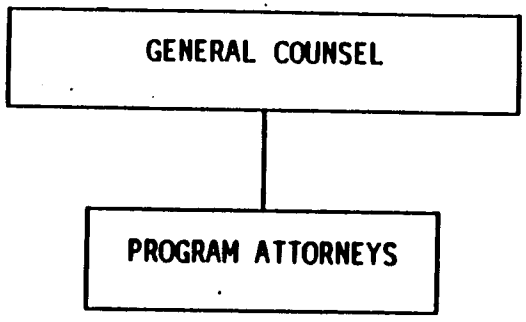
G. State Statutes; Proposed State Regulations with Summary

ATTACHMENT A

Organizational Charts

OFFICE OF GENERAL COUNSEL

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT



- REPRESENTS DEPARTMENT IN APPEALS AND ADMINISTRATIVE ACTIONS
- REPRESENTS DEPARTMENT IN LITIGATION
- PREPARES AND REVIEWS LEGISLATION AND REGULATIONS
- DRAFTS ADMINISTRATIVE ORDERS
- REVIEWS AND INTERPRETS RULES AND REGULATIONS
- REVIEWS AND APPROVES CONTRACTS
- REVIEWS AND APPROVES LEASES
- ADVISES ON EEOC, PERSONNEL, AND OTHER MATTERS
- PREPARES ADVISORY OPINIONS
- PROVIDES HEARING OFFICER IN RULEMAKING AND PERMIT HEARINGS

PERMITS AND SERVICES DIVISION

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

- COORDINATES COMMUNICATIONS AND ADMINISTRATIVE FUNCTIONS FOR ISSUANCE OF ENVIRONMENTAL PERMITS
- SERVES AS A FOCAL POINT REGARDING PERMIT APPLICATIONS AND INFORMATION
- ARRANGES FOR CONFERENCES WITH PRIVATE AND/OR GOVERNMENTAL AGENCIES REGARDING PERMIT REQUIREMENTS
- REQUESTS, RECEIVES, AND RECORDS ALL PERMIT APPLICATION FEES AS REQUIRED

LAND DIVISION

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

CHIEF

SOLID WASTE BRANCH

- Perform Inspection and Evaluation of Permitted Nonhazardous Solid Waste Disposal Facilities to Determine Compliance
- Investigate Citizen Complaints Related to Nonhazardous Solid Waste
- Regulate Management, Transportation, and Disposal of Medical Waste
- Development of Solid Waste Management Plans and Recycling Program
- Approve Special Wastes for Disposal

ENGINEERING SERVICES BRANCH

- Review, Process, and Make Permit Recommendations on Permits for Hazardous Waste Treatment, Storage, and Disposal Facilities
- Review, Process, and Make Permit Recommendations on Permits for Nonhazardous Solid Waste Disposal Facilities
- Provide Engineering Technical Support for Closure of Facilities, Both Hazardous and Nonhazardous
- Provide Engineering Technical Support to the Solid Waste Branch and the RCRA Compliance Branch
- Coordinate Review of Permits, as Applicable, with Air and Water Divisions
- Perform On-site Review to Observe Operation of Facilities

RCRA COMPLIANCE BRANCH

- Perform Inspection of Regulated Hazardous Waste Generators, Transporters, and Treatment, Storage and Disposal Facilities to Determine Compliance
- Provide Technical Assistance in Emergency Response Situations Regarding Residue Disposal
- Investigate Potential Illegal Activities Related to Hazardous Waste
- Investigate Citizen Complaints Related to Hazardous Waste
- Perform Limited Sampling Activities During Field Investigations
- Provide Technical Data Supporting Legal Basis for Enforcement Action
- Review of Preapproval Requests for Waste Disposal in Alabama

SPECIAL SERVICES UNIT

- Review, Process, and Make Permit Recommendations on Hazardous Waste Transporter Permit Applications
- Formulation and Coordination of Land Division Data Processing Needs
- Perform RCRA Financial Assurance Reviews
- Process Hazardous Waste Notification Applications
- Administration of Special Programs and Projects
- Preparation of Biennial and Other Reports
- Development of Hazardous Waste Regulations
- Prepare RCRA Program Authorization Applications
- Grant Management

LAND DIVISION
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

SUE R. ROBERTSON
CHIEF

RUSSELL KELLEY, CHIEF
SOLID WASTE BRANCH

Perform inspection and evaluation of permitted and closed non-hazardous solid waste disposal facilities to determine compliance.

Investigate citizen complaints related to non-hazardous solid waste and medical waste.

Regulate management, transportation, and disposal of medical waste.

Development of Solid Waste Management Plans, Regulations and Recycling Program.

Review and approve or deny special wastes for disposal.

Provide assistance to the Engineering Services Branch in review of Solid Waste Permits.

Coordinate with Air and Water Divisions concerning compliance issues.

WM. GERALD HARDY, CHIEF
ENGINEERING SERVICES BRANCH

Review, process, and make permit recommendations on permits for hazardous waste treatment, storage and disposal facilities.

Review, process, and make permit recommendations on permits for non-hazardous solid waste disposal facilities.

Provide engineering technical support for closure of facilities, both hazardous and non-hazardous.

Provide engineering technical support to the Solid Waste Branch and the RCRA Compliance Branch.

Coordinate review of permits, as applicable, with Air and Water Divisions.

Perform on-site review to observe operation of facilities.

STEVEN O. JENKINS, CHIEF
RCRA COMPLIANCE BRANCH

Perform inspection of regulated hazardous waste generators, transporters, and treatment, storage, and disposal facilities to determine compliance

Provide technical assistance in emergency response situations regarding residue disposal.

Investigate potential illegal activities related to hazardous waste.

Investigate citizen complaints related to hazardous waste.

Perform limited sampling activities during field investigations.

Provide technical data supporting legal basis for enforcement actions.

Review of preapproval requests for waste disposal in Alabama.

C. LYNN GARTHRIGHT, CHIEF
SPECIAL SERVICES UNIT

Review, process, and make permit recommendations on Hazardous Waste Transporter Permit Applications.

Formulation and coordination of Land Division data processing needs.

Perform RCRA financial assurance reviews.

Process Hazardous Waste Notification Applications.

Administration of special programs and projects.

Preparation of biennial and other reports.

Development of hazardous waste regulations.

Prepare RCRA Program Authorizations Applications.

AIR DIVISION

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

CHIEF

ENGINEERING SERVICES BRANCH

- Compliance Monitoring
- Control Equipment Evaluation
- Industrial Surveys
- Permit System
- Source Inspections

PLANNING BRANCH

- Development of Regulations
- Air Quality Impact Assessment of Regulation Changes
- Air Quality Impact Assessment of New Emission Sources
- Administrative Functions
- Clerical Services

TECHNICAL SERVICES BRANCH

- Ambient Monitoring
- Data Analysis
- Evaluate Monitoring Programs
- Instrument Calibration
- Source Testing
- Visible Emission Evaluation School

SPECIAL SERVICES SECTION

- Complaint Investigation
- Field Surveillance Inspection
- Asbestos Removal/ Demolition Inspection

WATER DIVISION
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

CHIEF

GROUNDWATER BRANCH

UST/UIC COMPLIANCE SEC.

- Manages Underground Storage Tank Program
- Manages Federal and State Trust Funds
- Manages Underground Injection Control Program
- Reviews UIC Permit Applications and Issues Permits
- Inspects Facilities
- Manages Compliance and Initiates Enforcement Actions

UST CORRECTIVE ACTION UNIT

- Manages Federal and State Trust Funds
- Manages Underground Storage Tank Corrective Actions
- Manages Enforcement for UST Corrective Actions

HYDROGEOLOGY UNIT

- Manages Groundwater Protection Program
- Provides Hydrogeological Support to Other ADEM Programs
- Evaluates Sites for Landfills, Lagoons and Land Application
- Evaluates Groundwater Contamination Assessments
- Initiates Enforcement Actions
- Inspects Facilities' Monitoring Well Systems

INDUSTRIAL BRANCH

- Manages NPDES Permit Program for Non-Municipal Sources
- Manages NPDES Pretreatment Program
- Issues Permits and FERC Certifications for Industrial and Hydroelectric Facilities
- Manages Compliance by Above Sources
- Performs Facility Inspections
- Reviews Treatment System Designs
- Responds to Complaints From Public
- Participates in Special Studies
- Cooperates with Other Organizations through Service on Panels, Committees, Etc.
- Manages Stormwater Permitting

WATER SUPPLY BRANCH

- Manages Chemical/Bacteriological Monitoring Program of Water Systems
- Manages Compliance By Above Systems
- Provides Inventory and Data Processing Needs
- Coordinates Chemical/Bacteriological Lab Certification Program
- Establishes Monitoring Schedules
- Collects Chemical Compliance Samples

COMMUNITY SYSTEMS SEC.

- Issues Permits for Community Water Distribution and Treatment Systems
- Reviews Designs for Treatment/Distribution Systems
- Performs Inspections of Community Systems
- Responds to Complaints
- Manages Water and Wastewater Operator Certification Program

NON-COMMUNITY SYSTEMS SEC.

- Issues Permits for Non-Community Distribution and Treatment Systems
- Performs Inspections of Non-Community Systems
- Responds to Complaints
- Coordinates Water Well Standards Program
- Manages Bottled Water Activities
- Provides Cross Connection Control Information

WATER QUALITY BRANCH

- Develops Wasteload Allocations
- Reviews/Revises Water Quality Standards
- Drafts/Updates Water Quality Management Plans
- Manages Water Quality Grants and Associated Programs
- Prepares 305(b) Water Quality Assessment Reports

MINING/NONPOINT SECTION

- Issues Permits to Mining, Coalbed Methane and Agricultural Sources
- Performs Inspections
- Reviews Plans/Specs
- Responds to Complaints
- Manages Compliance
- Participates in Field Aspects of Certain Nonpoint Source Programs
- Manages 319 NPS Management Plan
- Manages 404/401 Water Quality Certification Program
- Manages Agricultural, Silvicultural and Construction Stormwater Permit Program

MUNICIPAL BRANCH

COMPLIANCE SECTION

- Manages NPDES Permit Program for Municipal and Non-Industrial Sources
- Issues Permits to Municipal and Non-Industrial Sources
- Manages Compliance by Above Sources
- Performs Facility Inspections
- Responds to Complaints From Public
- Manages Wastewater Operator Certification Program
- Manages Stormwater Permitting
- Cooperates With Other Organizations through Service on Panels, Committees, Etc.
- Participates in Special Studies

FACILITIES CONSTRUCTION SECTION

- Manages 205(g) Construction Grants Program
- Makes Construction Grant Awards
- Conducts Design Reviews of Treatment Systems
- Manages SRF Loan Program
- Conducts Design Reviews of Other Federally Funded Sewerage Works Projects (CDBG, ARC, EDA, Etc.)

FIELD OPERATIONS DIVISION

CHIEF

MONTGOMERY BRANCH

FACILITY SECTION

- CSI/Efficiency Studies
- Respond to Emergencies
- Monitor Groundwater
- Monitor Leachate
- Sample Gen/TRN/TSD
- Conduct Flow Measurements
- Maintain Quality Control DMR/QA
- Operator Short Course Participation
- Investigate Complaints
- Conduct Fish Kill Investigations
- Maintain Spill Records
- Maintain Total CSI/ Efficiency Records
- Perform PAI Inspections
- Conduct CERCLA Site Investigations
- Prepare HRS Rankings for CERCLA Sites
- Conduct RI Investigations
- Coordinate SARA Title III Program
- Maintain SARA Information Library
- Conduct UIC Inspections

SPECIAL STUDIES SEC.

- Conduct Intensive Surveys, Water Quality Demo Studies, Special Studies
- Perform In-Stream Biological Monitoring
- Conduct Ambient Surface Water Monitoring
- Administer Fish Tissue Monitoring Program
- Coordinate Clean Lakes Program
- Conduct EIS/EA Reviews
- Perform Compliance Toxicity Testing
- Review Permittee Testing Results
- Conduct Performance Audit Inspection on Toxicity Laboratories
- Analyze Samples for Fecal Coliform Bacteria

MOBILE BRANCH

- Review Beach & Dune Construction Permits
- Review Oil & Gas Exploration Permits
- Coordinate Coastal Consistency Reviews of Air, Land, & Water Permits
- Conduct Reviews of 404 Dredge & Fill Permits
- Review 401a Water Quality Cert.
- Monitor Ambient Water Quality in Coastal Waters
- Conduct Special Surveys of Estuarine Environments
- Co-sponsor Annual Beach Clean-up
- Coordinate Perdido Bay Citizen Monitoring Program
- Perform Ambient Air Monitoring
- Conduct VE Observations
- Observe Stack Tests
- Inspect Asbestos Removals
- Conduct Compliance Sampling Inspections
- Sample Groundwater
- Investigate Fish Kills
- Perform UST Inspections
- Monitor Oil and Gas Activities
- Sample Soils and Leachate
- Analyze for Metals, Organics Inorganics
- Monitor QA/QC for Lab and Field Analyses
- Participate in EPA and NOAA QA Programs

DECATUR SECTION

- Inspects Industrial Facilities
- Investigate Complaints
- Observe Stack Testing
- Conduct Ambient Air Monitoring
- Respond to Emergencies
- Investigate Fish Kills
- Conduct Water & Soil Sampling
- Observe Visible Emissions
- Observe Asbestos Removal
- Conduct Underground Storage Tank Inspections

BIRMINGHAM BRANCH

- Conduct Compliance Sampling Inspections
- Investigate Complaints
- Respond to Emergencies
- Investigate Fish Kills
- Collect Water, Soil, Sediment & Sludge Samples
- Conduct Stream Studies
- Sample Groundwater
- Perform Inorganic Laboratory Analyses
- Maintain a Quality Control Program
- Conduct Ambient Stream Monitoring
- Conduct Performance Audit Inspections
- Inspect Underground Storage Tanks
- Inspect and Monitor Landfills
- Perform Ambient Air Sampling
- Analyze for Metals, Organics and Inorganics
- Monitor QA/QC for Lab & Field Analyses
- Participate in EPA QA Program

LABORATORY BRANCH

ORGANIC SECTION

- Maintain Quality Control
- Conduct Organic Analysis
- Participate in EPA QA Program

INORGANIC SECTION

- Conduct Inorganic Analysis
- Perform Radiologic Analysis
- Certify Drinking Water Laboratori

ATTACHMENT B

Subtitle D Meeting Agenda
Solid Waste Meeting Letter and Agenda

SUBTITLE "D" CONFERENCE

November 21, 1991

Auburn University at Montgomery

Goodwin Hall, Room 109

Moderator - Jack Honeycutt

9:00	Registration and Refreshments
10:00	Welcome Mr. Leigh Pegues, Director
10:10	Overview and State Implementation Sue Robertson, Chief, Land Division
10:30	Location Restrictions, Subpart B Jack Honeycutt, Chief, Solid Waste Branch
11:00	Operating Criteria Subpart C John Narramore, Solid Waste Branch
11:45	Lunch (on your own)

Moderator - Gerald Hardy

1:00	Design Criteria - Subpart D Russell Kelly, Engineering Services Branch
1:30	Groundwater Monitoring and Corrective Action Subpart E Paul Webster, Engineering Services Branch
2:00	Closure/Post Closure, Subpart F Terri Hatley, Engineering Services Branch
2:30	Break
3:00	Financial Assurance Subpart G Lynn Garthright, Chief, Special Services Section
3:20	New Air Regulations as Related to New and Existing Landfills Ron Gore, Air Division
3:45	Permitting Process for Expired/Expiring Permits Paul Webster, Engineering Services Branch
4:00	Panel Discussion/Questions and Answers ADEM Staff

ADEM

ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Leigh Pegues, Director

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205/271-7700

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35602
205/353-1713

2204 Perimeter Road
Mobile, AL
36615
205/479-2336

Guy Hunt
Governor

January 26, 1993

MEMORANDUM

TO: Elected Officials
State of Alabama

FROM: Russell A. Kelly, Chief
Solid Waste Branch RAK
Land Division
Alabama Department of Environmental Management

SUBJECT: One Day Seminar Concerning Solid Waste Issues

The Alabama Department of Environmental Management will be providing one (1) day seminars in the cities of Mobile, Montgomery, Birmingham, and Huntsville concerning solid waste issues. These solid waste topics will include Federal Subtitle D regulations, vertical expansion, solid waste permitting, recycling issues, etc. Please note a copy of the proposed agenda has been included for your review.

It is essential that all elected officials in the county and municipal governments attend in order to educate themselves and better understand the current solid waste crisis. Please inform your county commission or city council of the planned meetings and encourage them to make every effort to attend.

Time and place of each meeting is included along with directions to each facility. Also, please find copies of solid waste bills that the Department intends to introduce this legislative session.

We look forward to meeting with each and every one of you. Should you have questions please do not hesitate to contact me at 271-7988.

NOTE: These meetings are identical so you need only to attend one and there will be no registration fee for these meetings.

RAK/mhm/2621

ADEM SOLID WASTE MEETING
WITH GOVERNMENTAL OFFICIALS

9:00	Status of Subtitle D	Russell Kelly
10:15	Break	
10:30	ADEM's Proposed Legislation Regarding Solid Waste	Sue Robertson
12:00	Lunch (On Your Own)	
1:30	Solid Waste Permitting	Gerald Hardy
2:30	Solid Waste Plans	Sue Robertson Russell Kelly
3:15	Break	
3:30	Recycling Activities/Requirements in Alabama	Mike Forster
4:30	Adjourn	

/2610

Mobile - Tuesday February 9, 1993

Location: Mobile Gas Building @ 2828 Dauphin Street

Directions: Take Dauphin Street exit off I-65 go east to 2828 Dauphin Street

Parking is available at the ballfield approximately 1 block from Mobile Gas Building.

Meeting Room located on 2nd floor.

Contact: Ms. Beasley 205-476-2720
Russell Kelly 205-271-7988

Montgomery - Thursday February 11, 1993

Location: Civic Center @ 300 Bibb Street

Directions: Downtown Montgomery next to Riverfront Station

Parking is available at the Riverfront Station

Meeting Room is located on 2nd floor Rooms J & K

Contact: Spike Austin 205-241-2143
Russell Kelly 205-271-7988

Huntsville - Tuesday February 16, 1993

Location: Huntsville City Hall, 308 Fountain Row

Directions: Downtown Huntsville, see map included.

Parking: Two Parking Garages available adjacent on the east and west sides of City Hall

Meeting Room: City Council Chambers

Contact: Eddie Coker 205-880-6054
Russell Kelly 205-271-7988

Birmingham - Wednesday February 17, 1993

Location: Birmingham Botanical Gardens
2612 Lane Park Road

Directions: See map included

Parking: Available at the gardens

Meeting Room: Auditorium

Contact: Mickey Hamilton 205-841-4732
Russell Kelly 205-271-7988

NOTE: All starting times will be 9:00 AM
No registration fee required.

ATTACHMENT C

Letter on Permit Renewal Requests
Letter on Vertical Expansion

ADEM

ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Leigh Pegues, Director

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Guy Hunt
Governor

January 6, 1992

CERTIFIED MAIL NO. P 624 156 930
RETURN RECEIPT REQUESTED

Honorable Mac Smith, Chairman
Cleburne County Commission
406 Vickery Street
Heflin, Alabama 36264

Dear Chairman Smith:

RE: Cleburne County Sanitary Landfill
Permit Number 15-01R
Cleburne County
Request for Renewal and Hydrogeological Review Results

On November 5, 1991 the Department received correspondence from your office dated October 31, 1991. The purpose of this correspondence was to request the renewal of Permit Number 15-01R for the Cleburne County Sanitary Landfill.

Subtitle "D" Federal regulations are now in effect governing the construction, operation, and closure of municipal solid waste landfills. The following letter addresses some of the new requirements. Please review this information and contact the Department within fourteen (14) days of the date of this letter if you would like to schedule a meeting to discuss how this will impact the future of your landfill. The facility operations, closure, and future construction must be in compliance with the Subtitle "D" Federal regulations as well as the Alabama Department of Environmental Management (ADEM) Administrative Code Division 13.

The Administrator of the United States Environmental Protection Agency (EPA) signed the Federal regulations, Subtitle "D", for municipal solid waste landfills (MSWLF) on September 11, 1991. The Federal regulations were published in the Federal Register on October 9, 1991, and the regulations became effective on that date. Each new MSWLF facility will be required to submit to the Department for approval operation plans, closure plans, and engineering drawings which comply with the Subtitle "D" Federal regulations. Each existing MSWLF will be required to close or come into compliance with the Subtitle "D" Federal regulations within twenty-four (24) months from the date the regulations were published in the Federal Register.

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Any MSWLF facility which stopped accepting waste before October 9, 1991 will be required to close under the existing Alabama Department of Environmental Management (ADEM) regulations. MSWLF facilities which stop accepting waste before October 9, 1993 (the end of the initial twenty-four (24) month time period) will be required to comply with the existing ADEM regulations and the Subtitle "D" closure cap regulations which require a maximum permeability for the cap to be $1x10^{-5}$ cm/sec. Any MSWLF facility which will stop accepting waste after the initial twenty-four (24) month time period will be required to comply with all requirements of the Subtitle "D" Federal regulations.

Within sixty (60) days from receipt of this letter, the Land Division requests that the permittee submit, for approval, a schedule of closure for the facility. Since the permittee wishes to renew the permit for their MSWLF facility, a schedule for the submittal of operational plans, closure plans, and engineering drawings which comply with Subtitle "D" Federal regulations and the ADEM Administrative Code Division 13, along with a schedule for construction of the required compositely lined cell areas, must be submitted to the Department within ninety (90) days from the date of this letter.

The Department's Hydrogeological Unit of the Groundwater Branch of the Water Division will conduct a geological site evaluation of all sanitary landfills requesting a permit renewal. Recommendations by the Groundwater Branch will be used by the Engineering Services Branch in reviewing the design for the facility. The facility will be required to construct a composite liner with a leachate collection system, as required by Subtitle "D" Federal regulations, prior to the Department renewing the permit. All renewals are subject to public notice and a thirty-five (35) day comment period. Should the Department receive significant technical comments during this thirty-five (35) day comment period, a public hearing may be held.

The Land Division will review the application for renewal of the permit, and at the conclusion of the review process, a decision will be made to grant or deny the permit renewal. Prior to renewing any permit (sanitary, inert, or industrial) the permittee must be in full compliance with approved engineering drawings and operational narrative that meet the regulations of the ADEM Administrative Code Division 13.

On October 30, 1991 the Hydrogeological Unit of the Department's Groundwater Branch of the Water Division performed a hydrogeological review of the Cleburne County Sanitary Landfill Permit Number 15-01R. A Copy of this review is enclosed for your reference. A permit modification has been proposed to convert this landfill to a regional disposal site. The hydrogeological review was performed to determine the site suitability for such a modification.

The Engineering Services Branch of the Land Division has determined the following items must be addressed before the permit modification process can continue:

1. New monitoring wells must be installed around the existing sanitary landfill. Rule 335-13-4-.14 lists the requirements for groundwater monitoring.

2. Expanded analyses must be performed on all of the monitoring wells.

3. As previously stated, a composite liner will be required to operate this site past the October 9, 1993 deadline imposed by Subtitle "D". This landfill must also meet all other regulations set forth by Subtitle "D".

4. A complete geological and hydrogeological investigation must be performed for the property to be included within the proposed regional landfill facility.

A meeting may also be scheduled to discuss the requirements presented herein for the proposed permit modification and to discuss any other operational changes. If you should have any questions or desire to schedule such a meeting, please contact Ms. Terri H. Hatley of the Engineering Services Branch at 205/271-7726.

Sincerely,

Wm. Gerald Hardy, Chief
Engineering Services Branch
Land Division

WGH/THH:dm/#LT919

Enclosure

c: Solid Waste Branch

File: SW 15-01R

1/3/92 Originator	Section Chief
1/3/92 Branch Chief	Division Chief

ADEM

ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Leigh Pegues, Director

Jim Folsom
Governor

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August 28, 1992

Dear :

RE:

Vertical Expansion of Existing MSWLF
Operation After October 8, 1993

Many of you have recently contacted ADEM concerning rumors that the October 9, 1993, date for implementing the Subtitle D requirements for municipal solid waste landfills will be delayed or postponed by the Federal Environmental Protection Agency (EPA). The Department has repeatedly contacted the EPA Regional Office in Atlanta and EPA Headquarters in Washington, D.C. regarding these rumors and has been informed that the implementation dates for Subtitle D will not be postponed; all the requirements of Subtitle D will be implemented as scheduled.

Owners or operators of an existing landfill that they plan to close prior to becoming part of a larger regional facility or operating a new Subtitle D landfill of their own can accept waste up to October 8, 1993, close the unit within the specified timeframe, and be subject only to the final cover requirements in Section 258.60(a). The permittee would not be subject to any of the other Subtitle D requirements, as it would if the landfill accepted wastes on or after October 9, 1993.

A landfill which accepts municipal waste after October 8, 1993, will be required to comply with all Subtitle D regulations. This includes but is not limited to the expanded (Appendix I) groundwater monitoring parameters, quarterly explosive gas monitoring, financial assurance (beginning April 1994), operating standards, minimum 30 year post-closure, etc.

After October 8, any lateral expansion or new landfill must meet the liner and leachate collection requirements of Subtitle D. EPA however, states that the Federal design requirements (liner and leachate collection systems) do not apply to the existing portions of landfill units. Existing landfills could expand vertically after October 8, 1993, without meeting the liner and leachate collection requirements but would be required to comply with the other requirements of Subtitle D.

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ADEM will address vertical expansions by proposing regulations that allow vertical expansions under the following conditions:

1. Existing landfills accepting municipal waste where the groundwater analyses have indicated no impact to the groundwater will be allowed to fill vertically according to their approved plans until final closure elevations are reached.

2. Existing landfills accepting municipal waste where the groundwater analyses indicate an increase over the background data (initial sampling data) however, no sampling data has exceeded drinking water standards, will be allowed to expand vertically until October 1995.

3. Existing landfills accepting municipal waste where the groundwater analyses indicate an increase over the background data and exceed the drinking water standards must perform a groundwater assessment. After Departmental review of the groundwater assessment, a remediation plan (if required) must be submitted to and approved by the Department prior to October 1993. If a remediation plan is approved by ADEM and implemented by the (sanitary) landfill, the sanitary landfill may expand vertically until October 1995.

Vertical expansion will be allowed only on active operating areas where waste has been previously disposed and has not undergone final closure. The regulations will not propose to approve vertical expansions at landfills that have other environmental problems, such as karst terrain, excessive leachate generation, etc., that are of concern to the Department. Lateral expansions will be required to meet the minimum liner and leachate collection design requirements in addition to all other Subtitle D requirements. Areas that are approved by the Department to expand vertically and are operating after October 8, 1993, must comply with all Subtitle D regulations except liner and leachate collection.

Municipal Solid Waste (Sanitary) Landfills should contact the Department as soon as possible to determine whether they are possible candidates for vertical expansion after October 8, 1993. Consideration should be given to the increase in cost of operating, closure, and post-closure under subtitle D requirements while making this decision.

The Department anticipates that the public comment period for these proposed regulations will be announced in September. A copy of the legal notice will be forwarded to you at that time.

Should there be questions or if additional clarification is needed please contact Russell Kelly of the Solid Waste Branch at 271-7761.

Sincerely,

Sue R. Robertson, Chief
Land Division

SRR/RAK/mhm/2004

ATTACHMENT D

ESB Permitting Procedures

ADEM - LAND DIVISION
SOLID WASTE
PERMITTING PROCEDURES

Procedure	Estimated Time Requirement (Calendar Days)
1. Receive application and appropriate fees (must include Host Government Approval)	
2. Acknowledge receipt	7 days
3. Refer to Groundwater Branch of Water Division for initial hydrogeological review	90 days
4. Inform applicant if additional hydrogeological information to be submitted (if appropriate)	14 days
5. Applicant to respond with required additional geological/hydrogeological information	30-180 days
6. Inform applicant of site acceptability or unfavorableness, forward a copy of geologist's report, and list portions of application that remain to be submitted.	14 days
7. Applicant to submit design plans and operational narrative	60 days
8. Review application (design plans, etc.)	60 days
9. Prepare list of comments on application (if appropriate)	14 days
10. Applicant to respond to Review Comments	30 days
11. Review Applicant's response to comments	30 days
12. Prepare 2nd Review Comments (if appropriate)	7 days
13. Applicant to respond to 2nd Review Comments	20 days
14. Review Applicant's response to 2nd Review Comments	15 days
15. Repeat Review process or issue notice to deny permit if application still not complete	14 days
16. If application is determined to be complete then the review should be completed by preparing a staff technical statement (Preliminary Determination) and a draft permit including permit conditions	30 days
17. Prepare public notice and legal notice (copy of application, technical statement and draft permit to be placed on public display)	14 days & 35 days

18. Schedule public hearing if significant technical comments are received during the comments period	45 days
19. Respond to comments received during comment period and/or public hearing	45 days
20. Incorporate any changes into final permit (Issue/Deny)	7 days
21. Submit final permit to Director for signature	

#CB250

ATTACHMENT E

Inspection Checklist

FACILITY NAME:_____ PERMIT NO._____

SANITARY LANDFILL INSPECTION FORM

INSPECTOR:_____ DATE:_____ TIME:_____(a.m./p.m.)

FIELD CONTACTS:	TITLE:
_____	_____
_____	_____
_____	_____

FOLLOW-UP CONTACTS:	TITLE:	DATE:
_____	_____	_____
_____	_____	_____

(explain) **In the space provided,or on back of form, explain either the violation or the specific location of the violation**

Note: Write "Var" in the compliance blank to note a variance that was granted for that requirement.

* **These items should be addressed by completing a file review prior to making a site visit.**

Comments:_____

_____

_____

_____

_____

_____

_____

SW REG. NO:	Most Used Rule No:	REQUIREMENT:	COMPLIANCE: yes(NA)	no
13-4-.14(4)	3	Groundwater monitoring reports current	*_____	_____
		_____		
		Surface Water/Leachate reports current	*_____	_____
		_____		
13-4-.16(6)	4	Explosive gas monitoring and reporting plan prepared and on file.	*_____	_____
		_____		
13-4-.16(6)b	5	Explosive Gas reports current	*_____	_____
		_____		
13-4-.19	8	Acess control measures adequate	_____	_____
		_____		
13-4-.21(1)	17	No open burning without permit	_____	_____
		_____		
13-4-.21(2)	19	** Operation as stipulated on permit	_____	_____
		_____		
		_____		
13-4-.21(3)	20	Only approved waste streams accepted	_____	_____
		Permitted waste streams:_____		
		_____		
		No free liquids/containers > 10 gallons	_____	_____
		_____		
13-4-.21(3)(a)	21	Plan submitted for Free liquids;reg.H/W;Inf/W	*_____	_____
		_____		
13-4-.21(4)	23	No water pollution or unauthorized discharge	_____	_____
		_____		
		_____		
13-4-.21(5)	24	Written certification for Industrial Wastes renewed annually & kept on file	_____	_____
		Approved waste streams:_____		
		_____		
13-4-.21(6)	25	Facility boundary adequately marked	_____	_____
		_____		

SLF

	Most Used Rule No:		COMPLIANCE: yes(n/a)	no
13-4-.22(1)(a)	26	All waste covered daily/minimum 6 inches	____	____
13-4-.22(1)(b)	27	Incomplete landfilled areas (> 3 months) covered with 12 inches soil < 30 days	____	____
		Area prepared for vegetative cover	____	____
13-4-.22(1)(c)1.	28	Completed areas (final grade reached) covered with 2 feet soil < 60 days for each trench/2 acres	____	____
13-4-.22(1)(c)2.	29	Vegetative cover established <30 days after above	____	____
13-4-.22(2)	30	Waste confined to small area < 2 foot thick layers	____	____
		Appropriate slope for operating face	____	____
13-4-.22(3)	31	All waste thoroughly compacted	____	____
13-4-.22(4)	32	Scavenging prohibited	____	____
13-4-.22(5)	33	Litter controlled	____	____
13-4-.22(6)	34	Adequate fire control measures	____	____
13-4-.22(7)	35	**Operation in accordance with plans and permit	____	____
13-4-.22(8)	36	Adequate personnel provided	____	____
13-4-.22(9)	37	Personnel facilities(shelter-communications-lavatory-toilet) provided	____	____

	Most Used Rule No:		COMPLIANCE: yes(n/a)	no
13-4-.22(10)	38	Adequate equipment provided	____	____
13-4-.22(11)	39	All-weather access road to dumping face	____	____
13-4-.22(12)	40	Vector control measures adequate	____	____
13-4-.22(13)	41	Wet weather provisions provided	____	____
13-4-.22(14)	42	Site adequately secured	____	____
13-4-.22(15)	43	Information sign located at entrance	____	____
13-4-.22(16)	44	Groundwater monitoring wells in good repair	____	____
13-4-.22(17)	45	Completed areas properly closed	____	____
13-4-.22(18)	46	Records maintained on daily volumes *	____	____
13-4-.22(19)	47	Special provisions-large dead animals-etc.	____	____
13-5-.02(3)	68	Permit valid for > 180 days *	____	____
13-5-.05(1)(a)	70	All waste received from permitted service area	____	____
13-5-.05(1)(b)	71	Permitted volume not exceeded by 20% or 100 tons	____	____

ATTACHMENT F

Legal Certification Letter and Checklists

NOTE:

The following legal certification letter and checklists were forwarded to Alabama's Office of the Attorney General on May 10, 1993. As of the date of this submittal, ADEM has not received the signed certification letter.

OFFICE OF THE ATTORNEY GENERAL

JIMMY EVANS
ATTORNEY GENERAL
STATE OF ALABAMA

ALABAMA STATE HOUSE
11 SOUTH UNION STREET
MONTGOMERY, ALABAMA 36130
AREA (205) 242-7300

May 14, 1993

Patrick Tobin, Acting Regional Administrator
Region IV, U.S. Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, GA 30365

Dear Mr. Tobin:

I hereby certify pursuant to my authority as Attorney General that in my opinion, the laws of the State of Alabama cited in its application for a determination of permit program adequacy are contained in statutes or regulations lawfully enacted and fully effective at the time this Statement is signed. The citations to the applicable laws and regulations are provided in the enclosed regulation checklists comprising sixty-nine pages to this letter.

Sincerely,

Jimmy Evans
Attorney General

JE:mah:LR236

PART 258 CRITERIA §258.1 PURPOSE, SCOPE, AND APPLICABILITY	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) The purpose of this Part is to establish minimum national criteria under the Resource Conservation and Recovery Act (RCRA or the Act), as amended, for all municipal solid waste landfill (MSWLF) units and under the Clean Water Act, as amended, for municipal solid waste landfills that are used to dispose of sewage sludge. These minimum national criteria ensure the protection of human health and the environment.	335-13-1-.01
(b) These Criteria apply to owners and operators of new MSWLF units, existing MSWLF units, and lateral expansions, except as otherwise specifically provided in this part; all other solid waste disposal facilities and practices that are not regulated under Subtitle C of RCRA are subject to the criteria contained in part 257.	335-13-1-.01 The State Regulations became effective on October 2, 1990.
(c) These Criteria do not apply to municipal solid waste landfill units that do not receive waste after October 9, 1991.	335-13-1-.01 -- The revised State Regulations became effective on -----, -- 1993 and the previous regulations were effective since October 2, 1990.
(d) MSWLF units that receive waste after October 9, 1991 but stop receiving waste before October 9, 1993 are exempt from all the requirements of this part 258, except the final cover requirement specified in section 258.60(a). The final cover must be installed within six months of the last receipt of wastes. Owners or operators of MSWLF units described in this paragraph that fail to complete cover installation within this six month period will be subject to all the requirements of this part 258, unless otherwise specified.	The State Regulations do not include provisions for exemptions of existing landfills. Previous requirements for cover have been effective since October 2, 1990
(e) All MSWLF units that receive waste on or after October 9, 1993 must comply with all requirements of this part 258 unless otherwise specified.	The State Regulations for these provisions became effective on -------, 1993.

PART 258 CRITERIA §258.1 PURPOSE, SCOPE, AND APPLICABILITY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(f)(1) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions that dispose of less than twenty [20] tons of municipal solid waste daily, based on an annual average are exempt from subparts D and E of this part, so long as there is no evidence of existing groundwater contamination from the MSWLF unit, and the MSWLF unit serves:	The State Regulations do not include provisions for exemptions from subparts D & E for owners/ operators of new, existing, or lateral expansions of MSWLF units.
(i) a community that experiences an annual interruption of at least three consecutive months of surface transportation that prevents access to a regional waste management facility, or	The State Regulations do not include provisions for exemptions from subparts D & E for owners/ operators of new, existing, or lateral expansions of MSWLF units.
(ii) a community that has no practicable waste management alternative and is located in an area that annually receives less than or equal to 25 inches of precipitation.	The State Regulations do not include provisions for exemptions from subparts D & E for owners/ operators of new, existing, or lateral expansions of MSWLF units.
(2) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions that meet the criteria in paragraph (f)(1)(i) or (f)(1)(ii) of this section must place in the operating record information demonstrating this.	The State Regulations do not include provisions for exemptions from subparts D & E for owners/ operators of new, existing, or lateral expansions of MSWLF units.
(3) If the owner or operator of a new MSWLF unit, existing MSWLF unit, or lateral expansion has knowledge of groundwater contamination resulting from the unit that has asserted the exemption in paragraph (f)(1)(i) or (f)(1)(ii) of this section, the owner or operator must notify the State Director of such contamination and, thereafter, comply with subparts D and E of this part.	The State Regulations do not include provisions for exemptions from subparts D & E for owners/ operators of new, existing, or lateral expansions of MSWLF units.

PART 258 CRITERIA §258.1 PURPOSE, SCOPE, AND APPLICABILITY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(g) Municipal solid waste landfill units failing to satisfy these criteria are considered open dumps for purposes of State solid waste management planning under RCRA.	335-13-1-.13 335-13-1-.03
(h) Municipal solid waste landfill units failing to satisfy these criteria constitute open dumps, which are prohibited under Section 4005 of RCRA.	335-13-1-.13 335-13-1-.03
(i) Municipal solid waste landfill units containing sewage sludge and failing to satisfy these Criteria violate Sections 309 and 405(e) of the Clean Water Act.	335-13-4-.22(22)
(j) The effective date of this part is October 9, 1993, except subpart G of this part 258 is effective April 9, 1994.	The effective date of the State Solid Waste Regulations is October 2, 1990. Revisions to 335-13-1 and 335-13-4 became effective on _____ __, 1993.

PART 258 CRITERIA §258.2 DEFINITIONS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
Unless otherwise noted, all terms contained in this part are defined by their plain meaning. This section contains definitions for terms that appear throughout this part; additional definitions appear in the specific sections to which they apply.	335-13-1-.03
"Active life" means the period of operation beginning with the initial receipt of solid waste and ending at completion of closure activities in accordance with §258.60 of this part.	335-13-1-.03
"Active portion" means that part of a facility or unit that has received or is receiving wastes and that has not been closed in accordance with §258.60 of this part.	335-13-1-.03
"Aquifer" means a geological formation, group of formations, or portion of a formation capable of yielding significant quantities of groundwater to wells or springs.	335-13-1-.03
"Commercial solid waste" means all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial wastes.	335-13-1-.03
"Director of an approved State" means the chief administrative officer of a State agency responsible for implementing the State municipal solid waste permit program or other system of prior approval that is deemed to be adequate by EPA under regulations published pursuant to Section 4005 of RCRA.	335-13-1-.03
"Existing MSWLF unit" means any municipal solid waste landfill unit that is receiving solid waste as of the effective date of this part (October 9, 1993). Waste placement in existing units must be consistent with past operating practices or modified practices to ensure good management.	335-13-1-.03

PART 258 CRITERIA §258.2 DEFINITIONS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
"Facility" means all contiguous land and structures, other appurtenances, and improvements on the land used for the disposal of solid waste.	335-13-1-.03
"Groundwater" means water below the land surface in a zone of saturation.	335-13-1-.03
"Household waste" means any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).	335-13-1-.03
"Industrial solid waste" means solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under Subtitle C of RCRA. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: Electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.	335-13-1-.03
"Lateral expansion" means a horizontal expansion of the waste boundaries of an existing MSWLF unit.	335-13-1-.03
"Leachate" means a liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.	335-13-1-.03

PART 258 CRITERIA §258.2 DEFINITIONS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
"Municipal solid waste landfill unit" means a discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under §257.2. A MSWLF unit also may receive other types of RCRA Subtitle D wastes, such as commercial solid waste, nonhazardous sludge, small quantity generator waste and industrial solid waste. Such a landfill may be publicly or privately owned. A MSWLF unit may be a new MSWLF unit, an existing MSWLF unit or a lateral expansion.	335-13-1-.03
"New MSWLF unit" means any municipal solid waste landfill unit that has not received waste prior to the effective date of this part (October 9, 1993).	335-13-1-.03
"Open burning" means the combustion of solid waste without:	335-13-1-.03
(1) Control of combustion air to maintain adequate temperature for efficient combustion,	335-13-1-.03
(2) Containment of the combustion reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion, and	335-13-1-.03
(3) Control of the emission of the combustion products.	335-13-1-.03
"Operator" means the person(s) responsible for the overall operation of a facility or part of a facility.	335-13-1-.03
"Owner" means the person(s) who owns a facility or part of a facility.	335-13-1-.03
"Run-off" means any rainwater, leachate, or other liquid that drains over land from any part of a facility.	335-13-1-.03
"Run-on" means any rainwater, leachate, or other liquid that drains over land onto any part of a facility.	335-13-1-.03

PART 258 CRITERIA §258.2 DEFINITIONS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
"Saturated zone" means that part of the earth's crust in which all voids are filled with water.	335-13-1-.03
"Sludge" means any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.	335-13-1-.03
"Solid waste" means any garbage, or refuse, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved materials in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permit under 33 U.S.C. 1342, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).	335-13-1-.03
"State" means any of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Marianas Islands.	335-13-1-.03 of the State Regulations defines "State" as the State of Alabama.
"State Director" means the chief administrative officer of the State agency responsible for implementing the State municipal solid waste permit program or other system of prior approval.	The State Regulations do not include a definition for "State Director"; however, 335-13-1-.03 defines "Director" as the Director of the Alabama Department of Environmental Management.
"Uppermost aquifer" means the geologic formation nearest the natural ground surface	335-13-1-.03

PART 258 CRITERIA §258.2 DEFINITIONS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
that is an aquifer, as well as, lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.	
"Waste management unit boundary" means a vertical surface located at the hydraulically downgradient limit of the unit. This vertical surface extends down into the uppermost aquifer.	335-13-1-.03

PART 258 CRITERIA §258.3 CONSIDERATION OF OTHER FEDERAL LAWS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
The owner or operator of a municipal solid waste landfill unit must comply with any other applicable Federal rules, laws, regulations, or other requirements.	335-13-4-.01(8)

§§258.4 - 258.9 [Reserved]

SUBPART B — LOCATION RESTRICTIONS
§258.10 AIRPORT SAFETY

(a) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions that are located within 10,000 feet (3,048 meters) of any airport runway end used by turbojet aircraft or within 5,000 feet (1,524 meters) of any airport runway end used by only piston-type aircraft must demonstrate that the units are designed and operated so that the MSWLF unit does not pose a bird hazard to aircraft.	335-13-4-.01(5) 335-13-4-.01(5)(a)
(b) Owners or operators proposing to site new MSWLF units and lateral expansions located within a five-mile radius of any airport runway end used by turbojet or piston-type aircraft must notify the affected airport and the Federal Aviation Administration (FAA).	335-13-4-.01(5)(a)
(c) The owner or operator must place the demonstration in paragraph (a) of this section in the operating record and notify the State Director that it has been placed in the operating record.	335-13-4-.01 335-13-4-.29(1)(b)1.
(d) For purposes of this section:	335-13-1-.03
(1) "Airport" means public-use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.	335-13-1-.03

PART 258 CRITERIA §258.11 FLOODPLAINS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(2) "Bird hazard" means an increase in the likelihood of bird/aircraft collisions that may cause damage to the aircraft or injury to its occupants.	335-13-1-.03
(a) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions located in 100-year floodplains must demonstrate that the unit will not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a hazard to human health and the environment. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record.	335-13-4-.01(1)
(b) For purposes of this section:	335-13-1-.03
(1) "Floodplain" means the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, that are inundated by the 100-year flood.	335-13-1-.03
(2) "100-year flood" means a flood that has a 1-percent or greater chance of recurring in any given year or a flood of a magnitude equalled or exceeded once in 100 years on the average over a significantly long period.	335-13-1-.03
(3) "Washout" means the carrying away of solid waste by waters of the base flood.	335-13-1-.03

PART 258 CRITERIA §258.12 WETLANDS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) New MSWLF units and lateral expansions shall not be located in wetlands, unless the owner or operator can make the following demonstrations to the Director of an approved State:	335-13-4-.01(3)(e) 335-13-4-.01(3)(f) The State Regulations are more stringent in omitting this wetlands demonstration provision.
(1) Where applicable under Section 404 of the Clean Water Act or applicable State wetlands laws, the presumption that a practicable alternative to the proposed landfill is available which does not involved wetlands is clearly rebutted:	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(2) The construction and operation of the MSWLF unit will not:	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(i) Cause or contribute to violations of any applicable State water quality standard,	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(ii) Violate any applicable toxic effluent standard or prohibition under Section 307 of the Clean Water Act,	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(iii) Jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat, protected under the Endangered Species Act of 1973, and	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(iv) Violate any requirement under the Marine Protection, Research, and Sanctuaries Act of 1972 for the protection of a marine sanctuary;	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(3) The MSWLF unit will not cause or contribute to significant degradation of wetlands. The owner/operator must demonstrate the integrity of the MSWLF unit and its ability to protect ecological resources by addressing the following factors:	The State Regulations are more stringent in omitting this wetlands demonstration provision.

PART 258 CRITERIA §258.12 WETLANDS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(i) Erosion, stability, and migration potential of native wetland soils, muds and deposits used to support the MSWLF unit;	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(ii) Erosion, stability, and migration potential of dredged and fill materials used to support the MSWLF unit;	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(iii) The volume and chemical nature of the waste managed in the MSWLF unit;	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(iv) Impacts on fish, wildlife, and other aquatic resources and their habitat from release of the solid waste;	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(v) The potential effects of catastrophic release of waste to the wetland and the resulting impacts on the environment; and	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(vi) Any additional factors, as necessary, to demonstrate that ecological resources in the wetland are sufficiently protected.	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(4) To the extent required under Section 404 of the Clean Water Act or applicable State wetlands laws, steps have been taken to attempt to achieve no net loss of wetlands (as defined by acreage and function) by first avoiding impacts to wetlands to the maximum extent practicable as required by paragraph (a)(1) of this section, then minimizing unavoidable impacts to the maximum extent practicable, and finally offsetting remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions (e.g., restoration of existing degraded wetlands or creation of man-made wetlands); and	The State Regulations are more stringent in omitting this wetlands demonstration provision.

PART 258 CRITERIA §258.12 WETLANDS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(5) Sufficient information is available to make a reasonable determination with respect to these demonstrations.	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(b) For purposes of this section, wetlands means those areas that are defined in 40 CFR 232.2(r).	335-13-1-.03

PART 258 CRITERIA
§258.13 FAULT AREAS

(a) New MSWLF units and lateral expansions shall not be located within 200 feet (60 meters) of a fault that has had displacement in Holocene time unless the owner or operator demonstrates to the Director of an approved State that an alternative setback distance of less than 200 feet (60 meters) will prevent damage to the structural integrity of the MSWLF unit and will be protective of human health and the environment.	335-13-4-.01(6)(c)
(b) For the purposes of this section:	335-13-1-.03
(1) "Fault" means a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side.	335-13-1-.03
(2) "Displacement" means the relative movement of any two sides of a fault measured in any direction.	335-13-1-.03
(3) "Holocene" means the most recent epoch of the Quaternary period, extending from the end of the Pleistocene Epoch to the present.	335-13-1-.03

PART 258 CRITERIA §258.14 SEISMIC IMPACT ZONES	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) New MSWLF units and lateral expansions shall not be located in seismic impact zones, unless the owner or operator demonstrates to the Director of an approved State/Tribe that all containment structures, including liners, leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record.	335-13-4-.01(6)(d)
(b) For the purposes of this section:	335-13-1-.03
(1) "Seismic impact zone" means an area with a ten percent or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth's gravitational pull paragraph (g) of this section, will exceed 0.10g in 250 years.	335-13-1-.03
(2) "Maximum horizontal acceleration in lithified earth material" means the maximum expected horizontal acceleration depicted on a seismic hazard map, with a 90 percent or greater probability that the acceleration will not be exceeded in 250 years, or the maximum expected horizontal acceleration based on a site-specific seismic risk assessment.	335-13-1-.03
(3) "Lithified earth material" means all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock that formed by crystallization of magma or by induration of loose sediments. This term does not include man-made materials, such as fill, concrete, and asphalt, or unconsolidated earth materials, soil, or regolith lying at or near the earth surface.	335-13-1-.03

PART 258 CRITERIA §258.15 UNSTABLE AREAS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions located in an unstable area must demonstrate that engineering measures have been incorporated into the MSWLF unit's design to ensure that the integrity of the structural components of the MSWLF unit will not be disrupted. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record. The owner or operator must consider the following factors, at a minimum, when determining whether an area is unstable:	335-13-4-.01(6)(e)
(1) On-site or local soil conditions that may result in significant differential settling;	335-13-4-.01(6)(e)1.
(2) On-site or local geologic or geomorphologic features; and	335-13-4-.01(6)(e)2.
(3) On-site or local human-made features or events (both surface and subsurface).	335-13-4-.01(6)(e)3.
(b) For purposes of this section:	335-13-1-.03
(1) "Unstable area" means a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components responsible for preventing releases from a landfill. Unstable areas can include poor foundation conditions, areas susceptible to mass movements, and karst terrains.	335-13-1-.03
(2) "Structural components" means liners, leachate collection systems, final covers, run-on/run-off systems, and any other component used in the construction and operation of the MSWLF that is necessary for protection of human health and the environment.	335-13-1-.03
(3) "Poor foundation conditions" means those areas where features exist which	335-13-1-.03

PART 258 CRITERIA §258.15 UNSTABLE AREAS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
indicate that a natural or man-induced event may result in inadequate foundation support for the structural components of an MSWLF unit.	
(4) "Areas susceptible to mass movement" means those areas of influence (i.e., areas characterized as having an active or substantial possibility of mass movement) where the movement of earth material at, beneath, or adjacent to the MSWLF unit, because of natural or man-induced events, results in the downslope transport of soil and rock material by means of gravitational influence. Areas of mass movement include, but are not limited to, landslides, avalanches, debris slides and flows, soil fluctuation, block sliding, and rock fall.	335-13-1-.03
(5) "Karst terrains" means areas where karst topography, with its characteristic surface and subterranean features, is developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in karst terrains include, but are not limited to, sinkholes, sinking streams, caves, large springs, and blind valleys.	335-13-1-.03

PART 258 CRITERIA §258.16 CLOSURE OF EXISTING MSWLFS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Existing MSWLF units that cannot make the demonstration specified in §§285.10(a) pertaining to airports, 258.11(a) pertaining to floodplains, or 258.15(a) pertaining to unstable areas, must close by October 9, 1996, in accordance with §258.60 of this part and conduct post-closure activities in accordance with §258.61 of this part.	The State Regulations are more stringent in not allowing the provisions of §258.16 (a) and (b).
(b) The deadline for closure required by paragraph (a) of this section may be extended up to two years if the owner or operator demonstrates to the Director of an approved State that:	
(1) There is no available alternative disposal capacity;	
(2) There is no immediate threat to human health and the environment.	
Note to Subpart B: Owners or operators of MSWLFs should be aware that a State in which their landfill is located or is to be located, may have adopted a State wellhead protection program in accordance with Section 1428 of the Safe Drinking Water Act. Such State wellhead protection programs may impose additional requirements on owners or operators of MSWLFs than those set forth in this part.	
§§258.17 - 258.19 [Reserved]	

SUBPART C — OPERATING CRITERIA §258.20 PROCEDURES FOR EXCLUDING THE RECEIPT OF HAZARDOUS WASTE	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Owners or operators of all MSWLF units must implement a program at the facility for detecting and preventing the disposal of regulated hazardous wastes as defined in part 261 of this chapter and polychlorinated biphenyls (PCB) wastes as defined in part 761 of this chapter. This program must include, at a minimum:	335-13-4-.21 335-13-4-.21(3)(a)
(1) Random inspections of incoming loads unless the owner or operator takes other steps to ensure that incoming loads do not contain regulated hazardous wastes or PCB wastes;	335-13-4-.21(3)(a)1.
(2) Records of any inspections;	335-13-4-.21(3)(a)3.
(3) Training of facility personnel to recognize regulated hazardous waste and PCB wastes; and	335-13-4-.21(3)(a)4.
(4) Notification of State Director of authorized States under Subtitle C of RCRA or the EPA Regional Administrator if in an unauthorized State if a regulated hazardous waste or PCB waste is discovered at the facility.	335-13-4-.21(3)(a)5.
(b) For purposes of this section, "regulated hazardous waste" means a solid waste that is a hazardous waste, as defined in 40 CFR 261.3, that is not excluded from regulation as a hazardous waste under 40 CFR 261.4(b) or was not generated by a conditionally exempt small quantity generator as defined in §261.5 of this chapter.	335-13-1-.03

PART 258 CRITERIA §258.21 COVER MATERIAL REQUIREMENTS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Except as provided in paragraph (b) of this section, the owners or operators of all MSWLF units must cover disposed solid waste with six inches of earthen material at the end of each operating day, or at more frequent intervals if necessary, to control disease vectors, fires, odors, blowing litter, and scavenging.	335-13-4-.22(1) 335-13-4-.22(1)(a)
(b) Alternative materials of an alternative thickness (other than at least six inches of earthen material) may be approved by the Director of an approved State if the owner or operator demonstrates that the alternative material and thickness control disease vectors, fires, odors, blowing litter, and scavenging without presenting a threat to human health and the environment.	335-13-4-.22(1)(a)
(c) The Director of an approved State may grant a temporary waiver from the requirement of paragraph (a) and (b) of this section if the owner or operator demonstrates that there are extreme seasonal climatic conditions that make meeting such requirements impractical.	The State Regulations do not contain a waiver provision and are therefore more stringent. 335-13-4-.22(13) requires that the facility provide for disposal activities in adverse weather.

PART 258 CRITERIA §258.22 DISEASE VECTOR CONTROL	
(a) Owners or operators of all MSWLF units must prevent or control on-site populations of disease vectors using techniques appropriate for the protection of human health and the environment.	335-13-4-.22(12)
(b) For purposes of this section, "disease vectors" means any rodents, flies, mosquitoes, or other animals, including insects, capable of transmitting disease to humans.	335-13-1-.03

PART 258 CRITERIA §258.23 EXPLOSIVE GASES CONTROL	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Owners or operators of all MSWLF units must ensure that:	335-13-4-.16
(1) The concentration of methane gas generated by the facility does not exceed 25 percent of the lower explosive limit for methane in facility structures (excluding gas control or recovery system components); and	335-13-4-.16(2)
(2) The concentration of methane gas does not exceed the lower explosive limit for methane at the facility property boundary.	335-13-4-.16(1)
(b) Owners or operators of all MSWLF units must implement a routine methane monitoring program to ensure that the standards of paragraph (a) of this section are met.	335-13-4-.16(6)
(1) The type and frequency of monitoring must be determined based on the following factors:	335-13-4-.16(6)(a)
(i) Soil conditions;	335-13-4-.16(6)(a)1.
(ii) The hydrogeologic conditions surrounding the facility;	335-13-4-.16(6)(a)2.
(iii) The hydraulic conditions surrounding the facility; and	335-13-4-.16(6)(a)3.
(iv) The location of facility structures and property boundaries.	335-13-4-.16(6)(a)4.
(2) The minimum frequency of monitoring shall be quarterly.	335-13-4-.16(6)(b)
(c) If methane gas levels exceeding the limits specified in paragraph (a) of this section are detected, the owner or operator must:	335-13-4-.16(6)(c)
(1) Immediately take all necessary steps to ensure protection of human health and notify the State Director;	335-13-4-.16(6)(c)1.

PART 258 CRITERIA §258.23 EXPLOSIVE GASES CONTROL (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(2) Within seven days of detection, place in the operating record the methane gas levels detected and a description of the steps taken to protect human health; and	335-13-4-.16(6)(c)2.
(3) Within 60 days of detection, implement a remediation plan for the methane gas releases, place a copy of the plan in the operating record, and notify the State Director that the plan has been implemented. The plan shall describe the nature and extent of the problem and the proposed remedy.	335-13-4-.16(6)(c)3.
(4) The Director of an Approved State may establish alternative schedules for demonstrating compliance with paragraphs (c)(2) and (3) of this section.	The State Regulations are more stringent in omitting the alternative schedule provision.
(d) For purposes of this section, "lower explosive limit" means the lowest percent by volume of a mixture of explosive gases in air that will propagate a flame at 25 C and atmospheric pressure.	335-13-1-.03 335-13-4-.16(6)(c)3.

PART 258 CRITERIA §258.24 AIR CRITERIA	
(a) Owners or operators of all MSWLFs must ensure that the units do not violate any applicable requirements developed under a State Implementation Plan (SIP) approved or promulgated by the Administrator pursuant to Section 110 of the Clean Air Act, as amended.	335-13-4-.21(8)
(b) Open burning of solid waste, except for the infrequent burning of agricultural wastes, silvicultural wastes, landclearing debris, diseased trees, or debris from emergency clean-up operations, is prohibited at all MSWLF units.	335-13-4-.21(1) 335-13-4-.21(1)(a) 335-13-4-.21(1)(b) 335-13-4-.21(1)(c) 335-13-4-.21(1)(d)

PART 258 CRITERIA §258.25 ACCESS REQUIREMENTS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
Owners or operators of all MSWLF units must control public access and prevent unauthorized vehicular traffic and illegal dumping of wastes by using artificial barriers, natural barriers, or both, as appropriate to protect human health and the environment.	335-13-4-.19

PART 258 CRITERIA §258.26 RUN-ON/RUN-OFF CONTROL SYSTEMS	
(a) Owners or operators of all MSWLF units must design, construct, and maintain:	335-13-4-.17
(1) A run-on control system to prevent flow onto the active portion of the landfill during the peak discharge from a 25-year storm;	335-13-4-.17(1)
(2) A run-off control system from the active portion of the landfill to collect and control at least the water volume resulting from a 24-hour, 25-year storm.	335-13-4-.17(2)
(b) Run-off from the active portion of the landfill unit must be handled in accordance with §258.27(a) of this part.	335-13-4-.17(3)

PART 258 CRITERIA §258.27 SURFACE WATER REQUIREMENTS	
MSWLF units shall not:	335-13-4-.01
(a) Cause a discharge of pollutants into waters of the United States, including wetlands, that violates any requirements of the Clean Water Act, including, but not limited to, the National Pollutant Discharge Elimination System (NPDES) requirements, pursuant to Section 402.	335-13-4-.01(3)(b)

PART 258 CRITERIA §258.27 SURFACE WATER REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(b) Cause the discharge of a nonpoint source of pollution to waters of the United States, including wetlands, that violates any requirement of an area-wide or State-wide water quality management plan that has been approved under Section 208 or 319 of the Clean Water Act, as amended.	335-13-4-.01(3)(d)

PART 258 CRITERIA §258.28 LIQUIDS RESTRICTIONS	
(a) Bulk or noncontainerized liquid waste may not be placed in MSWLF units unless:	335-13-4-.22(20)
(1) The waste is household waste other than septic waste; or	335-13-4-.22(20)(a)
(2) The waste is leachate or gas condensate derived from the MSWLF unit and the MSWLF unit, whether it is a new or existing MSWLF or lateral expansion, is designed with a composite liner and leachate collection system as described in §258.40 (a)(2) of this part. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record.	335-13-4-.22(20)(b)
(b) Containers holding liquid waste may not be placed in a MSWLF unit unless:	335-13-4-.22(20)(c)
(1) The container is a small container similar in size to that normally found in household waste;	335-13-4-.22(20)(c)1.
(2) The container is designed to hold liquids for use other than storage; or	335-13-4-.22(20)(c)2.
(3) The waste is household waste.	335-13-4-.22(20)(c)3.

PART 258 CRITERIA §258.28 LIQUIDS RESTRICTIONS(Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(c) For purposes of this section:	335-13-1-.03
(1) "Liquid waste" means any waste material that is determined to contain "free liquids" as defined by Method 9095 (Paint Filter Liquids Test), as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Pub. No. SW-846).	335-13-1-.03
(2) "Gas condensate" means the liquid generated as a result of gas recovery process(es) at the MSWLF unit.	335-13-1-.03

PART 258 CRITERIA §258.29 RECORDKEEPING REQUIREMENTS	
(a) The owner or operator of a MSWLF unit must record and retain near the facility in an operating record or in an alternative location approved by the Director of an approved State the following information as it becomes available:	335-13-4-.29(1)
(1) Any location restriction demonstration required under subpart B of this part;	335-13-4-.29(1)(b)1.
(2) Inspection records, training procedures, and notification procedures required in §258.20 of this part;	335-13-4-.29(1)(c)2.
(3) Gas monitoring results from monitoring and any remediation plans required by §258.23 of this part;	335-13-4-.29(1)(c)1.
(4) Any MSWLF unit design documentation for placement of leachate or gas condensate in a MSWLF unit as required under §258.28(a)(2) of this part;	335-13-4-.29(1)(b)2.
(5) Any demonstration, certification, finding monitoring, testing, or analytical data required by subpart E of this part;	335-13-4-.29(1)(c)4.
(6) Closure and post-closure care plans and any monitoring, testing, or analytical data as required by §§258.60 and 258.61 of this part; and	335-13-4-.29(1)(b)3. 335-13-4-.29(1)(c)3.

PART 258 CRITERIA §258.29 RECORDKEEPING REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(7) Any cost estimates and financial assurance documentation required by subpart G of this part.	335-13-4-.29(1)(d)
(8) Any information demonstrating compliance with small community exemption as required by §258.1(f)(2).	The State has omitted the small community exemption provisions since they are not applicable in this region.
(b) The owner/operator must notify the State Director when the documents from paragraph (a) of this section have been placed or added to the operating record, and all information contained in the operating record must be furnished upon request to the State Director or be made available at all reasonable times for inspection by the State Director.	335-13-4-.29(2)
(c) The Director of an approved State can set alternative schedules for recordkeeping and notification requirements as specified in paragraphs (a) and (b) of this section, except for the notification requirements in §258.10(b) and §258.55(g)(1)(iii).	335-13-4-.29(3)

§§258.30 - 258.39 [Reserved]

SUBPART D — DESIGN CRITERIA §258.40 DESIGN CRITERIA	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) New MSWLF units and lateral expansions shall be constructed:	335-13-4-.18
(1) In accordance with a design approved by the Director of an approved State or as specified in §258.40(e) for unapproved States. The design must ensure that the concentration values listed in Table 1 of this section will not be exceeded in the uppermost aquifer at the relevant point of compliance, as specified by the Director of an approved State under paragraph (d) of this section, or	335-13-4-.18 335-13-4-.18(8)a. 335-13-1-.03
(2) With a composite liner, as defined in paragraph (b) of this section and a leachate collection system that is designed and constructed to maintain less than a 30-cm depth of leachate over the liner.	335-13-4-.18 335-13-1-.03
(b) For purposes of this section, "composite liner" means a system consisting of two components; the upper component must consist of a minimum 30-mil flexible membrane liner (FML), and the lower component must consist of at least a two-foot layer of compacted soil with a hydraulic conductivity of no more than 1 x 10^{-7} cm/sec. FML components consisting of High Density Polyethylene (HDPE) shall be at least 60-mil thick. The FML component must be installed in direct and uniform contact with the compacted soil component.	335-13-1-.03
(c) When approving a design that complies with paragraph (a)(1) of this section, the Director of an approved State shall consider at least the following factors:	335-13-4-.18(8) 335-13-4-.18(8)(b)
(1) The hydrogeologic characteristics of the facility and surrounding land;	335-13-4-.18(8)(b)1.
(2) The climatic factors of the area; and	335-13-4-.18(8)(b)2.

PART 258 CRITERIA §258.40 DESIGN CRITERIA (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(3) The volume and physical and chemical characteristics of the leachate.	335-13-4-.18(8)(b)3.
(d) The relevant point of compliance specified by the Director of an approved State shall be no more than 150 meters from the waste management unit boundary and shall be located on land owned by the owner of the MSWLF unit. In determining the relevant point of compliance, State Director shall consider at least the following factors:	335-13-4-.12(14)
(1) The hydrogeologic characteristics of the facility and surrounding land;	335-13-4-.12(14)(a)
(2) The volume and physical and chemical characteristics of the leachate;	335-13-4-.12(14)(b)
(3) The quantity, quality, and detection, of flow of groundwater;	335-13-4-.12(14)(c)
(4) The proximity and withdrawal rate of the groundwater users;	335-13-4-.12(14)(d)
(5) The availability of alternative drinking water supplies;	335-13-4-.12(14)(e)
(6) The existing quality of the groundwater, including other sources of contamination and their cumulative impacts on the groundwater and whether groundwater is currently used or reasonably expected to be used for drinking water;	335-13-4-.12(14)(f)
(7) Public health, safety, and welfare effects; and	335-13-4-.12(14)(g)
(8) Practicable capability of the owner or operator.	335-13-4-.12(14)(h)
(e) If EPA does not promulgate a rule establishing the procedures and requirements for State compliance with RCRA Section 4005(c)(1)(B) by October 9, 1993, owners and operators in unapproved States may utilize a design meeting the performance standard in § 258.40(a)(1) if the following conditions are met:	Alabama intends to become an authorized State and therefore, does not need the provisions of this reference.

PART 258 CRITERIA §258.40 DESIGN CRITERIA (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(1) The State determines the design meets the performance standard in § 258.40(a)(1);	Alabama intends to become an authorized State and therefore, does not need the provisions of this reference.
(2) The State petitions EPA to review its determination; and	Alabama intends to become an authorized State and therefore, does not need the provisions of this reference.
(3) EPA approves the State determination or does not disapprove the determination within 30 days.	Alabama intends to become an authorized State and therefore, does not need the provisions of this reference.

TABLE 1

Chemical	MCL (mg/l)
Arsenic	0.05
Barium	1.0
Benzene	0.005
Cadmium	0.01
Carbon tetrachloride	0.005
Chromium (hexavalent)	0.05
2,4-Dichlorophenoxy acetic acid	0.1
1,4-Dichlorobenzene	0.075
1,2-Dichloroethane	0.005
1,1-Dichloroethylene	0.007
Endrin	0.0002
Fluoride	4
Lindane	0.004
Lead	0.015
Mercury	0.002
Methoxychlor	0.1
Nitrate	10
Selenium	0.01
Silver	0.05
Toxaphene	0.005
1,1,1-Trichloromethane	0.2
Trichloroethylene	0.005
2,4,5-Trichlorophenoxy acetic acid	0.01
Vinyl Chloride	0.002

See 335-13-4-.18 for Table 1.

SUBPART E — GROUNDWATER MONITORING AND CORRECTIVE ACTION §258.50 APPLICABILITY	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) The requirements in this part apply to MSWLF units, except as provided in paragraph (b) of this section.	335-13-4-.27(1)
(b) Groundwater monitoring requirements under §258.51 through §258.55 of this part may be suspended by the Director of an approved State for a MSWLF unit if the owner or operator can demonstrate that there is no potential for migration of hazardous constituents from that MSWLF unit to the uppermost aquifer (as defined in §258.2) during the active life of the unit and the post-closure care period. This demonstration must be certified by a qualified groundwater scientist and approved by the Director of an approved State, and must be based upon:	335-13-4-.27(2)
(1) Site-specific field collected measurements, sampling, and analysis of physical, chemical, and biological processes affecting contaminant fate and transport, and	335-13-4-.27(2)(a)
(2) Contaminant fate and transport predictions that maximize contaminant migration and consider impacts on human health and environment.	335-13-4-.27(2)(b)
(c) Owners and operators of MSWLF units must comply with the groundwater monitoring requirements of this part according to the following schedule unless an alternative schedule is specified under paragraph (d) of this section:	335-13-4-.27(4)
(1) Existing MSWLF units and lateral expansions less than one mile from a drinking water intake (surface or subsurface) must be in compliance with the groundwater monitoring requirements specified in §§258.51 - 258.55 by October 9, 1994;	335-13-4-.27(4)(a)
(2) Existing MSWLF units and lateral expansions greater than one mile but less than two miles from a drinking water intake (surface or subsurface) must be in	335-13-4-.27(4)(a)

PART 258 CRITERIA §258.50 APPLICABILITY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
compliance with the groundwater monitoring requirements specified in §§258.51 - 258.55 by October 9, 1995;	
(3) Existing MSWLF units and lateral expansions greater than two miles from a drinking water intake (surface or subsurface) must be in compliance with the groundwater monitoring requirements specified in §§258.51 - 258.55 by October 9, 1996.	335-13-4-.27(4)(a)
(4) New MSWLF units must be in compliance with the groundwater monitoring requirements specified in §§258.51 - 258.55 before waste can be placed in the unit.	335-13-4-.27(4)(b)
(d) The Director of an approved State may specify an alternative schedule for the owners or operators of existing MSWLF units and lateral expansions to comply with the groundwater monitoring requirements specified in §§258.51 - 258.55. This schedule must ensure that 50 percent of all existing MSWLF units are in compliance by October 9, 1994 and all existing MSWLF units are in compliance by October 9, 1996. In setting the compliance schedule, the Director of an approved State must consider potential risks posed by the unit to human health and the environment. The following factors should be considered in determining potential risk:	335-13-4-.27(4) No alternative schedule is allowed for MSWLFs under State regulations. MSWLFs must adhere to 335-13-4-.27(4)(a) and (4)(b).
(1) Proximity of human and environmental receptors;	335-13-4-.27(4)
(2) Design of the MSWLF unit;	335-13-4-.27(4)
(3) Age of the MSWLF unit;	335-13-4-.27(4)
(4) The size of the MSWLF unit;	335-13-4-.27(4)
(5) Types and quantities of wastes disposed including sewage sludge; and	335-13-4-.27(4)
(6) Resource value of the underlying aquifer, including:	335-13-4-.27(4)

PART 258 CRITERIA §258.50 APPLICABILITY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(i) Current and future uses;	335-13-4-.27(4)
(ii) Proximity and withdrawal rate of users; and	335-13-4-.27(4)
(iii) Groundwater quality and quantity.	335-13-4-.27(4)
(e) Once established at a MSWLF unit, groundwater monitoring shall be conducted throughout the active life and post-closure care period of that MSWLF unit as specified in §258.61.	335-13-4-.27(5)
(f) For the purposes of this subpart, a qualified groundwater scientist is a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields as may be demonstrated by State registration, professional certifications, or completion of accredited university programs that enable that individual to make sound professional judgements regarding groundwater monitoring, contaminant fate and transport, and corrective-action.	335-13-1-.03
(g) The Director of an approved State may establish alternative schedules for demonstrating compliance with §258.51(d)(2), pertaining to notification of placement of certification in operating record; §258.54(c)(1), pertaining to notification that statistically significant increase (SSI) notice is in operating record; §258.54(c)(2) and (3), pertaining to an assessment monitoring program; §258.55(b), pertaining to sampling and analyzing Appendix II constituents; §258.55(d)(1), pertaining to placement of notice (Appendix II constituents detected) in record and notification of notice in record; §258.55(d)(2), pertaining to sampling for Appendix I and II to this part; §258.55(g),	335-13-4-.27(6)

PART 258 CRITERIA §258.50 APPLICABILITY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
pertaining to notification (and placement of notice in record) of SSI above groundwater protection standard; §§258.55(g)(1)(iv) and 258.56(a), pertaining to assessment of corrective measures; §258.57(a), pertaining to selection of remedy and notification of placement in record; §258.58(c)(4), pertaining to notification of placement in record (alternative corrective action measures); and §258.58(f), pertaining to notification of placement in record (certification of remedy completed).	

PART 258 CRITERIA
§258.51 GROUNDWATER MONITORING SYSTEMS

(a) A groundwater monitoring system must be installed that consists of a sufficient number of wells, installed at appropriate locations and depths, to yield groundwater samples from the uppermost aquifer (as defined in §258.2) that:	335-13-4-.27(7)
(1) Represent the quality of background groundwater that has not been affected by leakage from a unit. A determination of background quality may include sampling of wells that are not hydraulically upgradient of the waste management area where:	335-13-4-.27(7)(a)
(i) Hydrogeologic conditions do not allow the owner or operator to determine what wells are hydraulically upgradient; or	335-13-4-.27(7)(a)1.
(ii) Sampling at other wells will provide an indication of background groundwater quality that is as representative or more representative than that provided by the upgradient wells; and	335-13-4-.27(7)(a)2.
(2) Represent the quality of groundwater passing the relevant point of compliance specified by Director of an approved State under §258.40(d) or at the waste management unit boundary in unapproved States. The downgradient monitoring system must be installed at the relevant point of compliance specified by the Director of an approved State under §258.40(d) or at the waste management unit boundary in unapproved States that ensures detection of groundwater contamination in the uppermost aquifer. When physical obstacles preclude installation of groundwater monitoring wells at the relevant point of compliance at existing units, the down-gradient monitoring system may be installed at the closest practicable distance hydraulically down-gradient from the relevant point of compliance specified by the Director of an approved State under §258.40 that ensure detection of groundwater contamination in the uppermost aquifer.	335-13-4-.27(7)(b) 335-13-4-.12(14)

PART 258 CRITERIA §258.51 GROUNDWATER MONITORING SYSTEMS(Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(b) The Director of an approved State may approve a multi-unit groundwater monitoring system instead of separate groundwater monitoring systems for each MSWLF unit when the facility has several units, provided the multi-unit groundwater monitoring system meets the requirement of §258.51(a) and will be as protective of human health and the environment as individual monitoring systems for each MSWLF unit, based on the following factors:	335-13-4-.27(8)
(1) Number, spacing, and orientation of the MSWLF units;	335-13-4-.27(8)(a)
(2) Hydrogeologic setting;	335-13-4-.27(8)(b)
(3) Site history;	335-13-4-.27(8)(c)
(4) Engineering design of the MSWLF units, and	335-13-4-.27(8)(d)
(5) Type of waste accepted at the MSWLF units.	335-13-4-.27(8)(e)
(c) Monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole. This casing must be screened or perforated and packed with gravel or sand, where necessary, to enable collection of groundwater samples. The annular space (i.e., the space between the bore hole and well casing) above the sampling depth must be sealed to prevent contamination of samples and the groundwater.	335-13-4-.27(9)
(1) The owner or operator must notify the State Director that the design, installation, development, and decommission of any monitoring wells, piezometers and other measurement, sampling, and analytical devices documentation has been placed in the operating record; and	335-13-4-.27(9)(a)

PART 258 CRITERIA §258.51 GROUNDWATER MONITORING SYSTEMS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(2) The monitoring wells, piezometers, and other measurement, sampling, and analytical devices must be operated and maintained so that they perform to design specifications throughout the life of the monitoring program.	335-13-4-.27(9)(b)
(d) The number, spacing, and depths of monitoring systems shall be:	335-13-4-.27(10)
(1) Determined based upon site-specific technical information that must include thorough characterization of:	335-13-4-.27(10)(a)
(i) Aquifer thickness, groundwater flow rate, groundwater flow direction including seasonal and temporal fluctuations in groundwater flow; and	335-13-4-.27(10)(a)1.
(ii) Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer; including, but not limited to: thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.	335-13-4-.27(10)(a)2.
(2) Certified by a qualified groundwater scientist or approved by the Director of an approved State. Within 14 days of this certification, the owner or operator must notify the State Director that the certification has been placed in the operating record.	335-13-4-.27(10)(b)

§258.52 [Reserved]

PART 258 CRITERIA §258.53 GROUNDWATER SAMPLING AND ANALYSIS REQUIREMENTS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) The groundwater monitoring program must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide an accurate representation of groundwater quality at the background and downgradient wells installed in compliance with §258.51(a) of this part. The owner or operator must notify the State Director that the sampling and analysis program documentation has been placed in the operating record and the program must include procedures and techniques for:	335-13-4-.27(11)
(1) Sample collection;	335-13-4-.27(11)(a)
(2) Sample preservation and shipment;	335-13-4-.27(11)(b)
(3) Analytical procedures;	335-13-4-.27(11)(c)
(4) Chain of custody control; and	335-13-4-.27(11)(d)
(5) Quality assurance and quality control.	335-13-4-.27(11)(e)
(b) The groundwater monitoring program must include sampling and analytical methods that are appropriate for groundwater sampling and that accurately measure hazardous constituents and other monitoring parameters in groundwater samples. Groundwater samples shall not be field-filtered prior to laboratory analysis.	335-13-4-.27(12)
(c) The sampling procedures and frequency must be protective of human health and the environment.	335-13-4-.27(13)
(d) Groundwater elevations must be measured in each well immediately prior to purging, each time groundwater is sampled. The owner or operator must determine the rate and direction of groundwater flow each time groundwater is sampled. Groundwater elevations in wells which monitor the same waste management area must be measured within a period of time short enough to avoid temporal variations in groundwater	335-13-4-.27(14)

PART 258 CRITERIA §258.53 GROUNDWATER SAMPLING AND ANALYSIS REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
flow which could preclude accurate determination of groundwater flow rate and direction.	
(e) The owner or operator must establish background groundwater quality in a hydraulically upgradient or background well(s) for each of the monitoring parameters or constituents required in the particular groundwater monitoring program that applies to the MSWLF unit, as determined under §258.54(a), or §258.55(a) of this part. Background groundwater quality may be established at wells that are not located hydraulically upgradient from the MSWLF unit if it meets the requirements of §258.51(a)(1).	335-13-4-.27(15)
(f) The number of samples collected to establish groundwater quality data must be consistent with the appropriate statistical procedures determined pursuant to paragraph (g) of this section. The sampling procedures shall be those specified under §258.54(b) for detection monitoring, §258.55(b) and (d) for assessment monitoring, and §258.56(b) of corrective action.	335-13-4-.27(16)
(g) The owner or operator must specify in the operating record one of the following statistical methods to be used in evaluating groundwater monitoring data for each hazardous constituent. The statistical test chosen shall be conducted separately for each hazardous constituent in each well.	335-13-4-.27(17)
(1) A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.	335-13-4-.27(17)(a)
(2) An analysis of variance (ANOVA) based on ranks followed by multiple comparisons procedures to identify	335-13-4-.27(17)(b)

PART 258 CRITERIA §258.53 GROUNDWATER SAMPLING AND ANALYSIS REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.	
(3) A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.	335-13-4-.27(17)(c)
(4) A control chart approach that gives control limits for each constituent.	335-13-4-.27(17)(d)
(5) Another statistical test method that meets the performance standards of §258.53(h). The owner or operator must place a justification for this alternative in the operating record and notify the State Director of the use of this alternative test. The justification must demonstrate that the alternative method meets the performance standards of §258.53(h).	335-13-4-.27(17)(e)
(h) Any statistical method chosen under §258.53(g) shall comply with the following performance standards, as appropriate:	335-13-4-.27(18)
(1) The statistical method used to evaluate groundwater monitoring data shall be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used. If the distributions for the constituents differ, more than one statistical method may be needed.	335-13-4-.27(18)(a)

PART 258 CRITERIA §258.53 GROUNDWATER SAMPLING AND ANALYSIS REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(2) If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a groundwater protection standard, the test shall be done at a Type I error level no less than 0.01 for each testing period. If a multiple comparisons procedure is used, the Type I experiment wise error rate for each testing period shall be no less than 0.05; however, the Type I error of no less than 0.01 for individual well comparisons must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.	335-13-4-.27(18)(b)
(3) If a control chart approach is used to evaluate groundwater monitoring data, the specific type of control chart and its associated parameter values shall be protective of human health and the environment. The parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.	335-13-4-.27(18)(c)
(4) If a tolerance interval or a predictional interval is used to evaluate groundwater monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, shall be protective of human health and the environment. These parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.	335-13-4-.27(18)(d)
(5) The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment. Any practical	335-13-4-.27(18)(e)

PART 258 CRITERIA §258.53 GROUNDWATER SAMPLING AND ANALYSIS REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
quantitation limit (pql) that is used in the statistical method shall be the lowest concentration level that can be reliablyachieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.	
(6) If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.	335-13-4-.27(18)(f)
(i) The owner or operator must determine whether or not there is a statistically significant increase over background values for each parameter or constituent required in the particular groundwater monitoring program that applies to the MSWLF unit, as determined under §§258.54(a) or 258.55(a) of this part.	335-13-4-.27(19)
(1) In determining whether a statistically significant increase has occurred, the owner or operator must compare the groundwater quality of each parameter or constituent at each monitoring well designated pursuant to §258.51(a)(2) to the background value of that constituent, according to the statistical procedures and performance standards specified under paragraphs (g) and (h) of this section.	335-13-4-.27(19)(a)
(2) Within a reasonable period of time after completing sampling and analysis, the owner or operator must determine whether there has been a statistically significant increase over background at each monitoring well.	335-13-4-.27(19)(b)

PART 258 CRITERIA §258.54 DETECTION MONITORING PROGRAM	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Detection monitoring is required at MSWLF units at all groundwater monitoring wells defined under §§258.51(a)(1) and (a)(2) of this part. At a minimum, a detection monitoring program must include the monitoring for the constituents listed in Appendix I of this part.	335-13-4-.27(20)
(1) The Director of an approved State may delete any of the Appendix I monitoring parameters for a MSWLF unit if it can be shown that the removed constituents are not reasonably expected to be contained in or derived from the waste contained in the unit.	335-13-4-.27(20)(a)
(2) The Director of an approved State may establish an alternative list of inorganic indicator parameters for a MSWLF unit, in lieu of some or all of the heavy metals (constituents 1-15 in Appendix I to this part), if the alternative parameters provide a reliable indication of inorganic releases from the MSWLF unit to the groundwater. In determining alternative parameters, the Director shall consider the following factors:	335-13-4-.27(20)(b)
(i) The types, quantities, and concentrations of constituents in waste managed at the MSWLF unit;	335-13-4-.27(20)(b)1.
(ii) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the MSWLF unit;	335-13-4-.27(20)(b)2.
(iii) The detectability of indicator parameters, waste constituents, and reaction products in the groundwater; and	335-13-4-.27(20)(b)3.
(iv) The concentration or values and coefficients of variation of monitoring parameters or constituents in the groundwater background.	335-13-4-.27(20)(b)4.

PART 258 CRITERIA §258.54 DETECTION MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(b) The monitoring frequency for all constituents listed in Appendix I to this part, or in the alternative list approved in accordance with paragraph (a)(2) of this section, shall be at least semiannual during the active life of the facility (including closure) and the post-closure period. A minimum of four independent samples from each well (background and downgradient) must be collected and analyzed for the Appendix I constituents, or the alternative list approved in accordance with paragraph (a)(2) of this section, during the first semiannual sampling event. At least one sample from each well (background and downgradient) must be collected and analyzed during subsequent semiannual sampling events.	335-13-4-.27(21)
The Director of an approved State may specify an appropriate alternative frequency for repeated sampling and analysis for Appendix I constituents, or the alternative list approved in accordance with paragraph (a)(2) of this section, during the active life (including closure) and the post-closure care period. The alternative frequency during the active life (including closure) shall be no less than annual. The alternative frequency shall be based on consideration of the following factors:	335-13-4-.27(21)
(1) Lithology of the aquifer and unsaturated zone;	335-13-4-.27(21)(a)
(2) Hydraulic conductivity of the aquifer and unsaturated zone;	335-13-4-.27(21)(b)
(3) Groundwater flow rates;	335-13-4-.27(21)(c)
(4) Minimum distance between upgradient edge of the MSWLF unit and downgradient monitoring well screen (minimum distance of travel); and	335-13-4-.27(21)(d)
(5) Resource value of the aquifer.	335-13-4-.27(21)(e)

PART 258 CRITERIA §258.54 DETECTION MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(c) If the owner or operator determines, pursuant to §258.53(g) of this part, that there is a statistically significant increase over background for one or more of the constituents listed in Appendix I to this part, or in the alternative list approved in accordance with paragraph (a)(2) of this section, at any monitoring well at the boundary specified under §258.51(a)(2), the owner or operator:	335-13-4-.27(22)
(1) Must, within 14 days of this finding, place a notice in the operating record indicating which constituents have shown statistically significant changes from background levels, and notify the State director that this notice was placed in the operating record; and	335-13-4-.27(22)(a)
(2) Must establish an assessment monitoring program meeting the requirements of §258.55 of this part within 90 days except as provided for in paragraph (c)(3) of this section.	335-13-4-.27(22)(b)
(3) The owner/operator may demonstrate that a source other than a MSWLF unit caused the contamination or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. A report documenting this demonstration must be certified by a qualified groundwater scientist or approved by the Director of an approved State and be placed in the operating record. If a successful demonstration is made and documented, the owner or operator may continue detection monitoring as specified in this section. If, after 90 days, a successful demonstration is not made, the owner or operator must initiate an assessment monitoring program as required in §258.55.	335-13-4-.27(22)(c)

PART 258 CRITERIA §258.55 ASSESSMENT MONITORING PROGRAM	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Assessment monitoring is required whenever a statistically significant increase over background has been detected for one or more of the constituents listed in Appendix I or in the alternative list approved in accordance with §258.54(a)(2).	335-13-4-.27(23)
(b) Within 90 days of triggering an assessment monitoring program, and annually thereafter, the owner or operator must sample and analyze the groundwater for all constituents identified in Appendix II of this part. A minimum of one sample from each downgradient well must be collected and analyzed during each sampling event. For any constituent detected in the downgradient wells as the result of the complete Appendix II analysis, a minimum of four independent samples from each well (background and downgradient) must be collected and analyzed to establish background for the new constituents.	335-13-4-.27(24)
The Director of an approved State may specify an appropriate subset of wells to be sampled and analyzed for Appendix II constituents during assessment monitoring. The Director of an approved State may delete any of the Appendix II monitoring parameters for a MSWLF unit if it can be shown that the removed constituents are not reasonably expected to be in or derived from the waste contained in the unit.	335-13-4-.27(24)
(c) The Director of an approved State may specify an appropriate alternate frequency for repeated sampling and analysis for the full set of Appendix II constituents required by §258.55(b) of this part, during the active life (including closure) and post-closure care of the unit considering the following factors:	335-13-4-.27(25)
(1) Lithology of the aquifer and unsaturated zone;	335-13-4-.27(25)(a)
(2) Hydraulic conductivity of the aquifer and unsaturated zone;	335-13-4-.27(25)(b)

PART 258 CRITERIA §258.55 ASSESSMENT MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(3) Groundwater flow rates;	335-13-4-.27(25)(c)
(4) Minimum distance between upgradient edge of the MSWLF unit and downgradient monitoring well screen (minimum distance of travel);	335-13-4-.27(25)(d)
(5) Resource value of the aquifer; and	335-13-4-.27(25)(e)
(6) Nature (fate and transport) of any constituents detected in response to this section.	335-13-4-.27(25)(f)
(d) After obtaining the results from the initial or subsequent sampling events required in paragraph (b) of this section, the owner or operator must:	335-13-4-.27(26)
(1) Within 14 days, place a notice in the operating record identifying the Appendix II constituents that have been detected and notify the State Director that this notice has been placed in the operating record;	335-13-4-.27(26)(a)
(2) Within 90 days, and on at least a semiannual basis thereafter, resample all wells specified by §258.51(a) to this part, conduct analyses for all constituents in Appendix I to this part or in the alternative list approved in accordance with §258.54(a)(2), and for those constituents in Appendix II to this part that are detected in response to paragraph (b) of this section, and record their concentrations in the facility operating record. At least one sample from each well (background and downgradient) must be collected and analyzed during these sampling events.	335-13-4-.27(26)(b)
The Director of an approved State may specify an alternative monitoring frequency during the active life (including closure) and the post closure period for the constituents referred to in this paragraph. The alternative frequency for Appendix I constituents, or the alternative list approved in accordance with §258.54(a)(2), during the active life (including closure)	335-13-4-.27(26)(b)

PART 258 CRITERIA §258.55 ASSESSMENT MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
shall be no less than annual. The alternative frequency shall be based on consideration of the factors specified in paragraph (c) of this section;	
(3) Establish background concentrations for any constituents detected pursuant to paragraphs (b) or (d)(2) of this section; and	335-13-4-.27(26)(c)
(4) Establish groundwater protection standards for all constituents detected pursuant to paragraph (b) or (d) of this section. The groundwater protection standards shall be established in accordance with paragraphs (h) or (i) of this section.	335-13-4-.27(26)(d)
(e) If the concentrations of all Appendix II constituents are shown to be at or below background values, using the statistical procedures in §258.53(g), for two consecutive sampling events, the owner or operator must notify the State Director of this finding and may return to detection monitoring.	335-13-4-.27(27)
(f) If the concentrations of any Appendix II constituents are above background values, but all concentrations are below the groundwater protection standard established under paragraphs (h) or (i) of this section, using the statistical procedures in §258.53(g), the owner or operator must continue assessment monitoring in accordance with this section.	335-13-4-.27(28)
(g) If one or more Appendix II constituents are detected at statistically significant levels above the groundwater protection standard established under paragraphs (h) or (i) of this section in any sampling event, the owner or operator must, within 14 days of this finding, place a notice in the operating record identifying the Appendix II constituents that have exceeded the groundwater protection standard and notify the State Director and all appropriate local government officials that the notice has been placed in the operating record.	335-13-4-.27(29)

PART 258 CRITERIA §258.55 ASSESSMENT MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
The owner or operator also:	335-13-4-.27(29)(a)
(1)(i) Must characterize the nature and extent of the release by installing additional monitoring wells as necessary;	335-13-4-.27(29)(a)1.
(ii) Must install at least one additional monitoring well at the facility boundary in the direction of contaminant migration and sample this well in accordance with §258.55(d)(2);	335-13-4-.27(29)(a)2.
(iii) Must notify all persons who own the land or reside on the land that directly overlies any part of the plume of contamination if contaminants have migrated off-site if indicated by sampling of wells in accordance with §258.55(g)(1); and	335-13-4-.27(29)(a)3.
(iv) Must initiate an assessment of corrective measures as required by §255.56 of this part within 90 days; or	335-13-4-.27(29)(a)4.
(2) May demonstrate that a source other than a MSWLF unit caused the contamination, or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. A report documenting this demonstration must be certified by a qualified groundwater scientist or approved by the Director of an approved State and placed in the operating record. If a successful demonstration is made the owner or operator must continue monitoring in accordance with the assessment monitoring program pursuant to §258.55, and may return to detection monitoring if the Appendix II constituents are at or below background as specified in §258.55(e). Until a successful demonstration is made, the owner or operator must comply with §258.55(g) including initiating an assessment of corrective measures.	335-13-4-.27(29)(b)

PART 258 CRITERIA §258.55 ASSESSMENT MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(h) The owner or operator must establish a groundwater protection standard for each Appendix II constituent detected in the groundwater. The groundwater protection standard shall be:	335-13-4-.27(30)
(1) For constituents for which a maximum contaminant level (MCL) has been promulgated under Section 1412 of the Safe Drinking Water Act (codified) under 40 CFR part 141, the MCL for that constituent;	335-13-4-.27(30)(a)
(2) For constituents for which MCLs have not been promulgated, the background concentration for the constituent established from wells in accordance with §258.51(a)(1); or	335-13-4-.27(30)(b)
(3) For constituents for which the background level is higher than the MCL identified under subparagraph (h)(1) of this section or health based levels identified under §258.55(i)(1), the background concentration.	335-13-4-.27(30)(c)
(i) The Director of an approved State may establish an alternative groundwater protection standard for constituents for which MCLs have not been established. These groundwater protection standards shall be appropriate health based levels that satisfy the following criteria:	335-13-4-.27(31)
(1) The level is derived in a manner consistent with Agency guidelines for assessing the health risks of environmental pollutants (51 FR 33992, 34006, 34014, 34028, September 24, 1986);	335-13-4-.27(31)(a)
(2) The level is based on scientifically valid studies conducted in accordance with the Toxic Substances Control Act Good Laboratory Practice Standards (40 CFR part 792) or equivalent;	335-13-4-.27(31)(b)

PART 258 CRITERIA §258.55 ASSESSMENT MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(3) For carcinogens, the level represents a concentration associated with an excess lifetime cancer risk level (due to continuous lifetime exposure) with the 1×10^{-4} to 1×10^{-6} range; and	335-13-4-.27(31)(c)
(4) For systemic toxicants, the level represents a concentration to which the human population (including sensitive subgroups) could be exposed to on a daily basis that is likely to be without appreciable risk of deleterious effects during a lifetime. For purposes of this subpart, systemic toxicants include toxic chemicals that cause effects other than cancer or mutation.	(c)335-13-4-.27(31)(d)
(j) In establishing groundwater protection standards under paragraph (i) of this section, the Director of an approved State may consider the following:	335-13-4-.27(32)
(1) Multiple contaminants in the groundwater;	335-13-4-.27(32)(a)
(2) Exposure threats to sensitive environmental receptors; and	335-13-4-.27(32)(b)
(3) Other site-specific exposure or potential exposure to groundwater.	335-13-4-.27(32)(c)

PART 258 CRITERIA §258.56 ASSESSMENT OF CORRECTIVE MEASURES	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Within 90 days of finding that any of the constituents listed in Appendix II have been detected at a statistically significant level exceeding the groundwater protection standards defined under §258.55(h) or (i) of this part, the owner or operator must initiate an assessment of corrective measures. Such an assessment must be completed within a reasonable period of time.	335-13-4-.27(33)
(b) The owner or operator must continue to monitor in accordance with the assessment monitoring program as specified in §258.55.	335-13-4-.27(34)
(c) The assessment shall include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy as described under §258.57, addressing at least the following:	335-13-4-.27(35)
(1) The performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts, and control of exposure to any residual contamination;	335-13-4-.27(35)(a)
(2) The time required to begin and complete the remedy;	335-13-4-.27(35)(b)
(3) The costs of remedy implementation; and	335-13-4-.27(35)(c)
(4) The institutional requirements such as State or local permit requirements or other environmental or public health requirements that may substantially affect implementation of the remedy(s).	335-13-4-.27(35)(d)
(d) The owner or operator must discuss the results of the corrective measures assessment, prior to the selection of remedy, in a public meeting with interested and affected parties.	335-13-4-.27(36)

PART 258 CRITERIA §258.57 SELECTION OF REMEDY	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Based on the results of the corrective measures assessment conducted under §258.56, the owner or operator must select a remedy that, at a minimum, meets the standards listed in paragraph (b) of this section. The owner or operator must notify the State Director, within 14 days of selecting a remedy, a report describing the selected remedy has been placed in the operating record and how it meets the standards in paragraph (b) of this section.	335-13-4-.27(37)
(b) Remedies must:	335-13-4-.27(37)
(1) Be protective of human health and the environment;	335-13-4-.27(37)(a)
(2) Attain the groundwater protection standard as specified pursuant to §§258.55(h) or (i);	335-13-4-.27(37)(b)
(3) Control the source(s) of releases so as to reduce or eliminate, to the maximum extent practicable, further releases of Appendix II constituents into the environment that may pose a threat to human health or the environment; and	335-13-4-.27(37)(c)
(4) Comply with standards for management of wastes as specified in §258.58(d).	335-13-4-.27(37)(d)
(c) In selecting a remedy that meets the standards of §258.57(b), the owner or operator shall consider the following evaluation factors:	335-13-4-.27(38)
(1) The long- and short-term effectiveness and protectiveness of the potential remedy(s), along with the degree of certainty that the remedy will prove successful based on consideration of the following:	335-13-4-.27(38)(a)
(i) Magnitude of reduction of existing risks;	335-13-4-.27(38)(a)1.

PART 258 CRITERIA §258.57 SELECTION OF REMEDY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(ii) Magnitude of residual risks in terms of likelihood of further releases due to waste remaining following implementation of a remedy;	335-13-4-.27(38)(a)2.
(iii) The type and degree of long-term management required, including monitoring, operation, and maintenance;	335-13-4-.27(38)(a)3.
(iv) Short-term risks that might be posed to the community, workers, or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and redisposal or containment;	335-13-4-.27(38)(a)4.
(v) Time until full protection is achieved;	335-13-4-.27(38)(a)5.
(vi) Potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to human health and the environment associated with excavation, transportation, redisposal, or containment;	335-13-4-.27(38)(a)6.

PART 258 CRITERIA §258.57 SELECTION OF REMEDY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(vii) Long-term reliability of the engineering and institutional controls; and	335-13-4-.27(38)(a)7.
(viii) Potential need for replacement of the remedy.	335-13-4-.27(38)(a)8.
(2) The effectiveness of the remedy in controlling the source to reduce further releases based on consideration of the following factors:	335-13-4-.27(38)(b)
(i) The extent to which containment practices will reduce further releases;	335-13-4-.27(38)(b)1.
(ii) The extent to which treatment technologies may be used.	335-13-4-.27(38)(b)2.
(3) The ease or difficulty of implementing a potential remedy(s) based on consideration of the following types of factors:	335-13-4-.27(38)(c)
(i) Degree of difficulty associated with constructing the technology;	335-13-4-.27(38)(c)1.
(ii) Expected operational reliability of the technologies;	335-13-4-.27(38)(c)2.
(iii) Need to coordinate with and obtain necessary approvals and permits from other agencies;	335-13-4-.27(38)(c)3.
(iv) Availability of necessary equipment and specialists; and	335-13-4-.27(38)(c)4.
(v) Available capacity and location of needed treatment, storage, and disposal services.	335-13-4-.27(38)(c)5.
(4) Practicable capability of the owner or operator, including a consideration of the technical and economic capability.	335-13-4-.27(38)(d)
(5) The degree to which community concerns are addressed by a potential remedy(s).	335-13-4-.27(38)(e)

PART 258 CRITERIA §258.57 SELECTION OF REMEDY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(d) The owner or operator shall specify as part of the selected remedy a schedule(s) for initiating and completing remedial activities. Such a schedule must require the initiation of remedial activities within a reasonable period of time taking into consideration the factors set forth in paragraphs (d) (1-8). The owner or operator must consider the following factors in determining the schedule of remedial activities:	335-13-4-.27(39)
(1) Extent and nature of contamination;	335-13-4-.27(39)(a)
(2) Practical capabilities of remedial technologies in achieving compliance with groundwater protection standards established under §§258.55(g) or (h) and other objectives of the remedy;	335-13-4-.27(39)(b)
(3) Availability of treatment or disposal capacity for wastes managed during implementation of the remedy;	335-13-4-.27(39)(c)
(4) Desirability of utilizing technologies that are not currently available, but which may offer significant advantages over already available technologies in terms of effectiveness, reliability, safety, or ability to achieve remedial objectives;	335-13-4-.27(39)(d)
(5) Potential risks to human health and the environment from exposure to contamination prior to completion of the remedy;	335-13-4-.27(39)(e)
(6) Resource value of the aquifer including:	335-13-4-.27(39)(f)
(i) Current and future uses;	335-13-4-.27(39)(f)1.
(ii) Proximity and withdrawal rate of users;	335-13-4-.27(39)(f)2.
(iii) Groundwater quantity and quality;	335-13-4-.27(39)(f)3.

PART 258 CRITERIA §258.57 SELECTION OF REMEDY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(iv) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituent;	335-13-4-.27(39)(f)4.
(v) The hydrogeologic characteristic of the facility and surrounding land;	335-13-4-.27(39)(f)5.
(vi) Groundwater removal and treatment costs; and	335-13-4-.27(39)(f)6.
(vii) The cost and availability of alternative water supplies.	335-13-4-.27(39)(f)7.
(7) Practicable capability of the owner or operator.	335-13-4-.27(39)(g)
(8) Other relevant factors.	335-13-4-.27(39)(h)
(e) The Director of an approved State may determine that remediation of a release of an Appendix II constituent from a MSWLF unit is not necessary if the owner or operator demonstrates to the Director of the approved state that:	335-13-4-.27(40)
(1) The groundwater is additionally contaminated by substances that have originated from a source other than a MSWLF unit and those substances are present in concentrations such that cleanup of the release from the MSWLF unit would provide no significant reduction in risk to actual or potential receptors; or	335-13-4-.27(40)(a)
(2) The constituent(s) is present in groundwater that:	335-13-4-.27(40)(b)
(i) Is not currently or reasonably expected to be a source of drinking water; and	335-13-4-.27(40)(b)1.
(ii) Is not hydraulically connected with waters to which the hazardous constituents are migrating or are likely to migrate in a concentration(s) that would exceed the groundwater protection standards established under §258.55(h) or (i); or	335-13-4-.27(40)(b)2.

PART 258 CRITERIA §258.57 SELECTION OF REMEDY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(3) Remediation of the release(s) is technically impracticable; or	335-13-4-.27(40)(c)
(4) Remediation results in unacceptable cross-media impacts.	335-13-4-.27(40)(d)
(f) A determination by the Director of an approved State pursuant to paragraph (e) of this section shall not affect the authority of the State to require the owner or operator to undertake source control measures or other measures that may be necessary to eliminate or minimize further releases to the groundwater, to prevent exposure to the groundwater, or to remediate the groundwater to concentrations that are technically practicable and significantly reduce threats to human health or the environment.	335-13-4-.27(41)

PART 258 CRITERIA §258.58 IMPLEMENTATION OF THE CORRECTIVE ACTION PROGRAM	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Based on the schedule established under §258.57(d) for initiation and completion of remedial activities the owner/operator must:	335-13-4-.27(42)
(1) Establish and implement a corrective action groundwater monitoring program that:	335-13-4-.27(42)(a)
(i) At a minimum, meet the requirements of an assessment monitoring program under §258.55;	335-13-4-.27(42)(a)1.
(ii) Indicate the effectiveness of the corrective action remedy; and	335-13-4-.27(42)(a)2.
(iii) Demonstrate compliance with groundwater protection standard pursuant to paragraph (e) of this section.	335-13-4-.27(42)(a)3.
(2) Implement the corrective action remedy selected under §258.57; and	335-13-4-.27(42)(b)
(3) Take any interim measures necessary to ensure the protection of human health and the environment. Interim measures should, to the greatest extent practicable, be consistent with the objectives of and contribute to the performance of any remedy that may be required pursuant to §258.57. The following factors must be considered by an owner or operator in determining whether interim measures are necessary:	335-13-4-.27(42)(c)
(i) Time required to develop and implement a final remedy;	335-13-4-.27(42)(c)1.
(ii) Actual or potential exposure of nearby populations or environmental receptors to hazardous constituents;	335-13-4-.27(42)(c)2.
(iii) Actual or potential contamination of drinking water supplies or sensitive ecosystems;	335-13-4-.27(42)(c)3.
(iv) Further degradation of the groundwater that may occur if remedial action is not initiated expeditiously;	335-13-4-.27(42)(c)4.

PART 258 CRITERIA §258.58 IMPLEMENTATION OF THE CORRECTIVE ACTION PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(v) Weather conditions that may cause hazardous constituents to migrate or be released;	335-13-4-.27(42)(c)5.
(vi) Risks of fire or explosion, or potential for exposure to hazardous constituents as a result of an accident or failure of a container or handling system; and	335-13-4-.27(42)(c)6.
(vii) Other situations that may pose threats to human health and the environment.	335-13-4-.27(42)(c)7.
(b) An owner or operator may determine, based on information developed after implementation of the remedy has begun or other information, that compliance with requirements of §258.57(b) are not being achieved through the remedy selected. In such cases, the owner or operator must implement other methods or techniques that could practicably achieve compliance with the requirements, unless the owner or operator makes the determination under §258.58(c).	335-13-4-.27(43)
(c) If the owner or operator determines that compliance with requirements under §258.57(b) cannot be practically achieved with any currently available methods, the owner or operator must:	335-13-4-.27(44)
(1) Obtain certification of a qualified groundwater scientist or approval by the Director of an approved State that compliance with requirements under §258.57(b) cannot be practically achieved with any currently available methods;	335-13-4-.27(44)(a)
(2) Implement alternate measures to control exposure of humans or the environment to residual contamination, as necessary to protect human health and the environment; and	335-13-4-.27(44)(b)
(3) Implement alternate measures for control of the sources of contamination, or for removal or decontamination of equipment, units, devices, or structures that are:	335-13-4-.27(44)(c)

PART 258 CRITERIA §258.58 IMPLEMENTATION OF THE CORRECTIVE ACTION PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(i) Technically practicable; and	335-13-4-.27(44)(c)1.
(ii) Consistent with the overall objective of the remedy.	335-13-4-.27(44)(c)2.
(4) Notify the State Director within 14 days that a report justifying the alternative measures prior to implementing the alternative measures has been placed in the operating record.	335-13-4-.27(44)(d)
(d) All solid wastes that are managed pursuant to a remedy required under §258.57, or an interim measure required under §258.58(a)(3), shall be managed in a manner:	335-13-4-.27(45)
(1) That is protective of human health and the environment; and	335-13-4-.27(45)(a)
(2) That complies with applicable RCRA requirements.	335-13-4-.27(45)(b)
(e) Remedies selected pursuant to §258.57 shall be considered complete when:	335-13-4-.27(46)
(1) The owner or operator complies with the groundwater protection standards established under §§258.55(h) or (i) at all points within the plume of contamination that lie beyond the groundwater monitoring well system established under §258.51(a).	335-13-4-.27(46)(a)
(2) Compliance with the groundwater protection standards established under §§258.55(h) or (i) has been achieved by demonstrating that concentrations of Appendix II constituents have not exceeded the groundwater protection standard(s) for a period of three consecutive years using the statistical procedures and performance standards in §258.53(g) and (h). The Director of an approved State may specify an alternative length of time during which the owner or operator must demonstrate that concentrations of Appendix II constituents have not exceeded the groundwater protection standard(s) taking into consideration:	335-13-4-.27(46)(b)

PART 258 CRITERIA §258.58 IMPLEMENTATION OF THE CORRECTIVE ACTION PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(i) Extent and concentration of the release(s);	335-13-4-.27(46)(b)1.
(ii) Behavior characteristics of the hazardous constituents in the groundwater;	335-13-4-.27(46)(b)2.
(iii) Accuracy of monitoring or modeling techniques, including any seasonal, meteorological, or other environmental variabilities that may affect the accuracy; and	335-13-4-.27(46)(b)3.
(iv) Characteristics of the groundwater.	335-13-4-.27(46)(b)4.
(3) All actions required to complete the remedy have been satisfied.	335-13-4-.27(46)(c)
(f) Upon completion of the remedy, the owner or operator must notify the State Director within 14 days that a certification that the remedy has been completed in compliance with the requirements of §258.58(e) has been placed in the operating record. The certification must be signed by the owner or operator and by a qualified groundwater scientist or approved by the Director of an approved State.	335-13-4-.27(47)
(g) When, upon completion of the certification, the owner or operator determines that the corrective action remedy has been completed in accordance with the requirements under paragraph (e) of this section, the owner or operator shall be released from the requirements for financial assurance for corrective action under §258.73.	335-13-4-.27(48)

§258.59 [Reserved]

SUBPART F — CLOSURE AND POST-CLOSURE CARE §258.60 CLOSURE CRITERIA	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Owners or operators of all MSWLF units must install a final cover system that is designed to minimize infiltration and erosion. The final cover system must be comprised of an erosion layer underlain by an infiltration layer as follows:	335-13-4-.20 335-13-4-.20(2)
(1) The infiltration layer must be comprised of a minimum of 18 inches of earthen material that has a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than 1×10^{-5} cm/sec, whichever is less, and	335-13-4-.20(2)(a)
(2) The erosion layer must consist of a minimum 6 inches of earthen material that is capable of sustaining native plant growth.	335-13-4-.20(2)(b)
(b) The Director of an approved State may approve an alternative final cover design that includes:	335-13-4-.20(2)(c)
(1) An infiltration layer that achieves an equivalent reduction in infiltration as the infiltration layer specified in paragraph (a)(1) of this section, and	335-13-4-.20(2)(c)1.
(2) An erosion layer that provides equivalent protection from wind and water erosion as the erosion layer specified in (a)(2) of this section.	335-13-4-.20(2)(c)2.
(c) The owner or operator must prepare a written closure plan that describes the steps necessary to close all MSWLF units at any point during its active life in accordance with the cover design requirements in §258.60(a) or (b), as applicable. The closure plan, at a minimum, must include the following information:	335-13-4-.20(1)
(1) A description of the final cover, designed in accordance with §258.60(a) and the methods and procedures to be used to install the cover;	335-13-4-.20(1)(a)

PART 258 CRITERIA §258.60 CLOSURE CRITERIA (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(2) An estimate of the largest area of the MSWLF unit ever requiring a final cover as required under §258.60(a) at any time during the active life;	335-13-4-.20(1)(b)
(3) An estimate of the maximum inventory of wastes ever on-site over the active life of the landfill facility; and	335-13-4-.20(1)(c)
(4) A schedule for completing all activities necessary to satisfy the closure criteria in §258.60.	335-13-4-.20(1)(d)
(d) The owner or operator must notify the State Director that a closure plan has been prepared and placed in the operating record no later than the effective date of this part, or by the initial receipt of waste, whichever is later.	335-13-4-.20(1) 335-13-4-.29(1)(b)3. 335-13-4-.29(2)
(e) Prior to beginning closure of each MSWLF unit as specified in §258.60(f), an owner or operator must notify the State Director that a notice of the intent to close the unit has been placed in the operating record.	335-13-4-.20(5)
(f) The owner or operator must begin closure activities of each MSWLF unit no later than 30 days after the date on which the MSWLF unit receives the known final receipt of wastes or, if the MSWLF unit has remaining capacity and there is a reasonable likelihood that the MSWLF unit will receive additional wastes, no later than one year after the most recent receipt of wastes. Extensions beyond the one-year deadline for beginning closure may be granted by the Director of an approved State if the owner or operator demonstrates that the MSWLF unit has the capacity to receive additional wastes and the owner or operator has taken and will continue to take all steps necessary to prevent threats to human health and the environment from the unclosed MSWLF unit.	335-13-4-.20(6)

PART 258 CRITERIA §258.60 CLOSURE CRITERIA (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(g) The owner or operator of all MSWLF units must complete closure activities of each MSWLF unit in accordance with the closure plan within 180 days following the beginning of closure as specified in paragraph (f) of this section. Extensions of the closure period may be granted by the Director of an approved State if the owner or operator demonstrates that closure will, of necessity, take longer than 180 days and he has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed MSWLF unit.	335-13-4-.20(7)
(h) Following closure of each MSWLF unit, the owner or operator must notify the State Director that a certification, signed by an independent registered professional engineer or approved by Director of an approved State, verifying that closure has been completed in accordance with the closure plan, has been placed in the operating record.	335-13-4-.20(8)
(i)(1) Following closure of all MSWLF units, the owner or operator must record a notation on the deed to the landfill facility property, or some other instrument that is normally examined during title search, and notify the State Director that the notation has been recorded and a copy has been placed in the operating record.	335-13-4-.20(14) 335-13-4-.20(15)
(2) The notation on the deed must in perpetuity notify any potential purchaser of the property that:	335-13-4-.20(14)
(i) The land has been used as a landfill facility; and	335-13-4-.20(14)(a)
(ii) Its use is restricted under §258.61(c)(3).	335-13-4-.20(14)(b)
(j) The owner or operator may request permission from the Director of an approved State to remove the notation from the deed if all wastes are removed from the facility.	335-13-4-.20(16)

PART 258 CRITERIA §258.61 POST-CLOSURE CARE REQUIREMENTS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Following closure of each MSWLF unit, the owner or operator must conduct post-closure care. Post-closure care must be conducted for 30 years, except as provided under paragraph (b) of this section, and consist of at least the following:	335-13-4-.20(9)
(1) Maintaining the integrity and effectiveness of any final cover, including making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the final cover;	335-13-4-.20(9)(a) 335-13-4-.20(9)(b) 335-13-4-.20(9)(c) 335-13-4-.20(9)(d)
(2) Maintaining and operating the leachate collection system in accordance with the requirements in §258.40. The Director of an approved State may allow the owner or operator to stop managing leachate if the owner or operator demonstrates that leachate no longer poses a threat to human health and the environment;	335-13-4-.20(9)(g) The State Regulations do not provide for discontinuing the management of leachate and are, therefore, more stringent.
(3) Monitoring the groundwater in accordance with the requirements of subpart E of this part and maintaining the groundwater monitoring system, if applicable; and	335-13-4-.20(9)(g)
(4) Maintaining and operating the gas monitoring system in accordance with the requirements of §258.23.	335-13-4-.20(9)(g)
(b) The length of the post-closure care period may be:	335-13-4-.20(10)
(1) Decreased by the Director of an approved State if the owner or operator demonstrates that the reduced period is sufficient to protect human health and the environment and this demonstration is approved by the Director of an approved State; or	335-13-4-.20(10)(a)

PART 258 CRITERIA §258.61 POST-CLOSURE CARE REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(2) Increased by the Director of an approved State if the Director of an approved State determines that the lengthened period is necessary to protect human health and the environment.	335-13-4-.20(10)(b)
(c) The owner or operator of all MSWLF units must prepare a written post-closure plan that includes, at a minimum, the following information:	335-13-4-.20(11)
(1) A description of the monitoring and maintenance activities required in §258.61(a) for each MSWLF unit, and the frequency at which these activities will be performed;	335-13-4-.20(11)(a)
(2) Name, address, and telephone number of the person or office to contact about the facility during the post-closure period; and	335-13-4-.20(11)(b)
(3) A description of the planned uses of the property during the post-closure period. Post-closure use of the property shall not disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the monitoring systems unless necessary to comply with the requirements in this part 258.	335-13-4-.20(11)(c) 335-13-4-.20(12)
The Director of an approved State may approve any other disturbance if the owner or operator demonstrates that disturbance of the final cover, liner or other component of the containment system, including any removal of waste, will not increase the potential threat to human health or the environment.	335-13-4-.20(12) 335-13-4-.20(12)(a) 335-13-4-.20(12)(b)

PART 258 CRITERIA §258.61 POST-CLOSURE CARE REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(d) The owner or operator must notify the State Director that a post-closure plan has been prepared and placed in the operating record no later than the effective date of this part, October 9, 1993, or by the initial receipt of waste, whichever is later.	335-13-4-.20(11) 335-13-4-.29(1)(b)3. 335-13-4-.29(2)
(e) Following completion of the post-closure care period for each MSWLF unit, the owner or operator must notify the State Director that a certification, signed by an independent registered professional engineer or approved by the Director of an approved State, verifying that post-closure care has been completed in accordance with the post-closure plan, has been placed in the operating record.	335-13-4-.20(13)

§§258.62 - 258.69 [Reserved]

ATTACHMENT G

State Statutes
Proposed State Regulations with Summary

SUMMARY OF REGULATIONS/CHANGES PROPOSED FOR DIVISION 13

SOLID WASTE PROGRAM, ADEM ADMINISTRATIVE CODE

ADEM is updating its Administrative Code to reflect changes in the federal requirements for solid waste promulgated October 9, 1991 for RCRA, Subtitle D, 40 CFR 258. These regulations are effective October 9, 1993. The federal rules set forth minimum federal criteria for municipal solid waste landfills (MSWLFs), including location restrictions, facility design and operating criteria, groundwater monitoring requirements, corrective action requirements, financial assurance requirements, and closure and post-closure care requirements.

On May 10, 1993, the USEPA announced plans to propose a rule and take public comment on a 3-part extension to certain effective dates in Subtitle D. In general, the USEPA's proposal will include:

1. a 6 month extension for all facilities of the basic effective date (from 10/9/93 to 4/9/94). The USEPA stated that this proposal would provide enough time for the USEPA to approve the landfill permit programs of nearly all states, thus ensuring that a landfill would comply with one set of rules. Without such an extension, some landfills might be operating under both the USEPA Criteria and different state regulations, creating confusion and uncertainty.

2. an additional extension which approved states could grant at their discretion to a narrow set of facilities, e.g., in communities which have a record of making good faith efforts to establish a new site but which need a modest amount of extra time to finish the permit process. The USEPA is considering a range of 6 to 12 months for this additional extension period.

3. a one year extension of the effective date of the financial assurance requirements (from 4/9/94 to 4/9/95). The USEPA initially delayed the effective date of the financial requirements to 4/9/94, in order to allow for the completion of a rulemaking providing a "financial test" as an alternative, less costly financial mechanism for many local governments and corporations. This rulemaking has taken longer than expected, resulting in the need for an extra period of time before the financial requirements take effect.

ADEM proposes to extend the October 9, 1993 effective date if promulgated by the USEPA. Language tracking the USEPA's effective date is provided in the proposed ADEM regulations. ADEM invites public comment on the USEPA's proposal and the proposed changes to ADEM's existing regulations.

ADEM proposes to adopt Subtitle D in its entirety, except financial assurance. ADEM does not have statutory authority for financial assurance under existing law.

Attached is a summary of changes to existing regulations proposed by ADEM that are unique to the State of Alabama. Other proposed changes were made to conform to the federal requirements for Municipal Solid Waste Landfills.

A copy of the specific checklists comparing the proposed ADEM regulations with the federal Subtitle D requirements is available for $3.00.

Proposed Specific State Changes

Chapter 335-13-1 - General Provisions

1. 335-13-1-.03 Definitions - New definitions in addition to those under Subtitle D are:
   Construction/Demolition Landfill Unit (C/DLF)
   Foundry Sand
   Industrial Landfill Unit (ILF)
   Landfill Unit (LF)
   Operating Record
   Petroleum Contaminated Waste (PCW)
   Structural Components.
   Maximum Contaminate Level (MCL)
   Speculative Accumulation

   Existing definitions modified for clarity are:
   Agency
   Ashes
   Beach
   Cell
   Construction/Demolition Waste
   Industrial Solid Waste
   Medical Waste Facility
   Permit
   Rubbish

2. 335-13-1-.11 General - Delete references to Health Department and Rule 335-13-1-.12.

3. 335-13-1-.12 Exceptions - Delete rule and reserve. This Rule conflicts with Subtitle D. Under Alabama law, drilling waste is not a solid waste; therefore, this exception is removed.

4. 335-13-1-.13 Open Dump or Unauthorized Dump Closing - Adds requirement for land deed notation when land used as a solid waste disposal area.

Chapter 335-13-4 - Permit Requirements

1. 335-13-4-.01 - Solid Waste Disposal Siting Standards.

   (4)(a) Clarifies the existing 5 foot separation requirement between the groundwater table and/or bedrock and the bottom of the liner system or unlined cell.

2. 335-13-4-.12 - Plans Required.

   (1) Changes existing land use and zoning identification from 1400 feet to 5280 feet (1 Mile).

2. 335-13-4-.12 - Plans Required. (Continued)

(5) Changes the existing requirement of boundary plat and legal property description to be signed and sealed by a land surveyor for the boundary of the facility and disposal area of the facility.

(7) Adds the requirement of design calculations for sediment control basins, etc.

(11) Adds the requirement of a clear presentation and discussion of daily operations for treatment and storage in addition to disposal activities.

(15) Adds the requirement of a quality assurance/ quality control (QA/QC) plan for all components of liner, leachate collection, and cap systems.

(16) Adds the requirement of the groundwater monitoring plan which supports Rule 335-13-4-.14.

(17) Adds the requirement of the explosive gas monitoring plan which supports Rule 335-13-4-.16.

3. 335-13-4-.13 - Site Geology and Hydrology.

(2)(a) Clarifies the existing subparagraph to change the first zone of saturation to first saturated zone.

4. 335-13-4-.14 - Groundwater Resources.

(3)(b) Changes existing subparagraph to include the requirement that ADEM approve the design of monitoring wells.

5. 335-13-4-.15 - Cover. - Modified for clarity.

6. 335-13-4-.16 - Explosive Gases.

(6)(b) Changes the frequency of gas monitoring to be quarterly for MSWLFs.

(6)(b)2. Adds the requirement that levels of gas detected should be expressed in percent volume, as well as percent LEL.

Chapter 335-13-4 - Permit Requirements (Continued)

6. 335-13-4-.16 - Explosive Gases. (Continued)

   (6)(d) Adds new subparagraph to establish distances for gas monitoring points, monitoring locations, type of acceptable equipment and minimum depth of monitoring structures.

7. 335-13-4-.17 - Drainage.

   (1)-(3) Clarifies existing Rule to require run-on/run-off control structures for closed portions of the landfill as well as the active portions.

8. 335-13-4-.18 - Liners.

   (4)(a) ADEM proposed to be more stringent in requiring that flexible membrane liner (FML) thickness be at least 40 mil, instead of the 30 mil required by the USEPA, unless the FML is HDPE, which requires 60 mil.

   (5)(d) Modified for clarity.

   (6)(c) Modified for clarity.

9. 335-13-4-.20 Closure and Post-Closure. - ADEM's regulations have traditionally required closure and post-closure for all LFs, not just MSWLFs. This continues to be required. This Rule is clarified in the following ways:

   (3)(d) Clarifies the minimum final grade for the final cover system.

   (4) Prohibits deep rooted vegetation as vegetative cover.

   (12) Allows post-closure disturbance of final cap with Departmental approval.

   (17) Requires detail design drawings for closure of existing and proposed LF units.

10. 335-13-4-.21 General Operational Standards for Disposal.

   (3)(a)6. Adds the requirement of the identification of all special waste transporters.

Chapter 335-13-4 - Permit Requirements (Continued)

10. 335-13-4-.21 General Operational Standards for Disposal. (Continued)

    (7) Adds the requirement of measuring or weighing devices for all MSWLF and ILF units accepting solid waste not generated by the permittee.

11. 335-13-4-.22 Specific Requirements for Municipal Solid Waste Landfills.

    (2) Clarifies and redefines operating slope of active face.

12. 335-13-4-.23 Specific Requirements for Construction/Demolition Landfills and Industrial Landfills. - Clarifies the term "landfill" to include C/DLFs and ILFs.

    (1)(a) Clarifies the requirement that cover should be provided to control disease vectors, fires, odors, blown litter, and scavenging.

    (1)(b) Adds subparagraph to reaffirm that final closure is required in accordance with 335-13-4-.20.

    (2) Modifies paragraph for clarity to provide that waste should be compacted daily.

    (3) Modifies paragraph to clarify the term "slope".

    (5) Modifies paragraph for clarity.

    (14) Modifies paragraph for clarity.

    (16) Adds new paragraph that requires daily volume records for C/DLFs and ILFs and submittal of quarterly reports.

    (17) Adds new paragraph that requires measures to be taken at C/DLFs and ILFs to prevent the breeding or accumulation of disease vectors.

    (18)-(19) Adds new paragraphs that address free liquids restrictions and large container restrictions for C/DLFs and ILFs.

    (20) Changes former paragraph (16) to paragraph (20).

13. 335-13-4-.26 <u>Requirements for Management and Disposal of Special Waste.</u>

(3) Adds a paragraph to address possible exemptions from permitting for certain foundry sands.

(4) Adds a paragraph to address disposal requirements for petroleum contaminated wastes.

(5) Adds a paragraph to address disposal of municipal solid waste ash.

14. 335-13-4-.27 <u>Groundwater Monitoring and Corrective Action.</u>

(1) Adds the requirement of groundwater monitoring and corrective action for all MSWLFs as well as for C/DLFs and ILFs, where specified.

(2) ADEM will continue to require the establishment of the first saturated zone as opposed to the uppermost aquifer for monitoring.

(3) Adds paragraph to allow that groundwater monitoring requirements may be waived for C/DLFs or ILFs when approved by ADEM.

(4)(a)&(b) Establishes October 9, 1993; or the effective date of §251.1 of 40 CFR 258, Solid Waste Disposal Criteria, whichever is later; as the deadline for groundwater monitoring, rather than the USEPA's schedule. Existing regulations presently require groundwater monitoring.

(5) Adds the requirement that C/DLFs and ILFs conduct groundwater monitoring throughout the active life and post-closure care period.

(7) Adds paragraph to require that the groundwater monitoring system to be installed in the first saturated zone, rather than the uppermost aquifer as specified in §258.51.

(9)(c)1.-5. Adds paragraph to establish procedures and requirements for abandonment of wells and bore holes.

Chapter 335-13-5 - Procedures for Obtaining Permits

1. 335-13-5-.02 - Permit Application. Modified to include additional requirements regarding permit applications that have been mandated by Legislative Act 89-824 and by recent court decisions. This regulation is also being modified to include the effect of non-compliance or permitting activities that will make Division 13 consistent with other Divisions of ADEM's Administrative Code.

2. 335-13-5-.03 - Public Notice Procedures. Modified for clarity.

3. 335-13-5-.04 - Public Hearing Procedures. Modified for clarity.

4. 335-13-5-.05 and 335-13-5-.06 - Modified to separate permit modification procedures into a new Rule under 335-13-5-.06 for clarity. 335-13-5-.05 is being renamed Permit, Denial, Suspension, or Revocation.

5. 335-13-5-.07 - Transfer of Permit. Renumbered and modified for clarity.

6. 335-13-5-.08 - Vertical Expansion. New Rule which establishes vertical expansion applications for operations past October 8, 1993 and establishes criteria for approving or denying vertical operation requests.

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Land Division - Solid Waste Program

Division 335-13

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ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
LAND DIVISION - SOLID WASTE PROGRAM

CHAPTER 335-13-1
GENERAL PROVISIONS

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335-13-1-.01 Purpose. The purpose of this Division is to establish minimum criteria for use under the Act, as amended, for the processing, recycling and disposal of solid waste and the design, location and operation of solid waste disposal facilities.
Author:
Statutory Authority: Code of Alabama 1975, §22-27-7.
History: November 18, 1981; Amended: July 21, 1988.

335-13-1-.02 Statutory Authority. The Department is authorized to promulgate these rules and regulations under and by virtue of authority granted in the Code of Alabama 1975, §§22-27-7, 22-22A-5 and 22-22A-8.
Author:
Statutory Authority: Code of Alabama 1975, §§22-27-7, 22-22A-5 and 22-22A-8.
History: November 18, 1981; Amended: July 21, 1988.

335-13-1-.03 Definitions. For the purpose of these rules and regulations, the following words and phrases shall have the meanings ascribed to them in this Rule and as ascribed by law unless the context of the regulations indicate differently.

Act - the "Solid Waste Disposal Act", Act No. 771 (Regular Session, 1969), as amended by Act No. 2247 (Regular Session, 1971) Code of Alabama 1975, §22-27-1 et. seq.

Active life - the period of operation beginning with the initial receipt of solid waste and ending at completion of closure activities in accordance with the applicable requirements of Rule 335-13-4-.20.

Active portion - that part of a facility or unit that has received or is receiving wastes and that has not been closed in accordance with the applicable requirements of Rule 335-13-4-.20.

Agency - any controlling agency, public or private, elected, appointed or volunteer utilizing methods approved by the State Health Department, for ~~the purpose of controlling and supervising the collection and/or disposal of solid waste~~supervising the collection of solid wastes, and the Department, for controlling the disposal of solid wastes. (Act 1969, No. 771, p. 1373, §1.)

Ambient - normal atmospheric conditions.

Animal Carcasses - see Medical Waste.

Annular Space of a Well - the space between the bore hole and the casing.

Aquifer - a geologic formation, group of formations or part of a formation capable of yielding a significant amount of groundwater to wells, springs or waters of the State.

Airport - public-use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.

Areas Susceptible To Mass Movement - those areas of influence (i.e., areas characterized as having an active or substantial possibility of mass movement) where the movement of earth material at, beneath, or adjacent to the landfill unit, because of natural or man-induced events, results in the downslope transport of soil and rock material by means of gravitational influence. Areas of mass movement include, but are not limited to, landslides, avalanches, debris slides and flows, soil fluctuation, block sliding, and rock fall.

Ashes - the solid residue from burning of wood, coal, coke or other combustible material used for heating or the burning or ~~from~~ incineration of solid wastes. The terms "solid waste", "garbage", and "ash", as defined in this Chapter, do not include fly ash waste, bottom ash waste, boiler slag waste, or flue gas emission control waste which result from the combustion of coal or other fossil fuels at electric or steam generating plants~~,~~ ~~but excepting solid residue, the storage or disposition of which is controlled by other agencies~~.

ASTM - American Society for Testing and Materials. A technical society with headquarters located at 1916 Race Street, Philadelphia, Pennsylvania, 19103, which publishes national standards for the testing and quality assurance of materials.

~~Base Flood---a flood that has a one percent or greater chance of recurring in any year or a flood of a magnitude equalled or exceeded once in 100 years on the average over a significantly long period.~~

Beach - a sandy shoreline area characterized by low relief, generally of gentle slope, and some vegetation. The beach extends from the waterline to a change in physiographic form such as a dune or bluff, a change in sediment type, such as clay from sand, and/or a change in vegetation type. Gulf Beaches are those sand beaches of the mainland and islands in Alabama which are subjected to the direct wave action of the Gulf of Mexico. The upper limit of Gulf beaches is usually a transition from halophytic, succulent, prostrate plant forms such as *Hydrocotyl bonariensis* (pennywort), *Cakile epentula* (sea rocket), *Iva imbricata* (~~no common name~~ sump weed or marsh elder), and *Ipomoea stolonifera* (seaside morning glory) to a zone occupied by grasses, shrubs, and the same prostrate forms mentioned above. Some grasses indicative of this transition are *Uniola paniculata* (sea oats), *Spartina patens* (saltmeadow cordgrass), *Panicum amarulum* (dune panicgrass), and *Distichlis spicata* (saltgrass). Shrubs found at this transition are *Solidago paucifloscculosa* (seaside goldenrod), *Ceratiola ericoides* (seaside rosemary), *Ilex vomitaria* (yaupon), *Quercus virginica var. maritima* (live oak), and *Myrica cerifera* (waxmyrtle). Estuarine beaches are narrow, low energy beaches occurring along the protected margins of Mobile Bay, Perdido Bay, Mississippi Sound, and their various tributaries. The upper limit of estuarine beaches in Alabama can be distinguished easily by any or all of the three boundaries mentioned previously, that is a change in physiographic form, a change in sediment type, or a change in vegetation type.

Biological Waste - see Medical Waste.

Bird Hazard - an increase in the likelihood of bird/ ~~and~~ aircraft collisions that may cause damage to the aircraft or injury to its occupants.

Bladeable - the physical condition of a sludge or similar waste. Physical conditions include, but are not limited to, the absence of free liquids and of a consistency that can be easily managed by heavy equipment normally utilized at a disposal facility.

Bore Hole - a man-made hole in a geological formation which has been drilled, jetted, driven or made by other similar techniques.

Cell - a ~~unit~~ volume of compacted solid waste that is ~~enclosed~~ covered by means of compacted earth or some other approved alternative cover usually on a daily or weekly basis in a disposal facility.

Certification - a statement of professional opinion based upon knowledge and belief.

CFR - Code of Federal Regulations.

Chemotherapy Waste - see Medical Waste.

Closure - the process by which a disposal facility permanently ceases to accept waste, to include those actions taken by the permittee or owner of the facility to prepare the site for post-closure monitoring and maintenance or to make it suitable for other uses.

Coastal Area - coastal waters (including the lands therein and thereunder) and the adjacent shorelands (including the waters therein and thereunder) strongly influenced by each and in proximity to the shorelines of Alabama, and includes transitional and intertidal areas, salt marshes, wetlands, and beaches. The area extends seaward to the outer limit of the United States territorial sea and extends inland from the shorelines only to the extent necessary to control shorelands, the uses of which have a direct and significant impact on the coastal waters. The inland boundaries of the coastal area are described as follows: begin at the southernmost point on the Mississippi-Alabama state line where the land surface elevation reaches 10 feet above mean sea level and continue in a general easterly direction along the 10-foot contour to the proximity of Mobile Bay; continue in a northerly direction on the 10-foot contour along the

western shore of Mobile Bay and the Mobile River delta to the north line of Mobile County; thence southeastward along the north line of Mobile County to the intersection with the Baldwin County lines in the Mobile River; thence along the west and north lines of Baldwin County in the Mobile and Alabama Rivers to the intersection of the southwest corner of Monroe County; thence eastward along the Baldwin County line to the intersection of the westernmost point of Baldwin County where the land surface altitude reaches 10 feet above mean sea level; thence along the 10-foot contour in a southwesterly and southern direction along the Alabama River, the Mobile River delta and the east shore of Mobile Bay to the proximity of Bon Secour; thence continue along the 10-foot contour in an easterly and northeasterly direction to the Alabama-Florida state line.

Coastal Waters - those waters adjacent to the shoreline, which contain a measurable quantity or percentage of seawater, including but not limited to, sounds, bays, lagoons, bayous, ponds and estuaries.

Commercial Medical Waste Treatment Facility - a facility, other than an incinerator, used to treat more than 220 pounds of medical waste per month.

Commercial Solid Waste - all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial wastes.

Composite Liner - a system consisting of two components; the upper component must consist of a minimum 40 mil flexible membrane liner (FML), and the lower component must consist of at least a two-foot layer of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} cm/sec. FML components consisting of High Density Polyethylene (HDPE) shall be at least 60 mil thick. The FML component must be installed in direct and uniform contact with the compacted soil component.

Composting or Compost Plant - an officially controlled method or operation whereby putrescible solid wastes are broken down through microbic action to a material offering no hazard or nuisance factors to public health or well-being.

Construction/Demolition Landfill Unit (C/DLF) - a discrete area of land or an excavation that receives construction/demolition waste, and/or rubbish and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined in this Rule.

Construction/Demolition Waste - waste building materials, packaging, and rubble resulting from construction, remodeling, repair, or demolition operations on pavements, houses, commercial buildings, and other structures. Such wastes include, but are not limited to, ~~bricks, concrete, other~~ masonry materials, sheet rock, roofing waste, insulation (not including asbestos) ~~soil, rocks,~~ rebar, scrap metal, paving materials, and wood products~~,~~. ~~all being materials which constitutes rubbish.~~ Uncontaminated concrete, soil, brick, rock, and similar materials are excluded from this definition.

Container - any portable device in which a material is stored, transported, treated, disposed of or otherwise handled. The term container, when describing the packaging requirements, does not include items that are classified as medical waste.

Contingency Plan - a document setting out an organized, planned and coordinated course of action to be followed in case of a fire, explosion or release of solid waste or medical waste which could threaten human health or the environment.

Decontamination - a process of reducing or eliminating the presence of harmful substances, such as infectious agents, so as to reduce the likelihood of disease transmission from those substances.

Department - the Alabama Department of Environmental Management as established by Code of Alabama 1975, §22-22A-4.

Destruction or Adverse Modification - a direct or indirect alteration of critical habitat which appreciably diminishes the likelihood of the survival and recovery of threatened or endangered species using that habitat.

Director - the Director of the Alabama Department of Environmental Management, appointed pursuant to Code of Alabama 1975, §22-22A-4, or his designee.

Discarded Material - material thrown away, abandoned, disposed of, or otherwise given up without intent to reuse or reclaim.

Disease Vector - an organism that is capable of transmitting a disease from one host to another.

Displacement - the relative movement of any two sides of a fault measured in any direction.

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

Disposal Facility - the location of a disposal site where any ultimate disposal of solid waste occurs.

Drill Cuttings - solid materials generated by subsurface drilling operations.

Drilling Fluids - any fluid used in drilling operations that is sent down the well bore, including drilling muds and any specialty products, from the time a well is begun until final cessation of drilling in that well.

Dune - (see definition of primary dune system)

Endangered or Threatened Species - any species listed as such pursuant to Section 4 of the Endangered Species Act.

Engineer - a person currently registered as a professional engineer with the State of Alabama Board of Registration for Professional Engineers and Land Surveyors.

Existing MSWLF Unit - any municipal solid waste landfill (MSWLF) unit that is receiving solid waste as of October 9, 1993, or the effective date of §258.1 of 40 CFR 258, Solid Waste Disposal Criteria, whichever is later. Waste placement in existing units must be consistent with past operating practices or modified practices to ensure good management.

Explosive Gas - a gas that is explosive under ordinary conditions as used herein generally refers to methane (CH_4).

Facility - all contiguous land, structures and other appurtenances thereto used for the processing, treatment or disposal of solid waste, including waste disposal areas and waste disposed therein.

Facility Structures - any buildings and sheds or utility or drainage lines on the facility.

Fault - a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side.

Floodplain - the lowland and relatively flat areas adjoining inland and coastal waters, including floodprone areas of offshore islands, which are inundated by the ~~base~~ 100-year flood.

Foundry Sand - granular particles composed of grains of mineral matter ranging from 2 mm to 0.5 mm in diameter used for molding in a metal casting process.

Free Liquids - liquids which readily separate from the solid portion of a waste under ambient temperature and pressure.

Garbage - putrescible animal and vegetable waste resulting from the handling, preparation, cooking and consumption of food, including, but not limited to, waste from markets, storage facilities, handling and sale of produce and other food products.~~-and-excepting-such materials-that-may-be-serviced-by-garbage-grinders-and handled-as-household-sewage~~.

Gas Condensate - the liquid generated as a result of the gas collection and recovery process at the disposal facility.

Generator - any person who utilizes any process which results in the production of solid waste.

Groundwater - water below the land surface in the zone of saturation.

Hazardous Waste - defined in the same manner as that term is defined in the Alabama Hazardous Wastes Management and Minimization Act, Code of Alabama 1975, §22-30-3(5) and the regulations promulgated thereunder.

Holocene - the most recent epoch of the Quaternary period, extending from the end of the Pleistocene Epoch to the present.

Household Waste - any solid waste including garbage, trash and sanitary waste in septic tanks derived from households including, but not limited to, single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, parks, campgrounds, picnic grounds, and day-use recreation areas.

Incinerator or Combustion Unit - any equipment, device, or contrivance and all appurtenances thereof used for the destruction by burning of solid, semi-solid, liquid, or gaseous combustible waste.

Industrial Landfill (ILF) Unit - a discrete area of land or an excavation that receives industrial solid waste and may in addition receive construction/demolition waste and/or rubbish and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined in this Rule.

Industrial Solid Waste - solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under Subtitle C of RCRA. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: Electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include fly ash waste, bottom ash waste, boiler slag waste, or flue gas emission control waste which result from the combustion of coal or other fossil fuels at electric or steam generating plants. Additionally, this term does not include mining waste or oil and gas wastes, or small quantity generator waste as defined in Rule 335-14-2-.01(5). Uncontaminated concrete, soil, brick, rock, and similar materials are excluded from this definition.

~~Industrial-Waste---solid-waste-generated-by manufacturing-or-industrial-processes.--Such-waste-may include,-but-is-not-limited-to-the-following-manufacturing processes:--electric-power-generation,-organic-and inorganic-chemicals,-iron-and-steel,-leather-products, non-ferrous-metals-manufacturing/foundries,-plastics-and-~~

~~resins,-pulp-and-paper-industry,-stone,-glass,-clay-and concrete-products,-textiles,-and-water-treatment.~~

Infectious Agent - any organism (such as a virus or a bacterium) that is capable of causing disease or adverse health impacts in humans by invasion and multiplication in body tissues, fluids or secretions.

Infectious Waste - see Medical Waste.

Injection Well - a bored, drilled, or driven shaft or dug hole which is used for the injection of pollutants.

Isolation Waste - see Medical Waste.

International Biological Hazard Symbol - A symbol used to identify Infectious or Medical Waste as depicted below.

Karst Terrains - areas where karst topography, with its characteristic surface and subterranean features, is developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in karst terrains include, but are not limited to, sinkholes, sinking streams, caves, large springs, and blind valleys.

Laboratory Waste - see Medical Waste.

Land Application Unit - an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for agricultural purposes or for treatment and disposal.

Landfill (LF) - ~~a-method-of-compaction-and-earth cover-of-solid-wastes-other-than-those-containing-garbage or-other-putrescible-wastes,-including,-but-not-limited to,-tree-limbs-and-stumps,-demolition-material, incinerator-residues-and-like-materials-not-constituting-a health-or-nuisance-hazard,-where-cover-need-not-be-applied on-a-per-day-used-basis.~~an area of land or an excavation in which wastes are placed for disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined in this Rule.

Landfill (LF) Unit - this term shall include MSWLF, C/DLF, ILF units.

Land Surveyor - a person currently registered as a land surveyor with the State of Alabama Board of Registration for Professional Engineers and Land Surveyors.

Lateral Expansion - a horizontal expansion of the waste boundaries of an existing LF unit.

Leachate - any liquid, including any soluble, suspended or miscible components in the liquid, that has percolated through or emerged from solid waste.

Leachate Recirculation - the recycling or reintroduction of leachate into or on a disposal facility constructed with liners and leachate collection systems.

Lift - the compacted vertical thickness of a horizontal series of cells which have been accumulated and covered with earth or some other approved alternative cover. The cover may be either daily, weekly, intermediate, or final as required.

Liquid Waste - any waste material that is determined to contain "free liquids" as defined by Method 9095 (Paint Filter Liquids Test), as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Pub. No. SW-846), and is not considered bladeable.

Lithified Earth Material - all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock that formed by crystallization of magma or by induration of loose sediments. This term does not include man-made materials, such as fill, concrete, and asphalt, or unconsolidated earth materials, soil, or regolith lying at or near the earth surface.

Local Health Officer - the County, District or Regional Health Officer of a Local Health Department elected in accordance with §22-3-2(5)-(16), Code of Alabama 1975, or his designee provided by law.

Lower Explosive Limit - the lowest percent by volume of a mixture of explosive gases which will propagate a flame in air at 25°C and atmospheric pressure. For Methane (CH_4) the LEL is considered to be 5 percent.

Maximum Horizontal Acceleration in Lithified Earth Material - the maximum expected horizontal acceleration depicted on a seismic hazard map, with a 90 percent or greater probability that the acceleration will not be exceeded in 250 years, or the maximum expected horizontal acceleration based on a site-specific seismic risk assessment.

Maximum Contaminant Level (MCL) - maximum permissible levels of contaminants allowed in the saturated zone unless occurring naturally or found to already exist during background sampling.

Medical Waste - medical waste shall mean the following:

(a) Animal Waste - carcasses and body parts of animals exposed to human infectious agents as a result of the animal being used for the production and/or testing of biologicals and pharmaceuticals or in research. Bulk blood, blood components and potentially infectious body fluids from these animals shall be handled as specified in (b) for human blood and body fluids. All materials discarded from surgical procedures involving these animals which are grossly contaminated with bulk blood, blood components, or body fluids shall be treated as specified in (g) surgical waste.

(b) Blood and Body Fluids - all human bulk blood, bulk blood components (serum and plasma, for example), and bulk laboratory specimens of blood, tissue, semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, and amniotic fluid. Precautions do not apply to feces, nasal secretions, sputum, sweat, tears, urine or vomitus unless they contain visible blood. Free-flowing material or items saturated to the point of dripping liquids containing visible blood or blood components would be treated/handled as bulk blood and bulk blood components.

(c) Microbiological Waste - discarded cultures and stocks of human infectious agents and associated microbiologicals; human and animal cell cultures from medical and pathological laboratories; cultures and stocks of infectious agents from research and industrial laboratories; waste from the production of biologicals; discarded live and attenuated vaccines; culture dishes and devices used to transfer, inoculate and mix cultures. Only those animal vaccines which are potentially

infectious to humans (Strain 19 Brucellosis Vaccine, Feline Pneumonitis Vaccine, contagious Eczema Vaccine for Sheep, Newcastle Disease Vaccine, Anthrax Spore Vaccine, and Venezuelan Equine Encephalitis Vaccine) shall be considered microbiological waste.

(d) Pathological Waste - all discarded human tissues, organs, and body parts which are removed during surgery, obstetrical procedures, autopsy, laboratory, embalming, or other medical procedures, or traumatic amputation. Extracted teeth are not included in this definition.

(e) Renal Dialysis Waste - all liquid waste from renal dialysis contaminated with peritoneal fluid or with human blood visible to the human eye. Solid renal dialysis waste is considered medical waste if it is saturated, having the potential to drip or splash regulated blood or body fluids contained in (b) above.

(f) Sharps - any used or unused discarded article that may cause punctures or cuts and which has been or is intended for use in animal or human medical care, medical research, or in laboratories utilizing microorganisms. Such waste includes, but is not limited to, hypodermic needles, IV tubing with needles attached, scalpel blades, and syringes (with or without a needle attached). Items listed above that have been removed from their original sterile containers are included in this definition. Glassware, blood vials, pipettes, and similar items are to be handled as sharps if they are contaminated with blood or body fluids.

(g) Surgical Waste - all materials discarded from surgical procedures which are contaminated with human bulk blood, blood components, or body fluids, including but not limited to, disposable gowns, dressings, sponges, lavage tubes, drainage sets, underpads, and surgical gloves. Discarded surgical material is considered medical waste if it is saturated, having the potential to drip or splash regulated blood or body fluids contained in (b) above. Extracted teeth are not included in this definition.

Medical Waste Facility - all contiguous land and structures, other appurtenances, and improvements on the land used for treating, destroying, or storing ~~or disposing~~ of medical waste. A facility may consist of several treatment, destruction, or storage ~~or disposal~~ units.

Medical Waste Generator - a medical facility or person who produces or generates medical waste. The term includes, but is not limited to hospitals, nursing or convalescent facilities, intermediate care facilities, clinics, dialysis clinics, blood banks, dental offices, surgical clinics, medical buildings, health maintenance organizations, home health agencies, physicians offices, laboratories, emergency medical services, veterinary clinics, research and manufacturing facilities, and funeral homes. In the case where more than one person (e.g., doctors with separate medical practices) is located in the same building, each individual business entity is a separate generator. In no case shall a person be classified as a medical waste generator if those wastes are generated from a single-family residential dwelling by someone other than a health care professional.

Medical Waste Storage - the containment of medical waste at the generating facility or some alternative place for a temporary or extended period of time at the end of which the waste is treated or stored elsewhere. Placing waste in a container at the point of generation such as a patient's room, operating room, or laboratory would not be considered as storage.

Medical Waste Storage Facility - a facility or part thereof at which medical waste is placed in storage. The storage facility includes loading docks and parking areas where shipments of medical waste are held during the normal course of transportation.

Medical Waste Transportation - the movement of medical waste after leaving the generator's building to any intermediate transfer points, and finally to the disposal facility. The mode of transport may be by air, highway, rail, or water.

Medical Waste Transporter - a person engaged in the off-site transportation of medical waste. A medical waste generator who generates less than 220 pounds (100 kilograms) of medical waste per month and transports his/her own waste is exempt from the transporter requirements.

Medical Waste Transport Vehicle - a motor vehicle, barge, airplane or rail car used for the transportation of medical waste by any mode. Each cargo-carrying body (trailer, railroad car, etc.) is a separate transport vehicle. A vehicle used to transport less than 220 pounds of medical waste per month is exempt.

Medical Waste Treatment - any process, including incineration or steam sterilization, which changes the character or composition of medical waste in order for decontamination to take place. Additional treatment measures may include melting, shredding, grinding, tearing, or breaking, so that it is no longer generally recognizable as medical waste.

Medical Waste Treatment Facility - a location at which medical waste is subjected to treatment.

Municipal Solid Waste Landfill (MSWLF) Unit - a discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined in this Rule. A MSWLF unit also may receive other types of solid wastes, such as commercial solid waste, nonhazardous sludge, industrial solid waste, construction/demolition waste and/or rubbish. Such a landfill may be publicly or privately owned. A MSWLF unit may be a new MSWLF unit, an existing MSWLF unit or a lateral expansion.

New MSWLF Unit - any municipal solid waste landfill unit that has not received waste prior to October 9, 1993, or the effective date of §258.1 of 40 CFR 258, Solid Waste Disposal Criteria, whichever is later.

Off-site - not a part of what is defined as on-site.

On-site - the same or geographically contiguous property which may be divided by public or private right-of-way. Non-contiguous properties owned by the same person connected by a right-of-way which he controls and to which the public does not have access, is also considered on-site property.

100-year flood - a flood that has a one percent or greater chance of recurring in any given year or a flood of a magnitude equalled or exceeded once in 100 years on the average over a significantly long period.

Open Burning - the combustion of any material without the following characteristics:

(a) Control of combustion air to maintain adequate temperature for efficient combustion.

(b) Containment of the combustion-reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion, and

(c) Control of emission of the gaseous combustion products.

Open Dump - any officially recognized place, land or building which serves as a final depository for solid wastes, whether or not burned or buried, which does not meet the minimum requirements for a ~~sanitary~~ landfill unit except approved incinerators, compost plants and salvage yards.

Operating Record - a collection of documents relating to the permitting or operation of any landfill unit as listed in 335-13-4-.29.

Operator - the person(s) responsible for the overall operation of a facility or part of a facility.

Owner - the person(s) who owns ~~in fee simple the property on which~~ a facility or part ~~or~~ of a facility ~~is sited~~.

Partial Closure - the closure of a discrete part of a facility in accordance with the applicable closure requirements of Rule 335-13-4-.20. For example, partial closure may include the closure of a trench, a unit operation, a landfill cell or a pit, while other parts of the same facility continue in operation or will be placed in operation in the future.

Pathological Waste - see Medical Waste.

Permit - written authorization granted to a person by the Department to operate a solid waste management ~~system~~ facility for the processing or disposal of solid waste.

Permittee - any person possessing a valid permit issued by the Department to process, recycle and/or dispose of solid waste or possess a permit to manage medical waste. This person is responsible for the overall operation of a solid waste facility or a medical waste facility.

Person - any individual, trust, firm, joint stock company, corporation (including a government corporation), partnership, association, State, municipality, commission, political subdivision of a state, any interstate body, or any other private or public legal entity.

Personnel - all persons who work at or supervise the operations of a waste facility, and whose actions or inactions are responsible for compliance with the requirements of this Division.

Petroleum Contaminated Waste (PCW) - any material, including but not limited to soil, debris, absorbent pads/booms, oil dry, etc., that has been exposed to petroleum products in such a manner that the petroleum product can be detected by a total petroleum hydrocarbon (TPH) analysis using Standard Method 503 D & E, EPA Methods 9071 or 418.1 Infra Red, and that analysis exceeds 10 ppm TPH.

Poor Foundation Conditions - those areas where features exist which indicate that a natural or man-induced event may result in inadequate foundation support for the structural components of a landfill unit.

Post Closure - the activities, including monitoring and maintenance at the site following closure if solid waste will remain at the site after closure.

Practice - any operating method, technique or procedure for the management of solid waste.

Primary Dune System - a ridge or series of ridges of unconsolidated and usually mobile sands lying landward of the upper limit of Gulf beaches which serves as the principal defense against storm wave attack. Vegetatively, this primary protective dune can be characterized by *Uniola paniculata* (sea oats), *Spartina patens* (saltmeadow cordgrass), *Panicum amarulum* (dune panicgrass), *Distichlis spicata* (saltgrass), *Solidago pauciflosculosa* (seaside goldenrod), *Hydrocotyl bonariensis* (pennywort), and *Ipomoea stolonifera* (seaside morning glory).

Qualified Groundwater Scientist - a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields as may be demonstrated by state registration, professional certifications, or completion of accredited university programs that enable that individual to make sound professional judgments regarding groundwater monitoring, contaminant fate and transport, and corrective-action.

Recycling - any process by which solid waste, or materials which would otherwise become solid waste, are collected, separated, or processed and reused or returned to use in the form of raw materials or products.

Regulated Hazardous Waste - a solid waste that is a hazardous waste, as defined in 335-14-2-.01(3), that is not excluded from regulation as a hazardous waste under 335-14-2-.01(4)(b).

Relevant Point of Compliance - shall be no more than 150 meters (492 feet) from the waste management unit boundary and shall be located on land owned by the owner of the landfill unit as specified by the Department.

Representative Sample - a sample of a universe or whole (e.g., waste pile, groundwater) which can be expected to exhibit the average properties of the universe or whole.

Rubbish - nonputrescible solid wastes, excluding ashes, consisting of both combustible and noncombustible wastes. Combustible rubbish includes paper, rags, cartons, wood, furniture, rubber, plastics, yard trimmings, leaves, stumps, limbs, and similar materials. Noncombustible rubbish includes glass, crockery, metal cans, metal furniture and like materials which will not burn at ordinary incinerator temperatures, not less than 1600 degree F. Uncontaminated concrete, soil, brick, rock, and similar materials are excluded from this definition.

Run-Off - any rainwater, leachate, or other liquid that drains over land from any part of a facility.

Run-On - any rainwater, leachate, or other liquid that drains over land onto any part of a facility.

Salvaging - the controlled removal for reuse of material from a solid waste disposal facility. All salvaging operations at the disposal facility shall be approved by the Department in advance.

~~Sanitary-Landfill---a-controlled-area-of-land-upon which-solid-waste-is-deposited-and-is-compacted-and covered-with-compacted-earth-each-day-as-deposited,-with no-on-site-burning-of-wastes,-and-so-located,-contoured and-drained-that-it-will-no-constitute-a-source-of-water pollution-as-determined-by-the-Water-Division-of-this Department.~~

Sanitary Sewer - any device or system used in the treatment of municipal sewage or industrial waste of a liquid nature. This includes sewers, pipes or other conveyances only if they convey wastewater to a facility providing treatment.

Saturated Zone - that part of the earth's crust in which all voids are filled with water.

Scavenging - the removal of solid waste, not approved by the Department, from a disposal facility permitted under these regulations.

Seismic Impact Zone - an area with a ten percent or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth's gravitational pull (g), will exceed 0.10 g in 250 years.

Service Area - the geographical area serviced by a solid waste facility from which solid waste is generated and collected, including any interim points, (i.e., transfer stations) at which the solid waste is repacked or reloaded onto vehicles or other methods of transport for delivery to that facility.

Sharps - see Medical Waste.

Sludge - any nonhazardous, solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.

~~Solid-Wastes---all-putrescible-and-nonputrescible discarded-materials,-except-household-sewage-and-livestock and-poultry-wastes-including,-but-not-limited-to-garbage, rubbish,-ashes,-street-and-highway-cleanings,-dead-animals including-offal,-abandoned-automobiles,-and-such industrial-wastes-as-are-not-controlled-by-other-agencies.~~

Solid Waste - any garbage, or rubbish, construction/demolition debris, ash, sludge from a wastewater treatment facility, water supply treatment plant, or air pollution control facility, and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations and from

community activities or materials intended for or capable of recycling, but which have not been diverted or removed from the solid waste stream. The term "solid waste" does not include recovered material, solid or dissolved materials in domestic sewage, solid or dissolved materials in irrigation return flows, or industrial discharges which are point sources subject to National Pollutant Discharge Elimination System permits under the Federal Water Pollution Control Act (33 U.S.C. 1342), as amended, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923). Also excluded from this definition are wastes from silvicultural operations, land application of crop residues, animal manure and ash resulting exclusively from the combustion of fossil fuels or wood during normal agricultural operations or mining refuse as defined an regulated pursuant to the Alabama Mining Act.

Solid Waste Boundary - the outermost perimeter of the solid waste, projected in the horizontal plane, as it would exist at completion of the disposal activity.

Special Waste - those waste requiring specific processing, handling or disposal techniques as determined necessary by the Department which are different from the techniques normally utilized for handling or disposal. Examples of such waste types may include, but are not limited to: mining waste; fly ash; bottom ash; sludges; ~~drilling fluids and drill cuttings;~~ asbestos; industrial waste; liquid waste; large dead animals or large quantities of dead animals and residue, medical waste, foundry sand, debris, petroleum contaminated wastes, or contaminated soil and water from the cleanup of a spill.

Speculative Accumulation - Solid waste stored or accumulated for a period exceeding one year shall ,unless permitted or approved by the Department or governing Agency with authority, constitute disposal and be subject to the Rules of this Division.

Spill - the unplanned, accidental or unpermitted discharge, deposit, injection, leaking, pumping, pouring, emitting, dumping, placing or releasing of solid or medical waste, or materials which when spilled become solid or medical waste, into or on the land, the air or the water.

State - the State of Alabama.

State Health Department - the Alabama Department of Public Health as defined by ~~Section~~ §22-2-1, Code of Alabama 1975.

State Health Officer - the Health Officer for the State of Alabama as set out in ~~Section~~ §22-2-8, Code of Alabama 1975, or his designee provided by law.

~~Storage---the containment of solid waste, either on a temporary basis or for a period of years, in such a manner as not to constitute disposal.~~

Structural Components - liners, leachate collection systems, final covers, run-on/run-off systems, and any other component used in the construction and operation of the landfill unit that is necessary for protection of human health and the environment.

Surface Impoundment or Impoundment - a facility or part of a facility that is a natural topographic depression, human-made excavation, or diked area formed primarily of earthen materials (although it may be lined with human-made materials), that is designed to hold an accumulation of liquid wastes or wastes containing free liquids and that is not an injection well. Examples of surface impoundments are holding storage, settling, and aeration pits, ponds and lagoons.

Surgical waste - see Medical Waste.

Taking - harassing, harming, pursuing, hunting, wounding, killing, trapping, capturing or collecting or attempting to engage in such conduct.

Ten Year, Twenty-Four Hour Precipitation Event - the maximum 24 hour precipitation event with a probable reoccurrence interval of once in ten years as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U. S", May 1961, and subsequent amendments or equivalent regional or rainfall probability information developed therefrom.

Unauthorized Dump - any collection of solid wastes either dumped or caused to be dumped or placed on any property either public or private, whether or not regularly used, and not under the control and supervision of any person or agency. An abandoned automobile, large appliance or similar large item of solid waste shall be considered as forming an unauthorized dump within the meaning of this ~~Act~~ Division, but not the careless

littering of smaller individual items as tires, bottles, cans and the like. An unauthorized dump shall also mean any solid waste disposal site which does not meet the regulatory provisions of this ~~Act~~ Division.

Unstable Area - a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components responsible for preventing releases from a landfill. Unstable areas can include poor foundation conditions, areas susceptible to mass movements, and karst terrains.

Uppermost Aquifer - the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

~~Vector---an-organism-that-is-capable-of-transmitting a-disease-from-one-host-to-another.-~~

Washout - the carrying away of solid waste or earth cover by waters of the base flood.

Waste Management Unit Boundary - a vertical surface located at the hydraulically downgradient limit of the unit. This vertical surface extends down into the uppermost aquifer.

Waste Pile or Pile - any noncontainerized accumulation of solid, non-flowing waste that is used for treatment or storage. Solid waste stored or accumulated for periods exceeding one year shall, unless permitted or approved by the Department or governing Agency with authority, constitute disposal.

Waters - all waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the State, natural or artificial.

Wetlands - those areas that are inundated or saturated by surface or groundwater (salt and fresh) at a frequency and duration sufficient to support, and/or under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Vegetation typically adapted to wetlands in Alabama include, but are not limited to, the following vegetative species and in addition their presence in significant quantities creates a presumption that the area is a wetland:

(a)	Saltmarsh	*Spartina alterniflora Juncus roemerianus*
(b)	Brackish-Mixed Marsh	*Juncus roemerianus* *Spartina cynosuroides* *Distichlis spicata Borrichia frutescens Scirpus spp.* *Spartina alterniflora* *Spartina patens*
(c)	Saltflat	*Salicornia sp.* *Batis maritima Distichlis spicata*
(d)	Fresh-Mixed Marsh	*Typha angustifolia* *Typha latifolia* *Sagittaria falcata Zizania aquatica Zizaniopsis miliacea Alternanthera philoxeroides* *Scirpus validus* *Scirpus americanus* *Orontium aquaticum* *Phragmites communis* *Cladium jamaicense* *Panicum virgatum* *Vigna repens*
(e)	Saltbush	*Baccharis halimifolia* *Iva frutescens* *Iva imbricata*
(f)	Savannah	*Spartina patens* *Pinus elliottii* *Pinus palustris* *Rhynchospora spp.* *Juncus spp.* *Andropogon spp.*
(g)	Bogs	*Sphagnum spp.* *Sarracenia spp.* *Cyrilla racemiflora* *Ilex glabra* *Drosera spp.* *Dichromena colorata*

(h) Swamp — *Taxodium distichum*
Taxodium ascendens
Salix nigra
Magnolia virginiana
Nyssa biflora
Acer rubrum
Cliftonia monophylla
Pinus serotina

Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-2, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; October 2, 1990; ----- -, 1993.

335-13-1-.04 Limitations. Nothing in these rules and regulations shall be construed to limit the authority of municipal and county governments, solid waste authorities, Local Health Officer or State Health Department from adopting more stringent solid waste management requirements than those set forth in this Division.
Author:
Statutory Authority: Code of Alabama 1975, §§ 22-22A-4, 22-27-4, 22-27-5, 22-27-6, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; October 2, 1990.

335-13-1-.05 [Reserved]

335-13-1-.06 [Reserved]

335-13-1-.07 [Reserved]

335-13-1-.08 [Reserved]

335-13-1-.09 [Reserved]

335-13-1-.10 [Reserved]

335-13-1-.11 General - All solid waste shall be treated, utilized, processed, reclaimed, recycled and disposed of in a manner consistent with the requirements of this Division~~or the State Health Department, or covered by an exception under 335-13-1-.12~~.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-22A-4, 22-22A-5, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; October 2, 1990.

335-13-1-.12 [Reserved]. ~~Exceptions.--Any householder who chooses to store, haul and dispose of his own household solid waste on his own land or otherwise must have a permit issued by the Department unless the householder has obtained a Certificate of Exception.--Individuals shall apply to the Local Health Officer for this exception.~~

~~In addition, drilling waste generated from the exploration for oil and gas in which the disposal of these waste are regulated by the State Oil and Gas Board of Alabama are exempt from these regulations.~~
~~Author:~~
~~Statutory Authority:--Code of Alabama 1975, §22-27-3.~~
~~History:--November 18, 1981; Amended:--July 21, 1988; October 2, 1990.~~

335-13-1-.13 Open Dump or Unauthorized Dump Closing. Open dumps or unauthorized dumps are prohibited by this Division. An agency or person discontinuing the use of an open dump or unauthorized dump, whether on his own initiative or at the direction of the Department, or the State Health Department, shall take the following actions as determined to be needed by the Department or State Health Department following the Department's criteria:

(1) Barricade and secure entrance.

(2) Implement effective rodent or vector controls, including baiting for at least two weeks after closing, to prevent rodent migration to adjacent properties and spraying of containers to control mosquitoes, or other measures as determined necessary by the Department or State Health Department.

(3) Compact and cover existing solid waste. Final cover for the entire area shall be two feet or more of compacted earth or as otherwise determined by the Department or State Health Department. Earth cover shall be of a quality to be easily managed and with sufficient clay content to provide an adequate seal on the waste. The uppermost 6" of cover shall support an adequate stand of vegetation.

(4) The establishment of a vegetative or some other appropriate cover to minimize erosion and, when applicable, maximize evapotranspiration shall be established. Within 30 days after completion of final grading, the owner or operator of the dump shall prepare the final cover for the establishment of a vegetative or alternative cover. For the establishment of a vegetative cover, such preparation shall include, but not be limited to:

(a) Placement of appropriate species of grass seed, fertilizer and mulch; and

(b) Watering and maintenance necessary such that germination can reasonably be anticipated.

(5) Implement and maintain erosion control measures by grading and re-establishing vegetative cover as needed or determined necessary.

(6) Post signs indicating the dump site closure and location of the nearest approved disposal site when deemed necessary by the Department.

(7) The Department or State Health Department may, based on site geology, hydrology or waste types, require the solid waste to be removed from the site and placed in an approved disposal facility in accordance with an approved clean-up, site restoration and monitoring plan. The Department or State Health Department may also require monitoring of the site for unpermitted discharges to waters of the state as defined by the Alabama Water Pollution Control Act and other sources as may be necessary to protect public health and the environment.

(8) When closure requirements are achieved as determined by the Department, the landowner shall record a notation onto the land deed, when deemed necessary by the Department, containing the property utilized for disposal, and/or some other legal instrument that is normally examined during a title search, that will, in perpetuity, notify any potential purchaser of the property that:

(a) the land has been used as a solid waste disposal area, not permitted by the Department.

(b) the landowner shall submit a certified copy of the recording instrument to the Department within 90 days.

Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-4, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; October 2, 1990; ----- --, 1993.

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
LAND DIVISION - SOLID WASTE PROGRAM

CHAPTER 335-13-4
PERMIT REQUIREMENTS

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335-13-4-.01 Solid Waste Disposal Siting Standards. ~~Solid-waste-land-disposal-facilities-or-practices~~ New or existing landfill units shall comply with the following standards in order to prevent adverse effects on health or the environment. As part of the application, the owner/operator must submit documentation addressing to the satisfaction of the Department the following siting standards.

(1) A facility ~~or-practice~~ located in a floodplain shall not restrict the flow of the ~~base~~ 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste, so as to pose a hazard to human life, wildlife, or land or water resources.

(2) A facility ~~or-practice~~ shall be located in consideration of the following:

(a) A facility ~~or-practice~~ shall not cause or contribute to the taking of any endangered or threatened species of plants, fish or wildlife.

(b) The facility ~~or-practice~~ shall not result in the destruction or adverse modification of the critical habitat of endangered or threatened species as identified in 50 CFR 17.

(3) A facility ~~or-practice~~ shall be located so as to not violate the following:

(a) A facility ~~or-practice~~ shall be located so as to protect water quality.

(b) A facility ~~or-practice~~ shall not cause a discharge of pollutants into waters of the State, including wetlands, that is in violation of the requirements of the National Pollutant Discharge Elimination System (NPDES), Alabama Water Pollution Control Act, Code of Alabama 1975, §§ 22-22-1 to 22-22-14.

(c) A facility ~~or-practice~~ shall not cause a discharge of dredged material or fill material into waters of the State that is in violation of the requirements under Section 404 of the Clean Water Act, as amended.

(d) A facility ~~or-practice~~ shall not cause non-point source pollution of waters of the State, including wetlands, that violates any requirements of an

area wide and Statewide water quality management plan that has been approved under the Alabama Water Pollution Control Act.

(e) Solid waste disposal facilities shall not be permissible in wetlands, beaches or dunes.

(f) Solid waste disposal facilities shall not be permissible in any location where the disposal of solid waste would degrade wetlands, beaches, dunes or coastal waters.

(g) Solid waste disposal facilities shall be located outside the boundaries of the coastal area, unless no other reasonable alternative is available. If a site within the coastal area is proposed for development as a solid waste disposal facility, it shall be demonstrated to the satisfaction of the Department that siting, design, construction, and operation will ensure that present levels of coastal plants and animals will be maintained.

(4) A facility ~~or practice~~ shall not allow an unpermitted discharge to waters of the State as defined by the Alabama Water Pollution Control Act.

(a) The bottom elevation of ~~solid waste~~ the cell for unlined disposal facilities and the bottom elevation of the liner system for lined disposal facilities shall be a minimum of five feet above the seasonal high groundwater table or bedrock or as determined by the Department.

(b) When the geological and hydrological data so indicate, the Department may specify greater than five feet separation distance, a liner(s), or a leachate collection system, or combination of the above to protect the groundwater.

(5) A ~~facility or practice disposing of putrescible solid waste that may attract birds and which occurs within~~ MSWLF unit shall not be sited within 10,000 feet of any airport runway end ~~shall be operated in such a manner so as not to pose a bird hazard to aircraft~~.

(~~b~~ a) Owners or operators proposing to renew existing or site new disposal facilities located within a five-mile radius of any airport runway must notify the affected airport and the Federal Aviation Administration (FAA).

(6) Zones of active faults, seismic impact zones, unstable areas, sink holes and karst terrain shall be

avoided in locating facilities and practices unless a site specific evaluation demonstrates minimum potential for adverse effects upon waters of the State and human health.

(a) Site specific evaluations for geology and hydrology shall comply with 335-13-4-.11 through 335-13-4-.14.

(b) Site specific evaluation shall include minimum design parameters necessary to protect the waters and human health to include minimum requirements of 335-13-4-.15 through 335-13-4-.25.

(c) Disposal facilities shall not be located within 200 feet of a fault that has had displacement within the Holocene epoch unless the owner or operator demonstrates to the Department that an alternative setback distance of less than 200 feet will not result in damage to the structural integrity of the facility and will be protective of human health and the environment.

(d) Disposal facilities shall not be located in seismic impact zones, unless the owner or operator demonstrates to the Department that all containment structures, including liners, leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site.

(e) Disposal facilities shall not be located in an unstable area unless engineering measures have been incorporated in the design of the facility to ensure that the integrity of the structural components of the facility will not be disrupted. The following factors, at a minimum, must be considered when determining whether an area is unstable:

1. On-site or local soil and subsurface conditions that may result in significant differential settling;

2. On-site or local geologic or geomorphologic features; and

3. On-site or local human-made features or events (both surface and subsurface).

(7) Disposal facilities shall not be located in archaeologically or historically sensitive areas as determined by the Alabama Historical Commission. Written certification must be provided from the State Historic Preservation Officer.

(8) Solid Waste Disposal Facilities must comply with any other applicable State or Federal rules, laws, regulations, or other requirements.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; ------, 1993.

335-13-4-.02 Reserved

335-13-4-.03 Reserved

335-13-4-.04 Reserved

335-13-4-.05 Reserved

335-13-4-.06 Reserved

335-13-4-.07 Reserved

335-13-4-.08 Reserved

335-13-4-.09 Reserved

335-13-4-.10 Reserved

335-13-4-.11 General Design Standards for Disposal Facilities. 335-13-4-.12 through 335-13-4-.20 provides standards for establishing a disposal facility providing that the siting standards of 335-13-4-.01 have been fully complied with to the satisfaction of the Department. Certain requirements contained in 335-13-4-.12 through 335-13-4-.20 may be enhanced or reduced by the Department as deemed necessary to comply with the Act and this Division.
Author:
Statutory Authority: Code of Alabama 1975, §§22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988.

335-13-4-.12 Plans Required. ~~Design~~-Plans and operational reports for construction, operation, maintenance, ~~and~~-closure, and post-closure care of disposal facilities shall comply with 335-13-5-.02(1) and this Chapter and shall include the following as determined necessary by the Department.

(1) Land use and zoning within at least ~~1,400 feet~~ 5,280 feet (one mile) of the solid waste boundary site showing the location of all residences, buildings, public and private wells, water courses, utilities, geological features and roads.

(2) Location and use of all airports within 10,000 feet of the facility to include operational requirements as may be necessary to comply with federal or state agency regulations and 335-13-4-.01(5).

(3) Sufficient control points on-site to provide for accurate horizontal and vertical control for facility construction, operation and closure and post-closure.

(4) Detail presentation of geological and hydrogeological units in the disposal site, with typical sections of disposal method and plan and profile sheets on all areas or trenches.

(5) Boundary plat and legal property description prepared, signed, and sealed by a land surveyor of the proposed boundary of the facility and disposal area of the facility.

(6) Initial and final topographics at contour intervals of five feet or as otherwise specified by the Department.

(7) Existing and proposed surface drainage pattern to include control structures designed to handle run-on and run-off. Design calculations for sediment control basins, etc. should be provided.

(8) Buffer zones, screening and other aesthetic control measures. Buffer zones around the perimeter of the disposal facility shall be a minimum of 100 feet in width measured in a horizontal plane. No disposal or storage practices for waste shall take place in the buffer zone. Roads, access control measures, earth storage, and buildings may be placed in the buffer zone.

(9) Details of plans for temporary and permanent all weather access roads.

(10) A summary of 335-13-4-.01 standards and conclusions of action to be taken and implemented into facility design.

(11) A clear presentation and discussion of daily disposal facility operation to include any separate areas of the facility for disposal, treatment, storage, etc. of specific wastes requiring special or separate handling.

(12) Operation procedures for unloading, compacting and covering of solid wastes consistent with 335-13-4-.21 through 335-13-4-.24.

(13) Presentation of special engineering features or considerations which must be included or maintained in facility construction, operation, maintenance and closure. Items required in 335-13-4-.12 through 335-13-4-.20 shall be included.

(14) The relevant point of compliance, shall be no more than 150 meters (492 feet) from the waste management unit boundary and shall be located on land owned by the owner of the landfill unit. In determining the relevant point of compliance, the following factors shall be considered, at a minimum:

(a) The hydrogeologic characteristics of the facility and surrounding land;

(b) The volume and physical and chemical characteristics of the leachate;

(c) The quantity, quality, and detection of groundwater flow;

(d) The proximity and withdrawal rate of the groundwater users;

(e) The availability of alternative drinking water supplies;

(f) The existing quality of the groundwater, including other sources of contamination and their cumulative impacts on the groundwater and whether groundwater is currently used or reasonably expected to be used for drinking water;

(g) Public health, safety, and welfare effects; and

(h) Practicable capability of the owner or operator.

(15) Quality assurance/quality control (QA/QC) plan for all components of the liner, leachate collection, and cap systems.

(16) Groundwater monitoring plan.

(17) Landfill explosive gas monitoring plan.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; ----- --, 1993.

335-13-4-.13 Site Geology and Hydrology. The site hydrogeology shall be established to the upper most aquifer and subsequent interconnecting aquifers. The hydrogeological evaluation for a specific site, as required by the Department, may be provided for as follows:

(1) The Department will conduct a site background hydrogeological evaluation and review all other related reports, plans or submittals.

(a) Expense for the background hydrogeological evaluation and reviews conducted by the Department shall be borne by the applicant in accordance with established procedures of the Department.

(b) The expense for soil borings, soil tests, piezometers and other data as needed by the Department shall be borne by the applicant.

(2) A hydrogeological evaluation performed by a firm or individual having expertise in hydrogeology. The expense of this evaluation shall be borne wholly by the applicant. The following shall be required on such evaluations made under this Rule:

(a) The installation of a minimum of three exploration borings to include sampling and geologic logging and completion of these borings as piezometers. Subsequent establishment of the first ~~zone of saturation~~ saturated zone, the upper most aquifer and subsequent underlying and interconnected aquifers, piezometer measuring point elevations, water table elevations and an estimate of groundwater flow direction and rate will be required.

(b) A report shall be submitted to the Department which includes all items, information and analyses contained in 335-13-4-.13(2)(a).

(c) Resumes and references, as necessary, to establish the qualifications of the firm or individual preparing the evaluation.

(3) A review of the information submitted under 335-13-4-.13(2) shall be conducted by the Department.

(4) The requirement for a hydrogeological evaluation may be waived by the Department based on specific geology, hydrology, or waste types proposed for disposal.
Author:
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988.

335-13-4-.14 Groundwater Resources. Groundwater resources in the vicinity of the disposal facility shall be determined as a basis for facility design and groundwater protection and monitoring required under 335-13-4-.27.

(1) The depth to the groundwater including seasonal variations and the direction of flow shall be established during the hydrogeological evaluation.

(2) The permeability of on-site soils, specifically those underlying the disposal site, shall be determined by laboratory testing at a qualified soils laboratory and followed up by pump testing or slug testing of monitoring wells.

(3) The groundwater in the first ~~zone of saturation~~ saturated zone below the disposal facility shall be ~~monitored~~ evaluated as follows:

(a) A minimum of one hydraulically up-gradient monitoring well for background data and two hydraulically downgradient monitoring wells shall be required.

(b) The location and design of the monitoring wells shall be approved by the Department prior to installation and the upgradient well shall be located so as not to be affected by the disposal facility.

(c) The monitoring wells shall be installed well in advance of projected facility opening so as to provide an undisputed background water quality sample from each well. Background water quality shall be established using the ~~following~~ sampling and analysis procedures <u>described in 335-13-4-.27</u>. ~~The water levels, mean sea level elevation measuring point, depth to water and sampling and analysis procedures for all parameters shall be determined in all wells prior to permitting of the landfill and the data furnished to the Department. The parameters are as follows: field pH; field test for specific conductance; volatiles scan; base neutrals; acid extractables; arsenic; barium; cadmium; chromium; lead; mercury; TKN; ammonia; nitrate; selenium; endrin; lindane; methoxychlor; toxaphene; 2,4-D; 2,4,5-TP-Silvex; trichalomethanes; chloride; copper; iron; manganese; sulfate; and zinc. Site specific waste streams may require additional parameters to be added.~~

~~(d) The location of the monitoring wells shall be outside the proposed solid waste boundary or an alternate boundary as designated by the Department.~~

~~(e)~~<u>(d)</u> Additional monitoring wells above the minimum may be required by the Department based on site hydrology, geology, topographical features and waste characteristics.

~~(f)~~<u>(e)</u> Groundwater monitoring wells shall be designed and constructed <u>as described in 335-13-4-.27</u>. ~~in accordance with the following reference: "Design and Installation of Groundwater Monitoring Wells in Aquifers" ASTM Subcommittee D18.21 on Groundwater Monitoring, or otherwise as specifically approved by the Department. Plans for groundwater monitoring well location, design and construction shall be submitted to the Department for review and approved prior to installation.~~

(4) The groundwater sampling and analysis plan shall be prepared <u>in accordance with 335-13-4-.27,</u> as ~~required by the Department. Sampling and analysis shall be conducted semiannually or as otherwise specified by the Department. Water levels, mean sea level elevation measuring point, depth to water and a field test for pH and specific conductance shall be recorded at the time of sampling for each well. Other parameters will include a volatiles scan; cadmium; chromium; arsenic; lead; mercury; selenium; sulfate; nitrate; chlorides and others may be required depending on waste characteristics proposed to be accepted at the facility.~~

~~(5) The groundwater monitoring system must be capable of yielding sufficient volume of groundwater samples for analysis within 24 hours after purging. Any wells failing to provide sufficient volumes of water for groundwater analysis shall be repaired or replaced as determined necessary by the Department.~~

~~(6) The requirement for groundwater monitoring wells extending to the first zone of saturation may be waived by the Department based on specific site geology, hydrology and waste types proposed for disposal.~~
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; Amended: ----- --, 1993.

335-13-4-.15 Cover. Daily, weekly, or some other periodic cover shall be required at all disposal facilities, as determined by the Department.

(1) The suitability and volume of any soils for daily, intermediate and final cover requirements shall be determined by soil borings and analysis.

(2) Any proposal to use alternate cover systems shall be submitted to and approved by the Department prior to implementation.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988~~.~~; ----- --, 1993.

335-13-4-.16 **Explosive Gases**. The generation of explosive gases, especially methane (CH_4), at a disposal facility which accepts organic waste shall be considered in the design and operation of the facility. Special attention shall be given to control and monitoring of explosive gases as follows:

(1) Explosive gases shall not exceed the lower explosive limit at the facility boundary.

(2) Explosive gases shall not exceed 25 percent of the lower explosive limit in facility structures ~~but to~~ except for ~~exclude~~ gas control or recovery system components.

(3) Facility structures shall be designed and constructed so as not to allow explosive gases to collect in, under or around structures in concentrations exceeding the requirements of this Rule.

(4) Gas monitoring equipment as required by the Department shall be provided at the disposal facility by the operating agency.

(5) The Department upon review of waste type, facility structures, site geology and surrounding land use may require installation of permanent gas monitoring structures, gas vents, gas control or recovery systems.

(6) An explosive gas monitoring and reporting plan shall be prepared ~~as required by the Department~~ for all landfill facilities receiving organic wastes. ~~Reports shall be kept on routine monitoring and these reports shall be made available to the Department upon request.~~ All sites required to monitor for explosive gases shall submit a plat which indicates permanent monitoring points. A plan shall also be included which addresses how monitoring shall be conducted in accordance with Division 13 regulations. The plan shall also include what measures shall be taken by the permittee, landfill supervisor, and any operators present on-site to protect human health and property should explosive gases be detected which exceed the lower explosive limit (LEL). The plan must be prepared by a registered professional engineer and include seal or signature and registration number in accordance with Rule 335-13-5-.02(1)(c)1. of the ADEM Administrative Code.

(a) The type and frequency of monitoring must be determined based on the following factors:

1. Soil conditions;

2. Hydrogeological conditions surrounding the disposal facility;

3. Hydraulic conditions surrounding the disposal facility;

4. Location of the facility structures and property boundaries;

5. Location of structures adjacent to facility.

(b) The minimum frequency for monitoring shall be ~~yearly~~ quarterly for MSWLF and yearly for C/DLF and ILF.

1. All monitoring reports shall be submitted to the Department and placed in the operating record of the facility within 30 days of the monitoring event.

2. Levels of gas detected shall be expressed in percent LEL and percent volume.

(c) If explosive gas levels exceeds the limits specified in this Rule, the permittee shall:

1. Immediately take all necessary steps to ensure ~~immediate~~ protection of human health and property and notify the Department;

2. ~~Immediately notify the Department of~~ Within 7 days of detection, place in the operating record of the facility the explosive gas levels detected and the immediate steps taken to protect human health and property;

3. Within ~~14~~ 20 days of detection, submit to the Department for approval a remedial plan for the explosive gas releases. This plan shall describe the nature and extent of the problem and the proposed remedy. The plan shall be implemented upon approval by the Department, but within 60 days of detection. Also within 60 days of detection, a copy of the plan shall be placed in the operating record of the facility and the Department notified that the plan has been implemented.

(d) Monitoring points shall be located every 300 feet along the landfill permit boundaries. In areas where a dwelling is within 1000 feet of the boundaries, the monitoring points shall be 100 feet apart or as otherwise directed by the Department.

1. Monitoring shall be conducted in structures, culverts, under bridges, drop inlets, and any other place that is conducive to gas accumulation.

2. A bar hole punch, or permanent gas monitoring structures are required by the Department.

3. A minimum depth of six feet must be obtained for monitoring structures.

Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; ----- --, 1993.

335-13-4-.17 Drainage. ~~Drainage-control-structures-shall be-designed-as-follows:~~--Owners or operators of all facilities must design, construct and maintain:

(1) ~~Diversion-structures-shall-be-designed-and constructed-to-prevent-off-site-surface-drainage-from passing-over-the-disposal-site.~~ A run-on control system to prevent flow onto the active and/or closed portions of the landfill during the peak discharge from a 25-year storm;

(2) ~~Structures-shall-be-designed-to-divert-the surface-water-from-the-ten-year-24-hour-precipitation event-or-as-specified-by-the-Department.~~ A run-off control system from the active and/or closed portions of the landfill to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(3) ~~Design-of~~ On-site drainage structures to carry incident precipitation from the disposal site so as to minimize the generation of leachate, erosion and sedimentation. Run-off from the active and/or closed portions of the landfill unit must be handled in accordance with 335-13-4-.01(3)(b), (c) & (d) and shall be routed to a settling basin or other sedimentation control structure to remove sediment prior to release onto adjacent properties or waters.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; ----- --, 1993.

335-13-4-.18 Liners. Where natural hydrogeologic conditions may be determined by the Department to be insufficient to minimize the impact of leachate on waters, the use of an appropriate liner(s) shall be used as approved by the Department. New MSWLF units and lateral expansions, as a minimum, shall be constructed with a composite liner, as defined in 335-13-1-.03, or an alternate design as specified in 335-13-4-.18(7). Multiple liners, including composite liners, may be required if determined necessary by the Department. In addition, a leachate collection system shall be required that is designed and constructed to maintain less than a 30 cm depth of leachate over the liner. The composite liner(s) shall comply with the following minimum standards:

(1) The permeability shall be $1x10^{-7}$ cm/sec or less for soil ~~and-$1x10^{-12}$-cm/sec-or-less-for-synthetic-~~liners.

(2) The liner shall be resistant to physical and chemical attack by leachate.

(3) The liner shall be capable of maintaining integrity for the design life which must be determined on a site specific basis. ~~The use of a leachate collection system meeting the approval of the Department may be required. The liner(s) shall comply with the following minimum standards:~~

(4) The minimum allowable thickness of each layer of the composite liner ~~is~~ shall be:

(a) ~~60~~ 40 mils for the ~~synthetic~~ flexible membrane liners component unless FML consists of HDPE which requires 60 mil meeting the permeability requirements of 335-13-4-.18(1), and

(b) Two feet, measured after compaction, for the natural soil liners component meeting the permeability requirements of 335-13-4-.18(1).

(5) The installation of synthetic liners shall be as recommended by the manufacturer providing that:

(a) The installation recommendations of the manufacturer are provided to the Department for review and approval.

(b) The manufacturers' recommendations are implemented into engineered construction plans, if manufacturers' recommendations are approved by the Department.

(c) The Department finds that the recommended installation procedures are consistent with the intent of the Act and this Chapter.

(d) The installation of the liner shall be under the supervision of an engineer ~~with certification by~~ who shall certify to the Department that the liner was installed and maintained in accordance with this Division, QA/QC plans, and approved design plans.

(e) The Department may require more stringent requirements for liner design and installation to protect the environment and ~~the~~ public health.

(6) The design and installation of soil liners and the properties of soils used in a soil liner shall be as follows:

(a) Design of soil liner(s) shall be by a qualified soils engineer, geotechnical engineer or geologist.

(b) The soil liner must be compacted in lifts of 4 to 6 inches within 2 percent of optimum moisture content to a field density which correlates with a laboratory permeability of $1x10^{-7}$ cm/sec or less.

(c) The installation of soil liner(s) shall be under the supervision of a ~~qualified~~-soils engineer, geotechnical engineer or geologist who shall certify ~~with certification by the supervisor~~ to the Department that the liner(s) was installed and maintained in accordance with this Division, QA/QC plans, and approved design plans.

(d) The soils used in soil liners shall meet the minimum following criteria:

1. ~~Be~~-Free of oversize particles, such as rocks, roots, limbs and other foreign substances which would alter the design integrity of the liner;

2. ~~Be~~-Classified under the Unified Soil Classification System as CL, CH or SC (ASTM Standard D2 487-69);

3. Allow greater than 30 percent passage through a No. 200 sieve (ASTM Test D-1140);

4. Have a liquid limit equal to or greater than 30 units (ASTM Test D-423); and

5. Have a plasticity greater than or equal to 15 units (ASTM Test D-424).

(7) For a composite liner system, the synthetic liner shall be installed in direct contact with the soil liner.

(~~7~~8) ~~Liner materials other than soils and synthetics shall be considered by the Department if determined to meet the requirements of this Division.~~ An alternate liner design may be approved by the Department provided that:

(a) The owner or operator demonstrates that the alternate design ensures the concentration values listed in Table 1 of this Rule will not be exceeded in the first saturated zone at the relevant point of compliance, as specified by the Department under 335-13-4-.12(14).

(b) When approving a design that complies with subparagraph (a) of this paragraph, the Department shall consider at least the following factors:

1. The hydrogeologic characteristics of the facility and surrounding land;
2. The climatic factors of the area; and
3. The volume and physical and chemical characteristics of the leachate.

TABLE 1

Chemical	MCL (mg/l)
Arsenic	0.05
Barium	1.0
Benzene	0.005
Cadmium	0.01
Carbon tetrachloride	0.005
Chromium (hexavalent)	0.05
2,4-Dichlorophenoxy acetic acid	0.1
1,4-Dichlorobenzene	0.075
1,2-Dichloroethane	0.005
1,1-Dichloroethylene	0.007
Endrin	0.0002
Fluoride	4
Lindane	0.004
Lead	0.015
Mercury	0.002
Methoxychlor	0.1
Nitrate	10
Selenium	0.01
Silver	0.05
Toxaphene	0.005
1,1,1-Trichloroethane	0.2
Trichloroethylene	0.005
2,4,5-Trichlorophenoxy acetic acid	0.01
Vinyl Chloride	0.002

Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; ----- --, 1993.

335-13-4-.19 Access. ~~The design of barriers, both artificial and natural, shall be sufficient to prevent entry of vehicular traffic to the facility except when authorized operating personnel are on duty.~~ The owner or operator of the facility must control public access and prevent unauthorized vehicular traffic and illegal dumping of wastes by using artificial barriers, natural barriers, or both, as appropriate to protect human health and the environment.

Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; ----- --, 1993.

335-13-4-.20 Closure and Post-Closure. The requirements for closure and post-closure of existing and proposed landfill units shall include the following unless otherwise noted. ~~(Detail design for the closure of existing and proposed facilities shall include closure procedures for each specific area or trench, and shall be shown on a final contour and drainage plan to include the following as determined necessary by the Department)~~

(1) The owner or operator must prepare a written closure plan that describes the steps necessary to close all existing and proposed landfill units at any point during its active life in accordance with the cover design requirements in 335-13-4-.20(2). The owner or operator must submit the closure plan as part of the permit application to the Department. The closure plan, at a minimum, must include the following information:

(a) A description of the final cover, designed in accordance with 335-13-4-.20(2) and the methods and procedures to be used to install the cover;

(b) An estimate of the largest area of the landfill unit ever requiring a final cover as required under 335-13-4-.20(2) at any time during the active life;

(c) An estimate of the maximum inventory of wastes ever on-site over the active life of the facility; and

(d) A schedule for completing all activities necessary to satisfy the closure criteria in this Rule.

(2) A final cover system must be installed which is designed to minimize infiltration and erosion. The final cover system must be comprised of an erosion layer(s) underlain by an infiltration layer(s) as follows:

(a) The infiltration layer must be comprised of a minimum of 18 inches of earthen material and/or a synthetic layer that has a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than 1×10^{-5} cm/sec, whichever is less, and

(b) The erosion layer must consist of a minimum 6 inches of earthen material that is capable of sustaining native plant growth, as specified in 335-13-4-.20(4).

(c) The Department may approve an alternative final cover design that includes:

1. An infiltration layer that achieves an equivalent reduction in infiltration as the infiltration layer specified in 335-13-4.20(2)(a), and

2. An erosion layer that provides equivalent protection from wind and water erosion as the erosion layer specified in 335-13-4.20(2)(b).

~~(1)~~(3) ~~Intermediate-and-~~Final soil cover shall be graded so that:

(a) Surface water does not pond over the disposal facility.

(b) The final grade of the two-foot soil cover does not exceed 25 percent or as specified by the Department to minimize erosion.

(c) Slopes longer than 25 feet shall require horizontal terraces, of sufficient width for equipment operation, for every 20 feet rise in elevation or utilize other erosion control measures approved by the Department.

(d) The minimum final grade ~~for-a-disposal-facility shall-be-five-percent~~ of the final cover system shall not be less than 5 percent or as specified by the Department to minimize ponding.

(e) For a permitted facility utilizing the area-fill method, final grading shall be ~~provided~~ completed within ~~60~~ 90 days after ~~landfilling has either reached the final approved elevations, or ceased to occur in each phase~~ the unit has received the last known receipt of waste. When the trench method is utilized, final grading shall be ~~provided~~ completed within ~~60~~ 90 days after ~~landfilling has either reached the final approved elevations, or ceased to occur in each trench. For the closure of an unauthorized dump, final grading shall be provided as directed in 335-13-1-.13~~ the unit has received the last known receipt of waste.

~~(3)~~(4) The establishment of a vegetative or some other appropriate cover to minimize erosion and, when applicable, maximize evapotranspiration shall be established. Within ~~30~~ 90 days after completion of final grading requirements on each phase or each trench as specified in 335-13-4-.20(1), the Permittee or owner of a permitted disposal facility shall prepare the final cover for the establishment of a vegetative cover or alternative cover. Deep rooted vegetation (roots that may grow below the 6 inch erosion layer) shall be prohibited as vegetative cover. ~~For an unauthorized dump, the agency or person who is determined responsible by the Department for the facility shall prepare the final cover for the establishment of a vegetative cover or alternative cover as specified in 335-13-1-.13.~~ Preparation of a vegetative cover shall include, but not be limited to, the following:

(a) Placement of appropriate species of grass seed, fertilizer and mulch; and

(b) Watering and maintenance necessary such that germination of grass can reasonably be anticipated.

(5) Prior to beginning closure of each landfill unit as specified in this Rule, an owner or operator must submit to the Department and place in the operating record a notice of the intent to close the unit.

(6) The owner or operator must begin closure activities of each LF unit no later than 30 days after the date of which the LF unit receives the known final receipt of wastes. If the LF unit has remaining capacity and there is reasonable likelihood that the LF unit will receive additional wastes, closure activities of each LF unit must begin no later than one year after the date of known final receipt of wastes. Extensions beyond the

one-year deadline for beginning closure may be granted by the Department if the owner or operator demonstrates that the LF unit has the capacity to receive additional wastes and the owner or operator has taken and will continue to take all steps necessary to prevent threats to human health and the environment from the unclosed LF unit.

(7) The owner or operator of all LF units must complete closure activities of each LF unit in accordance with the closure plan within 180 days following the last known receipt of waste. Extensions of the closure period may be granted by the Department if the owner or operator demonstrates that closure will, of necessity, take longer than 180 days and he has taken and will continue to take all steps necessary to prevent threats to human health and the environment from the unclosed LF unit.

(8) Following closure of each LF unit, the owner or operator must submit to the Department a certification, signed by an independent registered professional engineer verifying that closure has been completed in accordance with the closure plan, and a copy placed in the operating record.

~~(3)~~(9) ~~Post-closure maintenance of the facility to include regular scheduled inspections by the operating agency, or responsible party, or owner unless all solid water is removed and no unpermitted discharge to waters have occurred. The following shall be maintained:~~ Following closure of each LF unit, the owner or operator must conduct post-closure care. Post-closure care must be conducted for a minimum of 30 years; or a minimum of 5 years if closed prior to October 9, 1993, or the effective date of §258.1 of 40 CFR 258, Solid Waste Disposal Criteria, whichever is later; except as provided under 335-13-4-.20(10), and consist of at least the following:

(a) Eroded areas shall be filled with suitable soil cover, compacted, graded and appropriate cover established as described in 335-13-4-.20(~~2~~4).

(b) Areas which provide for ponding of surface water ~~due to settling~~ shall be filled, graded and an appropriate cover established as described in 335-13-4-.20~~(2)~~(4).

(c) Landfilled areas with extensive surface cracks in soil cover shall be corrected as necessary, or as determined by the Department, to prevent infiltration of surface water.

(d) An appropriate cover shall be maintained on the facility at all times as described in 335-13-4-.20~~(2)~~(4).

(e) Access control structures shall be maintained or erected and signs shall be posted stating that the facility is closed and giving the location of the nearest permitted disposal facility.

(f) Any waste dumped at the disposal facility following closure shall be removed to an approved disposal facility by the permittee, operating agency, or owner.

(g) Monitoring devices and pollution control equipment such as groundwater monitoring wells, explosive gas monitoring systems, erosion, and surface water control structures, and leachate facilities shall be maintained. Monitoring requirements shall continue in effect throughout the active life and post-closure care period as determined by the Department unless all solid waste is removed and no unpermitted discharge to waters has occurred.

(h) Other deficiencies such as vector control which may be observed by the Department shall be corrected.

(10) The length of the post-closure care period may be:

(a) Decreased by the Department if the owner or operator demonstrates that the reduced period is sufficient to protect human health and the environment and this demonstration is approved by the Department; or

(b) Increased by the Department if the Department determines that the lengthened period is necessary to protect human health and the environment.

(11) The owner or operator of all LF units must submit to the Department and receive approval as part of the permitted application, a written post-closure plan. A copy must also be placed in the operating record. The post-closure plan must include, at a minimum, the following information:

(a) A description of the monitoring and maintenance activities required in 335-13-4-.20(9) for each LF unit, and the frequency at which these activities will be performed;

(b) Name, address, and telephone number of the person or office to contact about the facility during the post-closure period; and

(c) A description of the planned uses of the property during the post-closure period.

~~(4)~~(12) Post-closure use of the property used for the disposal operation must never be allowed to disturb the integrity of the final cover, liner(s), or any other component of the containment system, or the function of the monitoring systems~~,-unless-the-Department-determines that~~ necessary to comply with the requirements of these Rules. The Department may approve any other disturbance if the owner or operator demonstrates that the disturbance, including any removal of waste, complies with the following:

(a) The activities will not increase the potential threat to human health or the environment; or

(b) The activities are necessary to reduce a threat to human health or the environment.

(13) Following completion of the post-closure care period for each LF unit, the owner or operator must submit to the Department a certification, signed by an independent registered professional engineer verifying that post-closure care has been completed in accordance with the post-closure plan, and a copy placed in the operating record.

~~(5)~~(14) Within 90 days after permit expiration, revocation or when final closure requirements in 335-13-4-.20~~(1)-and-(2)~~ are achieved as determined by the Department, the permittee or owner of a facility shall record a notation onto the land deed containing the property utilized for disposal, and/or some other legal instrument that is normally examined during a title search, that will in perpetuity, notify any potential purchaser of the property that:

(a) The land has been used as a solid waste disposal facility;

(b) Its use is restricted by the items contained in 335-13-4-.20~~(4)~~(11) and 335-13-4-.20(12);

(c) The locations and dimensions of the disposal facility with respect to permanently surveyed benchmarks and section corners shall be on a plat prepared and sealed by a land surveyor;

(d) Contain a note, prominently displayed, which states the name of the Permittee or operating agency, the type of disposal facility and the beginning and closure dates of the disposal activity.

(e) Certification by a an Engineer or Land Surveyor that all closure requirements have been completed as determined necessary by the Department.

~~(6)~~(15) For a permitted facility, the permittee or land owner shall submit a certified copy of the recording instrument to the Department and place a copy in the operating record within 120 days after permit expiration, revocation or as otherwise directed by the Department.

~~(9)~~(16) If the Permittee or owner, or any subsequent owner of the land upon which a solid waste disposal facility is located wishes to remove waste, waste residues, the liner, if any, or any contaminated soils, the owner must request approval from the Department. The owner may also ask permission to remove the notation from the recording instrument if all waste and contaminated soils are removed from the property and no unpermitted discharges to waters have occurred.

(17) Detail design for the closure of existing and proposed LF units shall be shown on a final contour and drainage plan. Items required in 335-13-4-.20(2) through (4), (9), (12), and (14) through (16) shall be included.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-4, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; ------- --, 1993.

335-13-4-.21 General Operational Standards for Disposal. Any person or agency operating or planning to operate a solid waste disposal facility shall operate and maintain the facility consistent with this Division. The Department will make periodic evaluations of the disposal facility. General requirements for operating and maintaining an acceptable disposal facility shall be:

(1) Open burning of solid waste at any landfill~~, sanitary landfill or other disposal~~ facility shall not occur unless approved by the Department as follows:

(a) Clearing debris at the disposal facility such as trees and stumps may be burned if prior approval is received from the Department and the Alabama Forestry Commission.

(b) Emergency clean-up debris resulting from catastrophic incidents may be burned at a permitted disposal facility or in special areas if consistent with the intent of this Division. Prior approval must be received from this Department and other appropriate agencies.

(c) If approved, the burning shall not occur over previously filled areas or within 200 feet of existing disposal operations unless otherwise specified by the Department and such burning shall not cause a public nuisance or pose a threat to public health.

(d) The person or agency requesting permission to burn solid waste shall apply in writing to the Department, outlining why a burn request should be granted. This request should include, but not be limited to, specifically what areas will be utilized, types of waste to be burned, the projected starting and completion dates for the project, and the projected days and hours of operation.

(2) The operation and use of the disposal facility shall be as stipulated in the permit.

(3) Waste accepted at the facility shall be strictly controlled so as to allow only waste stipulated on the permit or otherwise as may be approved by the Department. ~~Free liquid waste or containers larger than 10 gallons which are capable of holding liquids shall not be accepted at a disposal facility except as follows. Empty containers larger than 10 gallons must be rendered unsuitable for holding liquids prior to delivery to the disposal facility unless otherwise approved by the Department.~~

(a) The permittee of any facility permitted under these Rules must submit a plan to be approved by the Department describing procedures the permittee will implement for detecting and preventing the disposal of

free liquids, ~~regulated~~ hazardous wastes, ~~and~~ medical wastes, and PCB wastes at the facility. This plan must include at a minimum:

1. Random inspections of incoming loads to ensure that incoming loads do not contain free liquids, hazardous wastes, medical wastes, or PCB wastes.

2. Inspection of suspicious loads.

3. Records of all inspections to include origin of waste suspected to be hazardous or ~~untreated~~ medical waste if known; transporters, to include transfer stations and all handlers of the waste enroute to the disposal site; and any certifications from generators provided to the permittee or facility personnel. These records must be maintained on file in the operating record of the facility.

4. Training of facility personnel to recognize free liquids, ~~regulated~~ hazardous wastes, ~~and untreated~~ medical wastes, and PCB wastes.

5. Procedures for notifying the proper authorities if free liquids, ~~regulated~~ hazardous wastes, ~~or untreated~~ medical wastes, or PCB wastes are discovered at the facility.

6. Methods to identify all industrial users of the facility, ~~and~~ producers of special wastes, and transporters of these wastes.

7. If the permittee proposes to receive waste from outside the boundaries of the State, except for solid waste from the drilling of wells for the production of oil and gas in federal waters immediately adjacent to waters of the State, the following information shall be ~~provided~~ maintained on file in the operating record of the facility, and made available to the Department upon request:

(i) ~~Identify~~ The place of origin of the wastes (state, county, and municipality).

(ii) A general description of how wastes are managed from the point of generation to the disposal facility. The description should name major collectors, transporters, transfer stations, and all others who handle waste enroute to the disposal facility.

(iii) ~~Identify~~ A general description of the steps taken at each point to ensure wastes are not commingled with other wastes which may be free liquids, ~~regulated~~ hazardous wastes, ~~or untreated~~ medical wastes, or PCB wastes.

(b) Certification shall be provided to the Department and maintained on file in the operating record of the facility by the permittee for all waste received at the facility. Such certification shall include but not be limited to the following:

1. Identification of the place of origin (state, county, and municipality).

2. Certification from the ~~permittee~~ generator that the wastes do not contain free liquids, ~~regulated~~ hazardous wastes, ~~or untreated~~ medical wastes, or PCB wastes.

3. Certification from the ~~permittee~~ collector or generator that the wastes are collected and transported in accordance with all regulatory requirements within the State of origin.

4. If available, certification from a government official of the State or locality of origin where governmental oversite of shipment is involved.

5. Permittee shall identify contact persons in the State of origin including the collector, transporter, local and state regulatory authorities, etc. Such information shall include current names, addresses, and telephone numbers of all required parties.

(4) The disposal facility shall be operated in such a manner that there will be no water pollution or unauthorized discharge.

(a) Any discharge resulting from a disposal facility or practice may require:

1. A National Pollutant Discharge Elimination System (NPDES) permit under the Alabama Water Pollution Control Act as issued by the Department.

2. A dredge or fill permit from the Army Corps of Engineers as required under Section 404 of the Clean Water Act, as amended; or

3. That a non-point source of surface waters does not violate an area wide or statewide water quality management plan that has been approved under the Alabama Water Pollution Control Act.

(b) The groundwater shall not be contaminated as specified by this Division.

(5) Prior to disposal, the permittee shall obtain from each generator of Industrial Waste proposing to dispose at the permittee's facility, a written certification that the material to be disposed does not contain ~~untreated~~ free liquids, medical wastes, ~~nor a regulated~~ hazardous wastes, or PCB wastes. Copies of analyses supporting this certification as required by the Department shall be made a part of the certification. Prior to disposal, the permittee shall cause to be submitted copies of this written certification to the Department for approval for disposal and for any specific requirements as to the method of disposal. Certification shall be renewed or revised annually or at such times operational changes at the point of generation could render the waste hazardous, whichever is more frequent, unless otherwise approved by the Department. Copies of these certifications shall be maintained on file in the operating record of the facility ~~by the permittee~~ and shall be made available for inspection by the Department upon request.

(6) The facility shall be identified with a sufficient number of permanent markers which are at least visible from one marker to the next.

~~(7) Municipal solid waste landfill units containing sewage sludge and failing to satisfy the criteria in this Division violate sections 309 and 405(e) of the Clean Water Act.~~

~~(8) Owners or operators of all MSWLFs must ensure that the units do not violate any applicable requirements developed under a State Implementation Plan (SIP) approved or promulgated by the Administrator pursuant to section 110 of the Clean Air Act, as amended.~~

(7) Measuring or weighing devices shall be required for all municipal solid waste and industrial landfill units accepting solid waste not generated by the permittee. All solid waste shall be properly measured or weighed prior to disposal unless otherwise approved by the Department.

(a) New MSWLFs shall install measuring or weighing devices prior to accepting any waste for disposal.

(b) Existing MSWLFs shall install measuring or weighing devices by October 9, 1995.

(c) New or existing ILFs shall install measuring or weighing devices by October 9, 1995.

(d) Measuring or weighing devices shall be maintained in appropriate working order.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-22A-5, 22-27-3, 22-27-4, 22-27-7~~.~~, 22-27-47, 22-27-48.
History: November 18, 1981; Amended: March 31, 1988 (Emergency Regulations); July 21, 1988; October 2, 1990; ----- --, 1993.

335-13-4-.22 Specific Requirements for ~~Sanitary~~ Municipal Solid Waste Landfills. The following requirements in conjunction with 335-13-4-.21 shall be for operating and maintaining an acceptable ~~sanitary landfill~~ MSWLF:

(1) All waste shall be covered as follows:

(a) A minimum of six inches of compacted earth or other alternative cover material that includes but is not limited to foams, geosynthetic or waste products, and is approved by the Department shall be added at the conclusion of each day's operation or as otherwise approved by the Department to control disease vectors, fires, odors, blowing litter, and scavenging.

~~(b) Landfilled areas (cells) which will not have additional waste placed on them for three months or more shall be covered within 30 days with a minimum of 12 inches of intermediate soil cover, graded to prevent ponding of surface water, and prepared for the establishment of a vegetative cover. Such preparation shall include, but not be limited to, the placement of appropriate species of grass seed, fertilizer, mulch, and watering such that germination can reasonably be anticipated.~~

~~(c) Grading and final cover requirements for completed portions of the facility are as follows:~~

~~1. Final grading shall be provided within 60 days after landfilling has been completed for each area fill of two acres or more. When the trench method is utilized, final grading shall be provided within 60 days after landfilling has been completed on each trench. Final earth cover shall be a minimum of two feet of compacted soil.~~

~~2. The establishment of a vegetative or some other appropriate cover to minimize erosion and, when applicable, maximize evapotranspiration shall be established. Within 30 days after completion of final grading on each filled area or each trench, as noted in 335-13-4-.22(1), the permittee shall prepare the final cover for the establishment of a vegetative or alternative cover. For the establishment of a vegetative cover, such preparation shall include, but not be limited to:~~

~~(i) Placement of appropriate species of grass seed, fertilizer and mulch; and~~
~~(ii) Watering and maintenance necessary such that germination can reasonably be anticipated.~~

~~(d) Earth cover shall be of a quality to be easy manageable and with sufficient clay content to provide an adequate seal on the landfilled waste.~~

(b) Final closure shall be carried out in accordance with §335-13-4-.20 of this Division.

(2) All waste shall be confined to as small an area as possible and spread to a depth ~~of approximately~~ not exceeding two feet prior to compaction. Such compaction shall be accomplished on a face slope not to exceed ~~of 20 to 30 degrees~~ 4 to 1 (25%) or as ~~specified~~ otherwise approved by the Department.

(3) All waste shall be thoroughly compacted with adequate landfill equipment before the daily cover is applied. A completed daily cell shall not exceed eight feet in vertical thickness measured perpendicular to the slope of the preceding cell.

(4) Scavenging shall be prohibited and salvaging operations shall be ~~permitted~~ controlled in accordance with plans approved by the Department.

(5) Litter shall be controlled along the access roads, ~~and~~ over the ~~sanitary landfill~~ disposal facility, and adjoining property.

(6) Adequate fire control measures shall be established and followed.

(7) The site shall be operated in accordance with approved plans and permits.

(8) Adequate personnel shall be provided to insure continued and smooth operation of the facility. The facility personnel and supervisor must be trained in ~~sanitary landfill~~ MSWLF techniques.

(9) Personnel facilities (shelter, communications, lavatory and toilet) shall be provided for employees' use and shall be kept clean and in good repair. Sewage disposal systems shall be approved by the Department, ~~or~~ the State Health Department, or the local Health Department.

(10) Adequate equipment shall be provided to insure continued operation and suitable stand-by equipment shall be available within 24 hours in case of prolonged breakdown of primary equipment.

(11) An all-weather access road shall be provided to the dumping face. The access road shall be wide enough to allow passage of collection vehicles.

(12) Measures shall be taken to prevent the breeding or accumulation of disease vectors. If determined necessary by the Department or the State Health Department, additional disease vector control measures shall be conducted.

(13) Provisions shall be included for disposal activities in adverse weather conditions.

(14) The site shall be adequately secured using artificial barriers, natural barriers, or both ~~as appropriate~~ to prevent entry of unauthorized vehicular traffic except when facility personnel are on duty.

(15) A sign outlining instructions for use of the site shall be posted at the entrance and shall include: name of facility, name of permittee, and/or operating agency or person, days and hours of operation, disposal fees, and types of waste accepted if the site is available to the general public or commercial haulers.

(16) Environmental monitoring and treatment structures shall be protected and maintained in good repair.

(17) Completed sites or portions of sites shall be properly closed as provided by this Division and approved facility plans.

(18) Records shall be maintained on the daily volume of waste received at ~~sanitary landfills~~ MSWLFs. A quarterly report utilizing a format approved by the Department which summarizes the daily volumes shall be submitted to the Department and maintained on file in the operating record of the facility by the permittee.

(19) Special provisions shall be made for handling large dead animals or highly putrescible waste. Immediately covering the waste with a minimum of 12 inches of soil in a designated area of the facility shall be included in these provisions.

(20) Bulk or noncontainerized liquid waste, or containers capable of holding liquids shall not be accepted at a disposal facility unless:

(a) The liquid is household waste other than septic waste;

(b) The liquid is leachate or gas condensate derived from the MSWLF unit, and the MSWLF unit is designed with a minimum composite liner and leachate collection system or approved equivalent liner and leachate collection system; or

(c) The containers:

1. Are similar in size to that normally found in household waste;

2. Are designed to hold liquids for use other than storage; or

3. Contain household wastes.

(21) Empty containers larger ~~than 10 gallons~~ in size than normally found in household waste must be rendered unsuitable for holding liquids prior to delivery to the disposal facility unless otherwise approved by the Department.

(22) MSWLF units containing sewage sludge and failing to satisfy the criteria in this Division violate Sections 309 and 405(e) of the Clean Water Act.

(23) Owners or operators of all MSWLFs must ensure that the units do not violate any applicable requirements developed under a State Implementation Plan (SIP) approved or promulgated by the Administrator pursuant to Section 110 of the Clean Air Act, as amended.

(24) Notwithstanding this Rule, additional requirements for operating and maintaining a ~~sanitary landfill~~ MSWLF may be imposed by the Department, as deemed necessary, to comply with the Act and this Division.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-4, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; October 2, 1990; ----- --, 1993.

335-13-4-.23 Specific Requirements for ~~Landfills~~ Construction/Demolition Landfills and Industrial Landfills. The following requirements in conjunction with 335-13-4-.21 shall be for operating and maintaining an acceptable ~~landfill~~ C/DLF or ILF:

(1) All waste shall be covered as follows:

(a) A minimum of six inches of compacted earth or other alternative cover material that includes but is not limited to foams, geosynthetic or waste products, and is approved by the Department shall be added at the conclusion of each week's operation or as otherwise specified by the Department~~.~~ to control disease vectors, fires, odors, blown litter and scavenging.

~~(b) Landfilled areas (cells) which will not have additional waste placed on them for three months or more shall be covered within 30 days with a minimum of 12 inches of intermediate soil cover, graded to prevent ponding of surface water, and prepared for the establishment of a vegetative cover. Such preparation shall include, but not be limited to, the placement of appropriate species of grass seed, fertilizer, mulch, and watering such that germination can reasonably be anticipated.~~

~~(c) Grading and final cover requirements for completed portions of the facility are as follows:~~

~~1. Final grading shall be provided within 60 days after landfilling has been completed for each area fill of two acres or more. When the trench method is utilized, final grading shall be provided within 60 days after landfilling has been completed on each trench. Final earth cover shall be a minimum of two feet of compacted soil.~~

~~2. The establishment of a vegetative or some other appropriate cover to minimize erosion and, when applicable, maximize evapotranspiration shall be established. Within 30 days after completion of final grading on each filled area or each trench, the permittee shall prepare the final cover for the establishment of a vegetative or alternative cover. For the establishment of a vegetative cover, such preparation shall include, but not be limited to:~~

~~(i) Placement of appropriate species of grass seed, fertilizer and mulch; and~~
~~(ii) Watering and maintenance necessary such that germination can reasonably be anticipated.~~

~~(d) Earth cover shall be of a quality to be easy manageable and with sufficient clay content to provide an adequate seal on the landfilled waste.~~

(b) Final closure shall be carried out in accordance with 335-13-4-.20 of this Division.

(2) All waste shall be thoroughly spread in layers two feet or less in thickness and thoroughly compacted daily with adequate landfill equipment prior to placing additional layers of waste or placing the weekly cover as specified in 335-13-4-.23(1). Waste such as construction/demolition waste and other types of waste which cannot be managed by landfill equipment in this manner shall be managed in a manner approved by the Department.

(3) All waste shall be confined to as small an area as possible and placed onto an appropriate slope of 4 to 1 (25%) or as approved by the Department.

(4) Scavenging shall not be permitted, and salvaging operations shall be controlled in accordance with plans approved by the Department.

(5) Litter shall be controlled along the access roads, ~~and~~ over the ~~landfill~~ disposal facility, and the adjoining property.

(6) Adequate fire control measures shall be established and followed.

(7) The facility shall be operated in accordance with approved plans and permits.

(8) The site shall be adequately secured to prevent entry except when a trained operator or caretaker is on site.

(9) If the site is available to the public or commercial haulers, a sign shall be posted at the landfill stating: name of permittee, owner and/or operator, name of landfill, days and hours of operation, waste types accepted and disposal fees for use of the landfill.

(10) An all-weather access road shall be provided to the dumping face. The access road shall be wide enough to allow passage of collection vehicles.

(11) Provisions shall be included for disposal activities in adverse weather conditions.

(12) Adequate personnel shall be provided to insure continued and smooth operation of the site. The facility personnel and landfill supervisor must be trained in landfill techniques.

(13) Completed sites or portions of sites shall be properly closed as provided by this Division and approved facility plans.

(14) The Department may require the following based on the extent the site is used:

(a) Personnel facilities which provide shelter, communications, lavatory, and toilets for employees. Such facilities shall be kept clean and well repaired. Sewage disposal systems shall be approved by the Department, ~~or~~ the State Health Department, ~~and~~ or Local Health ~~Officer~~ Department.

(b) Equipment allocated to the landfill shall be such that the site can be properly maintained to meet the requirements of this Division.

(15) Environmental monitoring and treatment structures shall be protected and maintained in good repair.

(16) Records shall be maintained on the daily volume of waste received at C/DLFs and ILFs. A quarterly report utilizing a format approved by the Department which summarizes the daily volumes shall be submitted to the Department and maintained on file in the operating record of the facility by the permittee.

(17) Measures shall be taken to prevent the breeding or accumulation of disease vectors. If determined necessary by the Department or the State Health Department, additional disease vector control measures shall be conducted.

(18) Bulk or noncontainerized liquid waste, capable of holding liquids shall not be accepted at a C/DLF or ILF unless:

1. The liquid is leachate or gas condensate derived from the C/DLF or ILF unit and, the C/DLF or ILF unit is designed with a minimum single liner and leachate collection system or approved equivalent liner and leachate collection system; or

2. The containers are designed to hold liquids for use other than storage.

(19) Empty containers larger than 10 gallons in size must be rendered unsuitable for holding liquids prior to delivery to the disposal facility unless otherwise approved by the Department.

(~~16~~20) Notwithstanding this Rule, certain requirements for operating and maintaining a ~~landfill~~ C/DLF or ILF may be enhanced or reduced by the Department as deemed necessary to comply with the Act and this Division.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-4, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; October 2, 1990.

335-13-4-.24 Septic Tank Pumpings and Sewage Sludge.
The practice of accepting septic tank pumpings and sewage sludge shall not occur at disposal facilities unless specifically approved in writing by the Department.
Author:
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988.

335-13-4-.25 Specific Requirements for Other Disposal Methods. Construction and operation of a solid waste disposal facility for which specific rules and regulations under this Division have not been developed is prohibited unless:

(1) A permit application for the location, construction, and operation of the facility is submitted as stated in 335-13-5-.01 of this Division, and

(2) The solid waste disposal facility is determined by the Department to be consistent with the intent of the Act and this Division.
Author:
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988.

335-13-4-.26 Requirements for Management and Disposal of Special Waste. Requirements for the management and disposal of special waste at a disposal facility permitted by the Department shall meet the following requirements. Certain requirements may be modified by the Department as deemed necessary to comply with the Act and this Division. Waste types for which specific rules and regulations under this Division have not been developed shall be managed and disposed of in a manner as determined by the Department to be consistent with the intent of the Act and this Division. Generators of a special waste may be required by the Department to provide an analysis and certification that the waste is nonhazardous or treated medical waste.

(1) Disposal requirements for drilling fluids and drill cuttings. Any person, agency, or permittee who generates, processes, treats, or disposes of drilling muds shall comply with the following practices:

(a) Drilling fluids and drill cuttings intended for disposal shall be disposed of in a facility permitted by the Department unless disposal is regulated by another agency such as the State Oil and Gas Board.

(b) Prior to disposal at a solid waste facility, the following conditions shall be met:

1. A written certification from the generator that the drilling fluids and drill cuttings are nonhazardous and has not been mixed with hazardous waste shall be submitted to the Department.

2. The drilling fluids and drill cuttings shall be dewatered or solidified to a bladeable consistency and certified to contain no "free liquids" as defined by Method 9095 (Paint Filter Liquids Test), as described in "Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods" (EPA Pub. No. SW-846).

(c) The area used for disposal shall be covered at least weekly or as determined necessary by the Department.

(d) Final earth cover shall be as noted in 335-13-4-.22(1).

(2) Disposal requirements for asbestos. Any person who generates, processes, treats, or disposes of asbestos shall comply with the following practices:

(a) Asbestos shall be disposed of in a facility permitted by the Department. The asbestos shall arrive at the disposal facility in properly labeled, leak-tight containers as determined by the Department. The material inside the containers should be in a form that it will not easily become airborne.

(b) Containers shall be placed intact in a specially prepared place and covered with a minimum of 12 inches of earth at the end of each working day. Asbestos waste may be landfilled in an excavation at the bottom of the operating face if no liner is present or the design depth restriction is not exceeded. The waste may also be placed in a separately designated area. If a separate area is utilized, it shall be clearly marked to prevent future excavation into the waste.

(c) Proper handling precautions shall be taken to ensure that containers are not ruptured prior to placing the required daily earth cover as noted in 335-13-4-.26(2)(b). No machinery shall be operated over uncovered containers.

(d) Final ~~earth~~-cover shall be as noted in 335-13-4-.22(1)(c).

<u>(3) Foundry sand which exhibit less than 50 percent of each of the TC Levels for metals as defined by the USEPA's Toxicity Characteristic Leaching Procedure (TCLP) may be managed in the following manner:</u>

<u>(a) Foundry sand may be managed in areas other than</u>

1. Flood Plains;

2. Wetlands;

3. Residential zones; or

4. Areas less than 5 feet above the seasonal high groundwater table.

(b) Each foundry must maintain records at the manufacturing facility. These records must include:

1. A description of the site to within the 1/4, 1/4 Section of a specific Township and Range.

2. Volume of foundry sand disposed of at each location.

(c) The waste must be certified by the generator on an quarterly basis or whenever the process changes which would significantly alter the test results, whichever is more frequent. Certification of the foundry sand shall be accomplished by submitting the following:

1. A completed Solid/Hazardous Waste Determination Form.

2. A TCLP Analysis for metals.

(d) Each foundry must contact the Water Division of ADEM with regards to General Stormwater and/or NPDES permits.

(e) Foundry sand from two or more foundries may be managed at one location provided adequate documentation and record keeping is maintained for each foundry.

(f) Foundry sands not meeting the requirements of Rule 335-13-4-.26(3)(a) through 335-13-4-.26(3)(f) must be managed at a disposal facility permitted by the Department or at an approval recycle/reuse facility.

(4) Disposal requirements for petroleum contaminated waste. Any person who disposes of petroleum contaminated waste shall comply with the following practices:

(a) Petroleum contaminated waste must be disposed of in a permitted facility with groundwater monitoring wells.

(b) Prior to disposal at a MSWLF, C/DLF or ILF, the following conditions must be met:

1. Written certification from generator that petroleum contaminated waste is non-hazardous supported by TPH analysis and TCLP analysis, where applicable.

(i) TPH analysis will be required for all petroleum contaminated waste certifications.

(ii) TCLP is required on used heavy petroleum contaminated waste or as determined by the Department.

(iii) No TCLP will be required for petroleum contaminated waste containing less than 100 TPH.

(iv) TPH and TCLP sampling frequency will be determined by the Department.

2. The petroleum contaminated waste must be solidified to a bladeable consistency and certified to contain no free liquids as defined by Method 9095 (Paint Filter Liquid Test).

3. TPH contaminated waste acceptable for disposal in an unlined permitted disposal facility shall not exceed the following TPH and Total Lead limits. Written approval from ADEM must be obtained before petroleum contaminated waste is disposed of.

PETROLEUM CONTAMINANT	TPH (MAXIMUMS)	LEAD ANALYSIS
Light (gasoline & similar weights)	< 250 ppm	< 100 total (or certification < 5.0 TCLP statement that product is unleaded)
Medium (diesel & similar weights)	< 500 ppm	Not required
Heavy (motor oil & similar weights)	< 3,000 ppm	Used - TCLP required Virgin - No TCLP required

4. Any petroleum contaminated waste in which the original product did not have a flash point < 140 degrees Fahrenheit or would not otherwise be classified as a light petroleum product may be disposed of at a permitted solid waste disposal facility with Departmental approval which has been synthetically lined according to Division 13 requirements. Used, heavy petroleum material such as waste oil, is still subject to TCLP analysis.

(c) Petroleum contaminated waste with a TPH of less than 10 ppm is considered noncontaminated and is not regulated by the ADEM.

(d) Petroleum contaminated waste from UST removals with a TPH greater than 10 ppm but less than 100 ppm may be disposed of on site under the following conditions:

1. The distance from land surface to existing groundwater must be 5 feet or more.

2. The soil is placed back in the excavation from which it was removed or spread in a thin layer on site. On site disposal requires the approval of the ADEM UST Section.

(e) Petroleum contaminated waste that exceeds the established TPH limits for disposal at a permitted disposal facility must be remediated to acceptable levels by aeration, bioremediation, thermal treatment or other Department approved remediation method.

(5) Municipal Solid Waste Ash shall be disposed of at a MSWLF meeting at a minimum the design criteria established under 335-13-4-.18. Alternative disposal methods or uses must be approved by the Department prior to implementation.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-4, 22-27-7.
History: July 21, 1988; Amended: October 2, 1990~~.~~; ------, 1993.

335-13-4-.27 Groundwater Monitoring and Corrective Action. The requirements for groundwater monitoring and corrective action at MSWLFs are presented in the following rules:

(1) The requirements in this Rule shall apply to all MSWLF units and, where specified, C/DLF units or ILF units, except as provided in 335-13-4-.27(2) or 335-13-4-.27(3).

(2) Groundwater monitoring requirements under 335-13-4-.27(7) through 335-13-4-.27(32) of these Rules may be waived by the Department for a MSWLF unit if the owner or operator can demonstrate that there is no potential for migration of hazardous constituents from that MSWLF unit to the first saturated zone, as defined in 335-13-1-.03, during the active life of the unit and the post-closure care period. This demonstration must be certified by a qualified groundwater scientist, as defined in 335-13-1-.03, and approved by the Department, and must be based upon:

(a) Site-specific field collected measurements, sampling, and analysis of physical, chemical, and biological processes affecting contaminant fate and transport, and

(b) Contaminant fate and transport predictions that maximize contaminant migration and consider impacts on human health and environment.

(3) Groundwater monitoring requirements under 335-13-4-.27(7) through 335-13-4-.27(32) of these Rules may be waived for a C/DLF or ILF when approved by the Department.

(4) Owners and operators of MSWLF, C/DLF or ILF units must comply with the groundwater monitoring requirements of this Rule according to the following schedule.

(a) Existing MSWLF units and lateral expansions must be in compliance with the groundwater monitoring requirements specified in 335-13-4-.27(7) through 335-13-4-.27(32) by October 9, 1993, or the effective date of §258.1 of 40 CFR 258, Solid Waste Disposal Criteria, whichever is later.

(b) New MSWLF units, C/DLF units or ILF units must be in compliance with the groundwater monitoring requirements specified in 335-13-4-.27(7) through 335-13-4-.27(32) before waste can be placed in the unit.

(5) Once established at a MSWLF unit, C/DLF unit or ILF unit groundwater monitoring shall be conducted throughout the active life and post-closure care period of that MSWLF unit, C/DLF unit or ILF unit as specified in 335-13-4-.20.

(6) The Department may establish alternative schedules for demonstrating compliance with 335-13-4-.27(10)(b), pertaining to notification of placement of certification in operating record; 335-13-4-.27(22)(a), pertaining to notification that a statistically significant increase (SSI) notice is in the operating record; 335-13-4-.27(22)(b) and (c), pertaining to an assessment monitoring program; 335-13-4-.27(24), pertaining to sampling and analyzing Appendix II constituents; 335-13-4-.27(26)(a), pertaining to placement of notice (Appendix II constituents detected) in record and notification of notice in record; 335-13-4-.27(26)(b), pertaining to sampling for Appendix I and II of this Chapter; 335-13-4-.27(29), pertaining to notification (and placement of notice in record) of SSI above groundwater protection standard; 335-13-4-.27(29)(a)4. and 335-13-4-.27(33), pertaining to assessment of corrective measures; 335-13-4-.27(37), pertaining to selection of remedy and notification of placement in record; 335-13-4-.27(44)(d), pertaining to notification of placement in record (alternative corrective action measures); and 335-13-4-.27(47), pertaining to notification of placement in record (certification of remedy completed).

(7) A groundwater monitoring system must be installed that consists of a sufficient number of wells, installed at appropriate locations and depths, to yield groundwater samples from the first saturated zone (as defined in 335-13-1-.03) that:

(a) Represent the quality of background groundwater that has not been affected by leakage from a unit. A determination of background quality may include sampling of wells that are not hydraulically upgradient of the waste management area where:

1. Hydrogeologic conditions do not allow the owner or operator to determine what wells are hydraulically upgradient; or

2. Sampling at other wells will provide an indication of background groundwater quality that is as representative or more representative than that provided by the upgradient wells; and

(b) Represent the quality of groundwater passing the relevant point of compliance specified by the Department under 335-13-4-.12(14). The downgradient monitoring system must be installed at the relevant point of compliance specified by the Department under

335-13-4-.12(14) that ensures detection of groundwater contamination in the first saturated zone. When physical obstacles preclude installation of groundwater monitoring wells at the relevant point of compliance at existing units, the down-gradient monitoring system may be installed at the closest practicable distance hydraulically down-gradient from the relevant point of compliance specified by the Department under 335-13-4-.12(14) that ensures detection of groundwater contamination in the uppermost aquifer.

(8) The Department may approve a multi-unit groundwater monitoring system instead of separate groundwater monitoring systems for each MSWLF unit when the facility has several units, provided the multi-unit groundwater monitoring system meets the requirement of 335-13-4-.27(7) and will be as protective of human health and the environment as individual monitoring systems for each MSWLF unit, based on the following factors:

(a) Number, spacing, and orientation of the MSWLF units;

(b) Hydrogeologic setting;

(c) Site history;

(d) Engineering design of the MSWLF units; and

(e) Type of waste accepted at the MSWLF units.

(9) Groundwater monitoring wells shall be designed and constructed in accordance with the following reference: "Design and Installation of Groundwater Monitoring Wells in Aquifers" ASTM Subcommittee D18.21 on Groundwater Monitoring, or otherwise as specifically approved by the Department. Plans for groundwater monitoring well location, design, construction and/or abandonment shall be submitted to the Department for review and approval prior to installation. The monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole. This casing must be screened or perforated and packed with gravel or sand, where necessary, to enable collection of groundwater samples. The annular space (i.e., the space between the bore hole and well casing) above the sampling depth must be sealed to prevent contamination of samples and the groundwater.

(a) The owner or operator must notify the Department that the design, installation, development, and/or abandonment of any monitoring wells, piezometers and other measurement, sampling, and analytical devices has been documented and placed in the operating record; and

(b) The monitoring wells, piezometers, and other measurement, sampling, and analytical devices must be operated and maintained so that they perform to design specifications throughout the life of the monitoring program.

(c) Abandoned wells and bore holes shall be abandoned in accordance with the following procedures in order to prevent contamination of groundwater resources. A plan of abandonment must be submitted and approved by the Department prior to implementing abandonment of any well.

1. A well shall be measured for depth prior to sealing to ensure that it is free from any obstructions that may interfere with sealing operations.

2. Where feasible, wells shall be completely filled with neat cement. If the well cannot be completely filled, the sealing materials for the top 20 feet must be neat cement and no material that could impart taste, odor, or toxic components to water may be used in the sealing process.

3. Liner pipe shall be removed from each well in order to ensure placement of an effective seal. If the liner pipe cannot be readily removed, it shall be perforated to ensure that proper sealing is obtained.

4. Concrete, cement grout, or neat cement shall be used as primary sealing materials and shall be placed from the bottom upwards using methods that will avoid segregation or dilution of material.

5. Complete, accurate records of the abandonment procedure shall be kept for each well abandoned. The record of abandonment shall include, at a minimum, the depth of each layer of all sealing and backfilling materials, the quantity of sealing materials used, measurements of static water levels and depths, and any changes made in the well during the sealing. A copy of these records shall be submitted to the Department and a copy placed in the operating record.

(10) The number, spacing, and depths of monitoring systems shall be:

(a) Determined based upon site-specific technical information that must include thorough characterization of:

1. Aquifer thickness, groundwater flow rate, groundwater flow direction including seasonal and temporal fluctuations in groundwater flow; and

2. Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer, including, but not limited to: thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.

(b) Certified by a qualified groundwater scientist and approved by the Department. Within 14 days of the Department's approval, the owner or operator must notify the Department that the certification has been placed in the operating record.

(11) The groundwater monitoring program must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide an accurate representation of groundwater quality at the background and downgradient wells installed in compliance with 335-13-4-.27(7). The owner or operator must submit for approval to the Department the sampling and analysis program documentation and place a copy in the operating record. The program must include procedures and techniques for:

(a) Sample collection;

(b) Sample preservation and shipment;

(c) Analytical procedures;

(d) Chain of custody control; and

(e) Quality assurance and quality control.

(12) The groundwater monitoring program must include sampling and analytical methods that are appropriate for groundwater sampling and that accurately measure hazardous constituents and other monitoring parameters in groundwater samples. Groundwater samples shall not be field-filtered prior to laboratory analysis.

(13) The sampling procedures and frequency must be protective of human health and the environment.

(14) Groundwater elevations (MSL) must be measured in each well immediately prior to purging, each time groundwater is sampled. The owner or operator must determine the rate and direction of groundwater flow each time groundwater is sampled. Groundwater elevations in wells which monitor the same waste management area must be measured within a 48 hour period to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater flow rate and direction.

(15) The owner or operator must establish background groundwater quality in a hydraulically upgradient or background well(s) for each of the monitoring parameters or constituents required in the particular groundwater monitoring program that applies to the MSWLF unit, C/DLF unit or ILF unit, as determined under 335-13-4-.27(20), or 335-13-4-.27(23). Background groundwater quality may be established at wells that are not located hydraulically upgradient from the MSWLF unit, C/DLF unit or ILF unit if it meets the requirements of 335-13-4-.27(7)(a).

(16) The number of samples collected to establish groundwater quality data must be consistent with the appropriate statistical procedures determined pursuant to 335-13-4.27(17). The sampling procedures shall be those specified under 335-13-4-.27(21) for detection monitoring, 335-13-4-.27(24) and 335-13-4-.27(26) for assessment monitoring, and 335-13-4-.27(34) for corrective action.

(17) The owner or operator must specify in writing to the Department and place in the operating record one of the following statistical methods to be used in evaluating groundwater monitoring data for each hazardous constituent. The statistical test chosen shall be conducted separately for each hazardous constituent in each well.

(a) A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.

(b) An analysis of variance (ANOVA) based on ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.

(c) A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.

(d) A control chart approach that gives control limits for each constituent.

(e) Another statistical test method that meets the performance standards of 335-13-4-.27(18). The owner or operator must place a justification for this alternative in the operating record and submit it to the Department for approval to use this alternative test. The justification must demonstrate that the alternative method meets the performance standards of 335-13-4-.27(18).

(18) Any statistical method chosen under 335-13-4-.27(17) shall comply with the following performance standards, as appropriate:

(a) The statistical method used to evaluate groundwater monitoring data shall be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used. If the distributions for the constituents differ, more than one statistical method may be needed.

(b) If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a groundwater protection standard, the test shall be done at a Type I error level no less than 0.01 for each

testing period. If a multiple comparisons procedure is used, the Type I experiment wise error rate for each testing period shall be no less than 0.05; however, the Type I error of no less than 0.01 for individual well comparisons must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.

(c) If a control chart approach is used to evaluate groundwater monitoring data, the specific type of control chart and its associated parameter values shall be protective of human health and the environment. The parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

(d) If a tolerance interval or a prediction interval is used to evaluate groundwater monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, shall be protective of human health and the environment. These parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

(e) The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment. Any practical quantitation limit (pql) that is used in the statistical method shall be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.

(f) If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability, as well as temporal correlation in the data.

(19) The owner or operator must determine whether or not there is a statistically significant increase (SSI) over background values for each parameter or constituent required in the particular groundwater monitoring program that applies to the MSWLF unit, C/DLF unit or ILF unit as determined under 335-13-4-.27(20) or 335-13-4-.27(23). If an SSI over background groundwater quality is detected owner/operator must notify the Department within 14 days of this event.

(a) In determining whether a statistically significant increase has occurred, the owner or operator must compare the groundwater quality of each parameter or constituent at each monitoring well designated pursuant to 335-13-4-.27(7)(b) to the background value of that constituent, according to the statistical procedures and performance standards specified under 335-13-4-.27(17) and 335-13-4-.27(18).

(b) Within 30 days after completing sampling and receiving analytical results, the owner or operator must determine whether there has been a statistically significant increase over background at each monitoring well.

(20) Detection monitoring is required at MSWLF units, C/DLF units or ILF units for all groundwater monitoring wells defined under 335-13-4-.27(7)(a) and 335-13-4-.27(7)(b). At a minimum, a detection monitoring program for MSWLF units must include the monitoring for the constituents listed in Appendix I of this Chapter. Detection monitoring programs for C/DLFs or ILFs must include monitoring for constituents as specified by the Department.

(a) The Department may delete any of the detection monitoring parameters for a MSWLF unit, C/DLF unit, or ILF unit if it can be shown that the removed constituents are not reasonably expected to be contained in or derived from the waste contained in the unit.

(b) The Department may establish an alternative list of inorganic indicator parameters for a MSWLF unit, in lieu of some or all of the heavy metals (constituents 1-15 in Appendix I), if the alternative parameters provide a reliable indication of inorganic releases from the MSWLF unit to the groundwater. In determining alternative parameters, the Department shall consider the following factors:

1. The types, quantities, and concentrations of constituents in waste managed at the MSWLF unit;

2. The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the MSWLF unit;

3. The detectability of indicator parameters, waste constituents, and reaction products in the groundwater; and

4. The concentration or values and coefficients of variation of monitoring parameters or constituents in the groundwater background.

(21) The monitoring frequency for all constituents listed in Appendix I, or in the alternative list approved in accordance with 335-13-4-.27(20) or 335-13-4-.27(20)(b), shall be at least semiannual during the active life of the facility (including closure) and the post-closure period. A minimum of four independent samples from each well (background and downgradient) must be collected and analyzed for the Appendix I constituents, or the alternative list approved in accordance with 335-13-4-.27(20) or 335-13-4-.27(20)(b), during the first semiannual sampling event. At least one sample from each well (background and downgradient) must be collected and analyzed during subsequent semiannual sampling events.

The Department may specify an appropriate alternative frequency for repeated sampling and analysis for Appendix I constituents, or the alternative list approved in accordance with 335-13-4-.27(20) or 335-13-4-.27(20)(b), during the active life (including closure) and the post-closure care period. The alternative frequency during the active life (including closure) shall be no less than annual. The alternative frequency shall be based on consideration of the following factors:

(a) Lithology of the aquifer and unsaturated zone;

(b) Hydraulic conductivity of the aquifer and unsaturated zone;

(c) Groundwater flow rates;

(d) Minimum distance between upgradient edge of the MSWLF unit, C/DLF unit, or ILF unit and downgradient monitoring well screen (minimum distance of travel); and

(e) Resource value of the aquifer.

(22) If the owner or operator determines, pursuant to 335-13-4-.27(17), that there is a statistically significant increase over background for one or more of the constituents listed in Appendix I, or in the alternative list approved in accordance with 335-13-4-.27(20) and 335-13-4-.27(20)(b), at any monitoring well at the boundary specified under 335-13-4-.27(7)(b), the owner or operator:

(a) Must, within 14 days of this finding, place a notice in the operating record, and submit a copy of this notice to the Department, indicating which constituents have shown statistically significant changes from background levels, and notify the Department that this notice was placed in the operating record; and

(b) Must establish an assessment monitoring program meeting the requirements of 335-13-4-.27(23) through 335-13-4-.27(32) within 90 days except as provided for in 335-13-4-.27(22)(c).

(c) The owner/operator may demonstrate that a source other than a MSWLF unit, C/DLF unit, or ILF unit caused the contamination or that the statistically significant increase resulted from an error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. A report documenting this demonstration must be certified by a qualified groundwater scientist, approved by the Department and be placed in the operating record. If a successful demonstration is made and documented, the owner or operator may continue detection monitoring as specified in this Rule. If, after 90 days, a successful demonstration is not made, the owner or operator must initiate an assessment monitoring program as required in 335-13-4-.27(23) through 335-13-4-.27(32).

(23) Assessment monitoring is required whenever a statistically significant increase over background has been detected for one or more of the constituents listed in Appendix I or in the alternative list approved in accordance with 335-13-4-.27(20)(b).

(24) Within 90 days of triggering an assessment monitoring program, and annually thereafter, the owner or operator must sample and analyze the groundwater for all constituents identified in Appendix II of this Chapter. A minimum of one sample from each downgradient well must be collected and analyzed during each sampling event. For any constituent detected in the downgradient wells as the result of the complete Appendix II analysis, a minimum of four independent samples from each well (background and downgradient) must be collected and analyzed to establish background for the new constituents.

The Department may specify an appropriate subset of wells to be sampled and analyzed for Appendix II constituents during assessment monitoring. The Department may delete any of the Appendix II monitoring parameters for a MSWLF

unit if it can be shown that the removed constituents are not reasonably expected to be in or derived from the waste contained in the unit.

(25) The Department may specify an appropriate alternate frequency for repeated sampling and analysis for the full set of Appendix II constituents required by 335-13-4-.27(24), during the active life (including closure) and post-closure care of the unit considering the following factors:

(a) Lithology of the aquifer and unsaturated zone;

(b) Hydraulic conductivity of the aquifer and unsaturated zone;

(c) Groundwater flow rates;

(d) Minimum distance between upgradient edge of the MSWLF unit and downgradient monitoring well screen (minimum distance of travel);

(e) Resource value of the aquifer; and

(f) Nature (fate and transport) of any constituents detected in response to this Rule.

(26) After obtaining the results from the initial or subsequent sampling events required in 335-13-4-.27(24), the owner or operator must:

(a) Within 14 days, place a notice in the operating record identifying the Appendix II constituents that have been detected and notify the Department that this notice has been placed in the operating record;

(b) Within 90 days, and on at least a semiannual basis thereafter, resample all wells specified by 335-13-4-.27(7), conduct analyses for all constituents in Appendix I or in the alternative list approved in accordance with 335-13-4-.27(20)(b), and for those constituents in Appendix II that are detected in response to 335-13-4-.27(24), and record their concentrations in the facility operating record. At least one sample from each well (background and downgradient) must be collected and analyzed during these sampling events.

The Department may specify an alternative monitoring frequency during the active life (including closure) and the post closure period for the constituents referred to in this paragraph. The alternative frequency for Appendix I constituents, or the alternative list approved in accordance with 335-13-4-.27(20)(b), during the active life (including closure) shall be no less than annual. The alternative frequency shall be based on consideration of the factors specified in 335-13-4-.27(25);

(c) Establish background concentrations for any constituents detected pursuant to 335-13-4-.27(24) or 335-13-4-.27(26)(b); and

(d) Establish groundwater protection standards for all constituents detected pursuant to 335-13-4-.27(24) or 335-13-4-.27(26). The groundwater protection standards shall be established in accordance with 335-13-4-.27(30) or 335-13-4-.27(31).

(27) If the concentrations of all Appendix II constituents are shown to be at or below background values, using the statistical procedures in 335-13-4-.27(17), for two consecutive sampling events, the owner or operator must notify the Department of this finding and may return to detection monitoring.

(28) If the concentrations of any Appendix II constituents are above background values, but all concentrations are below the groundwater protection standard established under 335-13-4-.27(30) or 335-13-4-.27(31), using the statistical procedures in 335-13-4-.27(17), the owner or operator must continue assessment monitoring in accordance with this Rule.

(29) If one or more Appendix II constituents are detected at statistically significant levels above the groundwater protection standard established under 335-13-4-.27(30) or 335-13-4-.27(31) in any sampling event, the owner or operator must, within 14 days of this finding, place a notice in the operating record identifying the Appendix II constituents that have exceeded the groundwater protection standard and notify the Department and all appropriate local government officials that the notice has been placed in the operating record.

(a) The owner or operator also:

1. Must characterize the nature and extent of the release by installing additional monitoring wells as necessary;

The Department may specify an alternative monitoring frequency during the active life (including closure) and the post closure period for the constituents referred to in this paragraph. The alternative frequency for Appendix I constituents, or the alternative list approved in accordance with 335-13-4-.27(20)(b), during the active life (including closure) shall be no less than annual. The alternative frequency shall be based on consideration of the factors specified in 335-13-4-.27(25);

(c) Establish background concentrations for any constituents detected pursuant to 335-13-4-.27(24) or 335-13-4-.27(26)(b); and

(d) Establish groundwater protection standards for all constituents detected pursuant to 335-13-4-.27(24) or 335-13-4-.27(26). The groundwater protection standards shall be established in accordance with 335-13-4-.27(30) or 335-13-4-.27(31).

(27) If the concentrations of all Appendix II constituents are shown to be at or below background values, using the statistical procedures in 335-13-4-.27(17), for two consecutive sampling events, the owner or operator must notify the Department of this finding and may return to detection monitoring.

(28) If the concentrations of any Appendix II constituents are above background values, but all concentrations are below the groundwater protection standard established under 335-13-4-.27(30) or 335-13-4-.27(31), using the statistical procedures in 335-13-4-.27(17), the owner or operator must continue assessment monitoring in accordance with this Rule.

(29) If one or more Appendix II constituents are detected at statistically significant levels above the groundwater protection standard established under 335-13-4-.27(30) or 335-13-4-.27(31) in any sampling event, the owner or operator must, within 14 days of this finding, place a notice in the operating record identifying the Appendix II constituents that have exceeded the groundwater protection standard and notify the Department and all appropriate local government officials that the notice has been placed in the operating record.

(a) The owner or operator also:

1. Must characterize the nature and extent of the release by installing additional monitoring wells as necessary;

2. Must install at least one additional monitoring well at the facility boundary in the direction of contaminant migration and sample this well in accordance with 335-13-4-.27(26)(b);

3. Must notify all persons who own the land or reside on the land that directly overlies any part of the plume of contamination if contaminants have migrated off-site as indicated by sampling of wells in accordance with 335-13-4-.27(29)(a); and

4. Must initiate an assessment of corrective measures as required by 335-13-4-.27(33) through 335-13-4-.27(36) within 90 days; or

(b) The owner or operator may demonstrate that a source other than a MSWLF unit caused the contamination, or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. A report documenting this demonstration must be certified by a qualified groundwater scientist or approved by the Department and placed in the operating record. If a successful demonstration is made, the owner or operator must continue monitoring in accordance with the assessment monitoring program pursuant to 335-13-4-.27(23) through 335-13-4-.27(32), and may return to detection monitoring if the Appendix II constituents are at or below background as specified in 335-13-4-.27(27). Until a successful demonstration is made, the owner or operator must comply with 335-13-4-.27(29) including initiating an assessment of corrective measures.

(30) The owner or operator must establish a groundwater protection standard for each Appendix II constituent detected in the groundwater. The groundwater protection standard shall be:

(a) For constituents for which a maximum contaminant level (MCL) has been promulgated under Section 1412 of the Safe Drinking Water Act (codified) under 40 CFR 141, the MCL for that constituent;

(b) For constituents for which MCLs have not been promulgated, the background concentration for the constituent established from wells in accordance with 335-13-4-.27(7)a); or

(c) For constituents for which the background level is higher than the MCL identified under 335-13-4-.27(30)(a) or health based levels identified under 335-13-4-.27(31)(a), the background concentration.

(31) The Department may establish an alternative groundwater protection standard for constituents for which MCLs have not been established. These groundwater protection standards shall be appropriate health based levels that satisfy the following criteria:

(a) The level is derived in a manner consistent with Agency guidelines for assessing the health risks of environmental pollutants (51 FR 33992, 34006, 34014, 34028, September 24, 1986);

(b) The level is based on scientifically valid studies conducted in accordance with the Toxic Substances Control Act Good Laboratory Practice Standards (40 CFR 792) or equivalent;

(c) For carcinogens, the level represents a concentration associated with an excess lifetime cancer risk level (due to continuous lifetime exposure) with the 1×10^{-4} to 1×10^{-6} range; and

(d) For systemic toxicants, the level represents a concentration to which the human population (including sensitive subgroups) could be exposed to on a daily basis that is likely to be without appreciable risk of deleterious effects during a lifetime. For purposes of this subpart, systemic toxicants include toxic chemicals that cause effects other than cancer or mutation.

(32) In establishing groundwater protection standards under 335-13-4-.27(31), the Department may consider the following:

(a) Multiple contaminants in the groundwater;

(b) Exposure threats to sensitive environmental receptors; and

(c) Other site-specific exposure or potential exposure to groundwater.

(33) Within 90 days of finding that any of the constituents listed in Appendix II have been detected at a statistically significant level exceeding the groundwater protection standards defined under 335-13-4-.27(30) or

335-13-4-.27(31), the owner or operator must initiate an assessment of corrective measures. Such an assessment must be completed within a reasonable period of time.

(34) The owner or operator must continue to monitor in accordance with the assessment monitoring program as specified in 335-13-4-.27(23) through 335-13-4-.27(32).

(35) The assessment shall include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy as described under 335-13-4-.27(37) through 335-13-4-.27(41), addressing at least the following:

(a) The performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts, and control of exposure to any residual contamination;

(b) The time required to begin and complete the remedy;

(c) The costs of remedy implementation; and

(d) The institutional requirements such as State or local permit requirements or other environmental or public health requirements that may substantially affect implementation of the remedy(s).

(36) The owner or operator must discuss the results of the corrective measures assessment, prior to the selection of remedy, in a public meeting with interested and affected parties.

(37) Based on the results of the corrective measures assessment conducted under 335-13-4-.27(33) through 335-13-4-.27(36), the owner or operator must select a remedy that, at a minimum, meets the standards listed in this paragraph. The owner or operator must notify the Department, within 14 days of selecting a remedy, that a report describing the selected remedy has been placed in the operating record and how it meets the standards in this paragraph. Remedies must:

(a) Be protective of human health and the environment;

(b) Attain the groundwater protection standard as specified pursuant to 335-13-4-.27(30) or 335-13-4-.27(31);

(c) Control the source(s) of releases so as to reduce or eliminate, to the maximum extent practicable, further releases of Appendix II constituents into the environment that may pose a threat to human health or the environment; and

(d) Comply with standards for management of wastes as specified in 335-13-4-.27(45).

(38) In selecting a remedy that meets the standards of 335-13-4-.27(37), the owner or operator shall consider the following evaluation factors:

(a) The long- and short-term effectiveness and protectiveness of the potential remedy(s), along with the degree of certainty that the remedy will prove successful based on consideration of the following:

1. Magnitude of reduction of existing risks;

2. Magnitude of residual risks in terms of likelihood of further releases due to waste remaining following implementation of a remedy;

3. The type and degree of long-term management required, including monitoring, operation, and maintenance;

4. Short-term risks that might be posed to the community, workers, or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and redisposal or containment;

5. Time until full protection is achieved;

6. Potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to human health and the environment associated with excavation, transportation, redisposal, or containment;

7. Long-term reliability of the engineering and institutional controls; and

8. Potential need for replacement of the remedy.

(b) The effectiveness of the remedy in controlling the source to reduce further releases based on consideration of the following factors:

1. The extent to which containment practices will reduce further releases;

2. The extent to which treatment technologies may be used.

(c) The ease or difficulty of implementing a potential remedy(s) based on consideration of the following types of factors:

1. Degree of difficulty associated with constructing the technology;

2. Expected operational reliability of the technologies;

3. Need to coordinate with and obtain necessary approvals and permits from other agencies;

4. Availability of necessary equipment and specialists; and

5. Available capacity and location of needed treatment, storage, and disposal services.

(d) Practicable capability of the owner or operator, including a consideration of the technical and economic capability.

(e) The degree to which community concerns are addressed by a potential remedy(s).

(39) The owner or operator shall specify as part of the selected remedy a schedule(s) for initiating and completing remedial activities. Such a schedule must require the initiation of remedial activities within a reasonable period of time taking into consideration the factors set forth in 335-13-4-.27(39)(a) through 335-13-4-.27(39)(h). The owner or operator must consider the following factors in determining the schedule of remedial activities:

(a) Extent and nature of contamination;

(b) Practical capabilities of remedial technologies in achieving compliance with groundwater protection standards established under 335-13-4-.27(29) or 335-13-4-.27(30) and other objectives of the remedy;

(c) Availability of treatment or disposal capacity for wastes managed during implementation of the remedy;

(d) Desirability of utilizing technologies that are not currently available, but which may offer significant advantages over already available technologies in terms of effectiveness, reliability, safety, or ability to achieve remedial objectives;

(e) Potential risks to human health and the environment from exposure to contamination prior to completion of the remedy;

(f) Resource value of the aquifer including:

1. Current and future uses;

2. Proximity and withdrawal rate of users;

3. Groundwater quantity and quality;

4. The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

5. The hydrogeologic characteristic of the facility and surrounding land;

6. Groundwater removal and treatment costs; and

7. The cost and availability of alternative water supplies.

(g) Practicable capability of the owner or operator.

(h) Other relevant factors.

(40) The Department may determine that remediation of a release of an Appendix II constituent from a MSWLF unit is not necessary if the owner or operator demonstrates to the Department that:

(a) The groundwater is additionally contaminated by substances that have originated from a source other than a MSWLF unit and those substances are present in concentrations such that cleanup of the release from the MSWLF unit would provide no significant reduction in risk to actual or potential receptors; or

(b) The constituent(s) is present in groundwater that:

1. Is not currently or reasonably expected to be a source of drinking water; and

2. Is not hydraulically connected with waters to which the hazardous constituents are migrating or are likely to migrate in a concentration(s) that would exceed the groundwater protection standards established under 335-13-4-.27(30) or 335-13-4-.27(31); or

(c) Remediation of the release(s) is technically impracticable; or

(d) Remediation results in unacceptable cross-media impacts.

(41) A determination by the Department pursuant to 335-13-4-.27(40) shall not affect the authority of the State to require the owner or operator to undertake source control measures or other measures that may be necessary to eliminate or minimize further releases to the groundwater, to prevent exposure to the groundwater, or to remediate the groundwater to concentrations that are technically practicable and significantly reduce threats to human health or the environment.

(42) Based on the schedule established under 335-13-4-.27(39) for initiation and completion of remedial activities the owner/operator must:

(a) Establish and implement a corrective action groundwater monitoring program that:

1. At a minimum, meets the requirements of an assessment monitoring program under 335-13-4-.27(23) through 335-13-4-.27(32);

2. Indicates the effectiveness of the corrective action remedy; and

3. Demonstrates compliance with groundwater protection standards pursuant to 335-13-4-.27(46).

(b) Implement the corrective action remedy selected under 335-13-4-.27(37) through 335-13-4-.27(41); and

(c) Take any interim measures necessary to ensure the protection of human health and the environment. Interim measures should, to the greatest extent practicable, be consistent with the objectives of and contribute to the performance of any remedy that may be required pursuant to 335-13-4-.27(37) through 335-13-4-.27(41). The following factors must be considered by an owner or operator in determining whether interim measures are necessary:

1. Time required to develop and implement a final remedy;

2. Actual or potential exposure of nearby populations or environmental receptors to hazardous constituents;

3. Actual or potential contamination of drinking water supplies or sensitive ecosystems;

4. Further degradation of the groundwater that may occur if remedial action is not initiated expeditiously;

5. Weather conditions that may cause hazardous constituents to migrate or be released;

6. Risks of fire or explosion, or potential for exposure to hazardous constituents as a result of an accident or failure of a container or handling system; and

7. Other situations that may pose threats to human health and the environment.

(43) An owner or operator may determine, based on information developed after implementation of the remedy has begun or other information, that compliance with requirements of 335-13-4-.27(37) are not being achieved through the remedy selected. In such cases, the owner or operator must implement other methods or techniques that could practicably achieve compliance with the requirements, unless the owner or operator makes the determination under 335-13-4-.27(44).

(44) If the owner or operator determines that compliance with requirements under 335-13-4-.27(37) cannot be practically achieved with any currently available methods, the owner or operator must:

(a) Obtain certification of a qualified groundwater scientist or approval by the Department that compliance with requirements under 335-13-4-.27(37) cannot be practically achieved with any currently available methods;

(b) Implement alternate measures to control exposure of humans or the environment to residual contamination, as necessary to protect human health and the environment; and

(c) Implement alternate measures for control of the sources of contamination, or for removal or decontamination of equipment, units, devices, or structures that are:

1. Technically practicable; and

2. Consistent with the overall objective of the remedy.

(d) Notify the Department within 14 days that a report justifying the alternative measures prior to implementing the alternative measures has been placed in the operating record.

(45) All solid wastes that are managed pursuant to a remedy required under 335-13-4-.27(37) through 335-13-4-.27(41), or an interim measure required under 335-13-4-.27(42)(c), shall be managed in a manner:

(a) That is protective of human health and the environment; and

(b) That complies with applicable RCRA requirements.

(46) Remedies selected pursuant to 335-13-4-.27(37) through 335-13-4-.27(41) shall be considered complete when:

(a) The owner or operator complies with the groundwater protection standards established under 335-13-4-.27(30) or 335-13-4-.27(31) at all points within the plume of contamination that lie beyond the groundwater monitoring well system established under 335-13-4-.27(7).

(b) Compliance with the groundwater protection standards established under 335-13-4-.27(30) or 335-13-4-.27(31) has been achieved by demonstrating that concentrations of Appendix II constituents have not exceeded the groundwater protection standard(s) for a period of three consecutive years using the statistical

procedures and performance standards in 335-13-4-.27(17) and 335-13-4-.27(18). The Department may specify an alternative length of time during which the owner or operator must demonstrate that concentrations of Appendix II constituents have not exceeded the groundwater protection standard(s) taking into consideration:

1. Extent and concentration of the release(s);

2. Behavior characteristics of the hazardous constituents in the groundwater;

3. Accuracy of monitoring or modeling techniques, including any seasonal, meteorological, or other environmental variabilities that may affect the accuracy; and

4. Characteristics of the groundwater.

(c) All actions required to complete the remedy have been satisfied.

(47) Upon completion of the remedy, the owner or operator must notify the Department within 14 days that a certification that the remedy has been completed in compliance with the requirements of 335-13-4-.27(46) has been placed in the operating record. The certification must be signed by the owner or operator and by a qualified groundwater scientist or approved by the Department.

(48) When, upon completion of the certification, the owner or operator determines that the corrective action remedy has been completed in accordance with the requirements under 335-13-4-.27(46), the owner or operator shall be released from the requirements for financial assurance for corrective action under 40 CFR 258, Subpart G.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-4, 22-27-7.
History: ----- --, 1993.

335-13-4-.28 Financial Assurance Criteria. [Reserved]

335-13-4-.29 Recordkeeping Requirements. Recordkeeping shall be maintained as follows:

(1) The owner or operator of a MSWLF, C/DLF or ILF unit must record and retain in an operating record ~~near~~ at the facility, ~~in an operating record~~ or in an alternative location approved by the Department, the following information as it becomes available:

(a) Solid Waste Disposal Facility Permit as issued by the Department.

(b) Permitted application, operational narrative, and engineering drawings. This may include, but is not limited to:

1. Any location restriction demonstration required under 335-13-4-.01 of this Division;

2. Any MSWLF unit design documentation for placement of leachate or gas condensate in a MSWLF unit as required under 335-13-4-.21(3)(a) of this Division;

3. Closure and post closure care plans as required by 335-13-4-.20 of this Division;

4. Explosive gas monitoring plans as required by 335-13-4-.16 of this Division;

5. Corrective action plan, if necessary, which includes detection in assessment monitoring;

6. Any other documentation submitted to the Department during the permitting process.

(c) Reports or documentation generated during the normal operation of the facility. May include, but is not limited to:

1. Gas monitoring results from monitoring and any remediation plans required by 335-13-4-.16;

2. Inspection records, training procedures, notification procedures, and other information required in 335-13-4-.21(3)(a);

3. Any monitoring, testing, or analytical data as required by 335-13-4-.20 of this Division concerning closure;

4. Any demonstration, certification, finding monitoring, testing, or analytical data required by 335-13-4-.27 concerning groundwater monitoring and corrective action;

5. Quarterly volume reports as required in 335-13-4-.22(18) or 335-13-4-.23(16) of this Division;

6. Waste certifications as required by 335-13-4-.21(3)(b) and 335-13-4-.21(5) of this Division;

7. Any other report or document generated in the normal operation of the facility which is submitted to the Department.

(d) Any cost estimates and financial assurance documentation required by 40 CFR 258, Subpart G.

(2) The owner/operator must notify the Department when the documents from subparagraph (1)(b) of this Rule have been placed or added to the operating record, and all information contained in the operating record must be furnished upon request to the Department or be made available at all reasonable times for inspection by the Department.

(3) The Department can set alternative schedules for recordkeeping and notification requirements as specified in paragraphs (1) and (2) of this Rule, except for notification requirements in 335-13-4-.01(5)(b) and 335-13-4-.27(29)(a)3.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§22-22A-8, 22-27-7.
Effective Date: ----- --, 1993.

APPENDIX I

CONSTITUENTS FOR DETECTION MONITORING

Common Name[2]	CAS Number[3]
pH[4]	N/A
Specific Conductance[4]	N/A
Inorganic Constituents	
1. Antimony	Total
2. Arsenic	Total
3. Barium	Total
4. Beryllium	Total
5. Cadmium	Total
6. Chromium	Total
7. Cobalt	Total
8. Copper	Total
9. Lead	Total
10. Nickel	Total
11. Selenium	Total
12. Silver	Total
13. Thallium	Total
14. Vanadium	Total
15. Zinc	Total
Organic Constituents	
16. Acetone	67-64-1
17. Acrylonitrile	107-13-1
18. Benzene	71-43-2
19. Bromochloromethane	74-97-5
20. Bromodichloromethane	75-27-4
21. Bromoform; Tribromomethane	75-25-2
22. Carbon disulfide	75-15-0
23. Carbon tetrachloride	56-23-5
24. Chlorobenzene	108-90-7
25. Chloroethane; Ethyl chloride	75-00-3
26. Chloroform; Trichloromethane	67-66-3
27. Dibromochloromethane; Chlorodibromomethane	124-48-1
28. 1,2-Dibromo-3-chloropropane (DBCP)	96-12-8
29. 1,2-Dibromoethane; Ethylene dibromide; EDB	106-93-4
30. o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1
31. p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7
32. trans-1,4-Dichloro-2-butene	110-57-6
33. 1,1-Dichloroethane; Ethylidene chloride	75-34-3
34. 1,2-Dichloroethane; Ethylene dichloride	107-06-2
35. 1,1-Dichloroethylene; 1,1-dichloroethene; Vinylidene chloride	75-35-4
36. cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2

APPENDIX I (Continued)

CONSTITUENTS FOR DETECTION MONITORING

Common Name[2]		CAS Number[3]
37.	trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	156-60-5
38.	1,2-Dichloropropane; Propylene dichloride	78-87-5
39.	cis-1,3-Dichloropropene	10061-01-5
40.	trans-1,3-Dichloropropene	10061-02-6
41.	Ethylbenzene	100-41-4
42.	2-Hexanone; Methyl butyl ketone	591-78-6
43.	Methyl bromide; Bromomethane	74-83-9
44.	Methyl chloride; Chloromethane	74-87-3
45.	Methylene bromide; Dibromomethane	74-95-3
46.	Methylene chloride; Dichloromethane	75-09-2
47.	Methyl ethyl ketone; MEK; 2-Butanone	78-93-3
48.	Methyl iodide; Iodomethane	74-88-4
49.	4-Methyl-2-pentanone; Methyl isobutyl ketone	108-10-1
50.	Styrene	100-42-5
51.	1,1,1,2-Tetrachloroethane	630-20-6
52.	1,1,2,2-Tetrachloroethane	79-34-5
53.	Tetrachloroethylene; Tetrachloroethene; Perchloroethylene	127-18-4
54.	Toluene	108-88-3
55.	1,1,1-Trichloroethane; Methylchloroform	71-55-6
56.	1,1,2-Trichloroethane	79-00-5
57.	Trichloroethylene; Trichloroethene	79-01-6
58.	Trichlorofluoromethane; CFC-11	75-69-4
59.	1,2,3-Trichloropropane	96-18-4
60.	Vinyl acetate	108-05-4
61.	Vinyl chloride	75-01-4
62.	Xylenes	1330-20-7

Notes

[1]This list contains 47 volatile organics for which possible analytical procedure provided in EPA Report SW-846, "Test Methods for Evaluating Solid Waste," Third Edition, November 1986, as revised December 1987, includes Method 8260; and 15 metals for which SW-846 provides either Method 6010 or a method from the 7000 series of methods.

[2] Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

[3] Chemical Abstracts Service registry number. Where "Total" is entered, all species in the groundwater that contain this element are included.

[4] State specific requirements.

Author: Russell A. Kelly.

Statutory Authority: Code of Alabama 1975, §§ 22-27-4, 22-27-7.

History: ----- --, 1993.

APPENDIX II

LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUGGESTED METHODS[5]	PQL (ug/L)[6]
Acenaphthene	83-32-9	Acenaphthylene, 1,2-dihydro-	8100	200
			8270	10
Acenaphthylene	208-96-8	Acenaphthylene	8100	200
			8270	10
Acetone	67-64-1	2-Propanone	8260	100
Acetonitrile; Methyl cyanide	75-05-8	Acetonitrile	8015	100
Acetophenone	98-86-2	Ethanone, 1-phenyl-	8270	10
2-Acetylaminofluorene; 2-AAF	53-96-3	Acetamide, N-9H-fluoren-2-yl-	8270	20
Acrolein	107-02-8	2-Propenal	8030	5
			8260	100
Acrylonitrile	107-13-1	2-Propenenitrile	8030	5
			8260	200
Aldrin	309-00-2	1,4,5,8,-Dimethanonaphthalene 1,2,3,4,10,10-hexachloro- 1,4,4a,5,8,8a-hexahydro-(1α,4α,4aβ,5α,8α,8aβ)-	8080	0.05
			8270	10
Allyl chloride	107-05-1	1-Propene, 3-chloro-	8010	5
			8260	10
4-Aminobiphenyl	92-67-1	[1,1'-Biphenyl]-4-amine	8270	20
Anthracene	120-12-7	Anthracene	8100	200
			8270	10
Antimony	(Total)	Antimony	6010	300
			7040	2000
			7041	30
Arsenic	(Total)	Arsenic	6010	500
			7060	10
			7061	20
Barium	(Total)	Barium	6010	20
			7080	1000

APPENDIX II

LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUGGESTED METHODS[5]	PQL (ug/L)[6]
Benzene	71-43-2	Benzene	8020	2
			8021	0.1
			8260	5
Benzo[a]anthracene; Benzanthracene	56-55-3	Benz[a]anthracene	8100	200
			8270	10
Benzo[b]fluoranthene	205-99-2	Benz[e]acephenanthrylene	8100	200
			8270	10
Benzo[k]fluoranthene	207-08-9	Benzo[k]fluoranthene	8100	200
			8270	10
Benzo[ghi]perylene	191-24-2	Benzo[ghi]perylene	8100	200
			8270	10
Benzo[a]pyrene	50-32-8	Benzo[a]pyrene	8100	200
			8270	10
Benzyl alcohol	100-51-6	Benzenemethanol	8270	20
Beryllium	(Total)	Beryllium	6010	3
			7090	50
			7091	2
alpha-BHC	319-84-6	Cyclohexane, 1,2,3,4,5,6-hexachloro-(1α,2α,3β,4α,5β,6β)-	8080	0.05
			8270	10
beta-BHC	319-85-7	Cyclohexane, 1,2,3,4,5,6-hexachloro-(1α,2β,3α,4β,5α,6β)-	8080	0.05
			8270	20
delta-BHC	319-86-8	Cyclohexane, 1,2,3,4,5,6-hexachloro-(1α,2α,3α,4β,5α,6β)-	8080	0.1
			8270	20
gamma-BHC; Lindane	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-(1α,2α,3β,4α,5α,6β)-	8080	0.05
			8270	20
Bis(2-chloroethoxy)methane	111-91-1	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-	8110	5
			8270	10
Bis(2-chloroethyl) ether; Dichloroethyl ether	111-44-4	Ethane, 1,1'-oxybis[2-chloro-	8110	3
			8270	10
Bis(2-chloro-1-methylethyl) ether 2,2'-Dichlorodisopropyl ether; DCIP. See note 7	108-60-1	Propane, 2,2'-oxybis[1-chloro-	8110	10
			8270	10

APPENDIX II

LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUG-GESTED METHODS[5]	PQL (ug/L)[6]
Bis(2-ethylhexyl) phthalate	117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	8060	20
Bromochloromethane; Chlorobromomethane	74-97-5	Methane, bromochloro-	8021	0.1
			8260	5
Bromodichloromethane; Dibromochloromethane	75-27-4	Methane, bromodichloro-	8010	1
			8021	0.2
			8260	5
Bromoform; Tribromomethane	75-25-2	Methane, tribromo-	8010	2
			8021	15
			8260	5
4-Bromophenyl phenyl ether	101-55-3	Benzene, 1-bromo-4-phenoxy-	8110	25
			8270	10
Butyl benzyl phthalate; Benzyl butyl phthalate	85-68-7	1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester	8060	5
			8270	10
Cadmium	(Total)	Cadmium	6010	40
			7130	50
			7131	1
Carbon disulfide	75-15-0	Carbon disulfide	8260	100
Carbon tetrachloride	56-23-5	Methane, tetrachloro-	8010	1
			8021	0.1
			8260	10
Chlordane	See note 8	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-	8080	0.1
			8270	50
p-Chloroaniline	106-47-8	Benzenamine, 4-chloro-	8270	20
Chlorobenzene	108-90-7	Benzene, chloro-	8010	2
			8020	2
			8021	0.1
			8260	5
Chlorobenzilate	510-15-6	Benzeneacetic acid, 4-chloro-α-(4-chlorophenyl)-α-hydroxy-ethyl ester	8270	10

APPENDIX II

LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUG-GESTED METHODS[5]	PQL (ug/L)[6]
p-Chloro-m-cresol; 4-Chloro-3-methylphenol	59-50-7	Phenol, 4-chloro-3-methyl-	8040	5
			8270	20
Chloroethane; Ethyl chloride	75-00-3	Ethane, chloro-	8010	5
			8021	1
			8260	10
Chloroform; Trichloromethane	67-66-3	Methane, trichloro-	8010	0.5
			8021	0.2
			8260	5
2-Chloronaphthalene	91-58-7	Naphthalene, 2-chloro-	8120	10
			8270	10
2-Chlorophenol	95-57-8	Phenol, 2-chloro-	8040	5
			8270	10
4-Chlorophenyl phenyl ether	7005-72-3	Benzene, 1-chloro-4-phenoxy-	8110	40
			8270	10
Chloroprene	126-99-8	1,3-Butadiene, 2-chloro-	8010	50
			8260	20
Chromium	(Total)	Chromium	6010	70
			7190	500
			7191	10
Chrysene	218-01-9	Chrysene	8100	200
			8270	10
Cobalt	(Total)	Cobalt	6010	70
			7200	500
			7201	10
Copper	(Total)	Copper	6010	60
			7210	200
			7211	10
m-Cresol; 3-methylphenol	108-39-4	Phenol, 3-methyl-	8270	10
o-Cresol; 2-methylphenol	95-48-7	Phenol, 2-methyl-	8270	10
p-Cresol; 4-methylphenol	106-44-5	Phenol, 4-methyl-	8270	10
Cyanide	57-12-5	Cyanide	8270	10

APPENDIX II

LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUGGESTED METHODS[5]	PQL (ug/L)[6]
2,4-D; 2,4-Dichlorophenoxyacetic acid	94-75-7	Acetic acid, (2,4-dichlorophenoxy)-	8150	10
4,4[1]-DDD	72-54-8	Benzene, 1,1[1]-(2,2-dichloroethylidene) bis[4-chloro-	8080	0.1
			8270	10
4,4[1]-DDE	72-55-9	Benzene, 1,1[1]-(dichloroethyenylidene) bis[4-chloro-	8080	0.05
			8270	10
4,4[1]-DDT	50-29-3	Benzene, 1,1[1]-(2,2,2-trichloroethylidene)bis[4-chloro-	8080	0.1
			8270	10
Diallate	2303-16-4	Carbamothioic acid, bis(1-methylethyl)-,S-(2,3-dichloro-2-propenyl) ester	8270	10
Dibenz[a,h]anthracene	53-70-3	Dibenz[a,h]anthracene	8100	200
			8270	10
Dibenzofuran	132-64-9	Dibenzofuran	8270	10
Dibromochloromethane; Chlorodibromomethane	124-48-1	Methane, dibromochloro-	8010	1
			8021	0.3
			8260	5
1,2-Dibromo-3-chloropropane; DBCP	96-12-8	Propane, 1,2-dibrome-3-chloro-	8011	0.1
			8021	30
			8260	25
1,2-Dibromoethane; Ethylene dribromide; EDB	106-93-4	Ethane, 1,2-dibromo-	8011	0.1
			8021	10
			8260	5
Di-n-butyl phthalate	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester	8060	5
			8270	10
o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1	Benzene, 1,2-dichloro-	8010	2
			8020	5
			8021	0.5
			8120	10
			8260	5
			8270	10

APPENDIX II

LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUGGESTED METHODS[5]	PQL (ug/L)[6]
m-Dichlorobenzene; 1,3-Dichlorobenzene	541-73-1	Benzene, 1,3-Dichloro-	8010	5
			8020	5
			8021	0.2
			8120	10
			8260	5
			8270	10
p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7	Benzene, 1,4-dichloro-	8010	2
			8020	5
			8021	0.1
			8120	15
			8260	5
			8270	10
3,3[1]-Dichlorobenzidine	91-94-1	[1,1[1]-Biphenyl]-4,4[1]-diamine, 3,3[1]-dichloro-	8270	20
trans-1,4-Dichloro-2-butene	110-57-6	2-Butene, 1,4-dichloro-, (E)-	8260	100
Dichlorodifloromethane; CFC-12	75-71-8	Methane, dichlorodifluoro-	8021	0.5
			8260	5
1,1-Dichloroethane; Ethyldidene chloride	75-34-3	Ethane, 1,1-dichloro-	8010	1
			8021	0.5
			8260	5
1,2-Dichloroethane; Ethylene dichloride	107-06-2	Ethane, 1,1-dichloro-	8010	0.5
			8021	0.3
			8260	5
1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride	75-35-4	Ethene, 1,1-dichloro-	8010	1
			8021	0.5
			8260	5
cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2	Ethene, 1,2-dichloro-,(Z)-	8021	0.2
			8260	5

APPENDIX II

LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUGGESTED METHODS[5]	PQL (ug/L)[6]
trans-1,2-Dichloroethylene trans-1,2-Dichloroethene	156-60-5	Ethene, 1,2-dichloro-,(E)-	8010	1
			8021	0.5
			8260	5
2,4-Dichlorophenol	120-83-2	Phenol, 2,4-dichloro-	8040	5
			8270	10
2,6-Dichlorophenol	87-65-0	Phenol, 2,6-dichloro-	8270	10
1,2-Dichloropropane; Propylene dichloride	78-87-5	Propane, 1,2-dichloro-	8010	0.5
			8021	0.05
			8260	5
1,3-Dichloropropane; Trimethylene dichloride	142-28-9	Propane, 1,3-dichloro-	8021	0.3
			8260	5
2,2-Dichloropropane; Isopropylidene chloride	594-20-7	Propane, 2,2-dichloro-	8021	0.5
			8260	15
1,1-Dichloropropene	563-58-6	1-Propene, 1,1-dichloro-	8021	0.2
			8260	5
cis-1,3-Dichloropropene	10061-01-5	1-Propene, 1,3-dichloro-, (Z)-	8010	20
			8260	10
trans-1,3-Dichloropropene	10061-02-6	1-Propene, 1,3-dichloro-, (E)-	8010	5
			8260	10
Dieldrin	60-57-1	2,7:3,6-Dimethanonaphth[2,3-b]oxirene,	8080	0.05
		3,4,5,6,9,9-hexa, chloro-1a,2,2a,3,	8270	10
		6,6a,7,7a-octahydro-, (1aα,2β,2aα,3β,		
		6β,6aα,7β,7aα)-		
Diethyl phthalate	84-66-2	1,2-Benzenedicarboxylic acid, diethyl	8060	5
		ester	8270	10
0,0-Diethyl 0-2-pyrazinyl phosphorothioate; Thionazin	297-97-2	Phosphorothioic acid, 0,0-diethyl	8141	5
		0-pyrazinyl ester	8270	20
Dimethoate	60-51-5	Phosphorodithioic acid, 0,0-dimethyl	8141	3
		S-[2-(methylamino)-2- oxoethyl] ester.	8270	20
p-(Dimethylamino)azobenzene	60-11-7	Benzenamine, N,N-dimethyl-4-(phenylazo)-	8270	10
7,12-Dimethylbenz[a]anthracene	57-97-6	Benz[a]anthracene, 7,12-dimethyl-	8270	10

APPENDIX II

LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUGGESTED METHODS[5]	PQL (ug/L)[6]
3,3[1]-Dimethylbenzidine	119-93-7	[1,1[1]-Biphenyl]-4,4[1]-diamine, 3,3[1]-dimethyl-	8270	10
2,4-Dimethylphenol; m-Xylenol	105-67-9	Phenol, 2,4-dimethyl-	8040	5
			8270	10
Dimethyl phthalate	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester	8060	5
			8270	10
m-Dinitrobenzene	99-65-0	Benzene, 1,3-dinitro-	8270	20
4,6-Dinitro-o-cresol 4,6-Dinitro-2-methylphenol	534-52-1	Phenol, 2-methyl-4,6-dinitro-	8040	150
			8270	50
2,4-Dinitrophenol	51-28-5	Phenol, 2,4-dinitro-	8040	150
			8270	50
2,4-Dinitrotoluene	121-14-2	Benzene, 1-methyl-2,4-dinitro-	8090	0.2
			8270	10
2,6-Dinitrotoluene	606-20-2	Benzene, 2-methyl-1,3-dinitro-	8090	0.1
			8270	10
Dinoseb; DNBP; 2-sec-Butyl-4,6-dinitrophenol	88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro-	8150	1
			8270	20
Di-n-octyl phthalate	117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester	8060	30
			8270	10
Diphenylamine	122-39-4	Benzenamine, N-phenyl-	8270	10
Disulfoton	298-04-4	Phosphorodithioic acid, 0,0-diethyl S-[2-(ethylthio)ethyl] ester	8140	2
			8141	0.5
			8270	10
Endosulfan I	959-98-8	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-,3-oxide,	8080	0.1
			8270	20
Endosulfan II	33213-65-9	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-,3-oxide, (3α,5aα,6β,9β,9aα)-	8080	0.05
			8270	20

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LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUGGESTED METHODS[5]	PQL (ug/L)[6]
Endosulfan sulfate	1031-07-8	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a, 6,9,9a-hexahydro-3-3-dioxide.	8080 8270	0.5 10
Endrin	72-20-8	2,7:3,6-Dimethanonaphth[2,3-b] oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aα,2β,2aβ,3α,6α,6aβ,7β,7aα)-	8080 8270	0.1 20
Endrin aldehyde	7421-93-4	1,2,4-Methenocyclopenta[cd]pentalene-5-carboxaldehyde, 2,2a,3,3,4,7-hexachlorodecahydro-, (1α,2β,2aβ,4β,4aβ,5β,6aβ,6bβ,7R*)-	8080 8270	0.2 10
Ethylbenzene	100-41-4	Benzene, ethyl-	8020 8221 8260	2 0.05 5
Ethyl methacrylate	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester	8015 8260 8270	5 10 10
Ethyl methanesulfonate	62-50-0	Methanesulfonic acid, ethyl ester	8270	20
Famphur	52-85-7	Phosphorothioic acid, 0-[4-[(dimethylamino)sulfonyl]phenyl] 0,0-dimethyl ester	8270	20
Fluoranthene	206-44-0	Fluoranthene	8100 8270	200 10
Fluorene	86-73-7	9H-Fluorene	8100 8270	200 10
Heptachlor	76-44-8	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-	8080 8270	0.05 10

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LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUG-GESTED METHODS[5]	PQL (ug/L)[6]
Heptachlor epoxide	1024-57-3	2,5-Methano-2H-indeno[1,2-b] oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aα,1bβ,2α,5α,5aβ,6β,6aα)	8080 8270	1 10
Hexachlorobenzene	118-74-1	Benzene, hexachloro-	8120 8270	0.5 10
Hexachlorobutadiene	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	8021 8120 8260 8270	0.5 5 10 10
Hexachlorocyclopentadiene	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	8120 8270	5 10
Hexachloroethane	67-72-1	Ethane, hexachloro-	8120 8260 8270	0.5 10 10
Hexachloropropene	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-	8270	10
2-Hexanone; Methyl butyl ketone	591-78-6	2-Hexanone	8260	50
Indeno(1,2,3-cd)pyrene	193-39-5	Indeno(1,2,3-cd)pyrene	8100 8270	200 10
Isobutyl alcohol	78-83-1	1-Propanol, 2-methyl-	8015 8240	50 100
Isodrin	465-73-6	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10- hexachloro-1,4,4a,5,8,8a hexahydro-(1α,4α,4aβ,5β,8β,8aβ)-	8270 8260	20 10
Isophorone	78-59-1	2-Cyclohexen-1-one, 3,5,5-trimethyl-	8090 8270	60 10
Isosafrole	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-	8270	10

APPENDIX II

LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUGGESTED METHODS[5]	PQL (ug/L)[6]
Kepone	143-50-0	1,3,4-Metheno-2H-cyclobuta [cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-	8270	20
Lead	(Total)	Lead	6010	400
			7420	1000
			7421	10
Mercury	(Total)	Mercury	7470	2
Methacrylonitrile	126-98-7	2-Propenenitrile, 2-methyl-	8015	5
			8260	100
Methapyrilene	91-80-5	1,2-ethanediamine, N,N,-dimethyl-N[1]-2-pyridinyl-N[1]/2-thienyl-methyl)-	8270	100
Methoxychlor	72-43-5	Benzene,1,1[1]-(1,2,2,trichloroethylidene) bis[4-methoxy-	8080	2
			8270	10
Methyl bromide; Bromomethane	74-83-9	Methane, bromo-	8010	20
			8021	10
Methyl chloride;Chloromethane	74-87-3	Methane, chloro-	8010	1
			8021	0.3
3-Methylcholanthrene	56-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-	8270	10
Methyl ethyl ketone; MEK; 2-Butanone	78-93-3	2-Butanone	8015	10
			8260	100
Methyl iodide; iodomethane	74-88-4	Methane,iodo-	8010	40
			8260	10
Methyl methacrylate	80-62-6	2-Propenoic acid, 2-methyl-, methyl ester	8015	2
			8260	30
Methyl methanesulfonate	66-27-3	Methanesulfonic acid, methyl ester	8270	10
2-Methylnaphthalene	91-57-6	Naphthalene, 2-methyl-	8270	10
Methyl parathion;Parathion methyl	298-00-0	Phosphorothioic acid, 0,0-dimethyl 0-(4-nitrophenyl) ester	8140	0.5
			8141	1
			8270	10

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LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUG-GESTED METHODS[5]	PQL (ug/L)[6]
4-Methyl-2-pentanone; Methyl isobutyl ketone	108-10-1	2-Pentanone, 4-methyl-	8015	5
			8260	100
Methylene bromide; Dibromomethane	74-95-3	Methane, dibromo-	8010	15
			8021	20
			8260	10
Methylene chloride; Dichloromethane	75-09-2	Methane, dichloro-	8010	5
			8021	0.2
			8260	10
Naphthalene	91-20-3	Naphthalene	8021	0.5
			8100	200
			8260	5
			8270	10
1,4-Naphthoquinone	130-15-4	1,4-Naphthalenedione	8270	10
1-Naphthylamine	134-32-7	1-Naphthalenamine	8270	10
2-Naphthylamine	91-59-8	2-Naphthalenamine	8270	10
Nickel	(Total)	Nickel	6010	150
			7520	400
o-Nitroaniline; 2-Nitroaniline	88-74-4	Benzenamine, 2-nitro-	8270	50
m-Nitroaniline; 3-Nitroaniline	99-09-2	Benzenamine, 3-nitro-	8270	50
p-Nitroaniline; 4-Nitroaniline	100-01-6	Benzenamine, 4-nitro	8270	20
Nitrobenzene	98-95-3	Benzene, nitro-	8090	40
			8270	10
o-Nitrophenol; 2-Nitrophenol	88-75-5	Phenol, 2-nitro-	8040	5
			8270	10
p-Nitrophenol; 4-Nitrophenol	100-02-7	Phenol, 4-nitro-	8040	10
			8270	50
N-Nitrosodi-n-butylamine	924-16-3	1-Butananmine, N-butyl-N-nitroso-	8270	10
N-Nitrosodiethylamine	55-18-5	Ethanamine, N-ethyl-N-nitroso-	8270	20
N-Nitrosodimethylamine	62-75-9	Methanamine, N-methyl-N-nitroso-	8070	2
N-Nitrosodiphenylamine	86-30-6	Benzenamine, N-nitroso-N-phenyl-	8070	5

APPENDIX II

LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUGGESTED METHODS[5]	POL (ug/L)[6]
N-Nitrosodipropylamine; N-Nitroso-N-dipropylamine; Di-n-propylnitrosamine	621-64-7	1-Propanamine, N-nitroso-N-propyl-	8070	10
N-Nitrosomethylethalamine	10595-95-6	Ethanamine, N-methyl-N-nitroso-	8270	10
N-Nitrosopiperidine	100-75-4	Piperidine, 1-nitorso-	8270	20
N-Nitrosopyrrolidine	930-55-2	Pyrrolidine, 1-nitoso-	8270	40
5-Nitro-o-toluidine	99-55-8	Benezenamine, 2-methyl-5-nitro-	8270	10
Parathion	56-38-2	Phosphorothioic acid, 0,0-diethyl 0-(4-nitrophenyl) ester	8141	0.5
			8270	10
Pentachlorobenzene	608-93-5	Benzene, pentachloro-	8270	10
Pentachloronitrobenzene	82-68-8	Benzene, pentachloronitro-	8270	20
Pentachlorophenol	87-86-5	Phenol, pentachloro-	8040	5
			8270	50
Phenacetin	62-44-2	Acetamide, N-(4-ethoxyphenl)	8270	20
Phenanthrene	85-01-8	Phenanthrene	8100	200
			8270	10
Phenol	108-95-2	Phenol	8040	1
p-Phenylenediamine	106-50-3	1,4-Benzenadiamine	8270	10
Phorate	298-02-2	Phosphorodithioic acid, 0,0-diethyl-S-[(ethylthio)methyl] ester	8140	2
			8141	0.5
			8270	10
Polychlorinated biphenyls; PCBs; Aroclors	See Note 9	1,1'-Biphenyl, chloro derivatives	8080	50
			8270	200
Pronamide	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-	8270	10
Propionitrile; Ethyl cyanide	107-12-0	Propanenitrile	8015	60
			8260	150
Pyrene	129-00-0	Pyrene	8100	200
			8270	10
Safrole	94-59-1	1,3-Benzodioxole, 5-(2-propenyl)-	8270	10

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LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUG-GESTED METHODS[5]	PQL (ug/L)[6]
Selenium	(Total)	Selenium	6010	750
			7740	20
			7741	20
Silver	(Total)	Silver	6010	70
			7760	100
			7761	10
Silvex; 2,4,5-TP	93-72-1	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-	8150	2
Styrene	100-42-5	Benzene, ethenyl-	8020	1
			8021	0.1
			8260	10
Sulfide	18496-25-8	Sulfide	9030	4000
2,4,5-T; 2,4,5-Trichlorophenoxyacetic acid	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-	8150	2
1,2,4,5-Tetrachlorobenzene	95-94-3	Benzene, 1,2,4,5-tetrachloro-	8270	10
1,1,1,2-Tetrachloroethane	630-20-6	Ethane, 1,1,1,2-tetrachloro-	8010	5
			8021	0.05
			8260	5
1,1,2,2-Tetrachloroethane	79-34-5	Ethane, 1,1,2,2-tetrachloro-	8010	0.5
			8021	0.1
			8260	5
Tetrachloroethylene; Tetrachloroethene; Perchloroethylene	127-18-4	Ethene, tetrachloro-	8010	0.5
			8021	0.5
			8260	5
2,3,4,6-Tetrachlorophenol	58-90-2	Phenol, 2,3,4,6-tetrachloro-	8270	10
Thallium	(Total)	Thallium	6010	400
			7840	1000
			7841	10
Tin	(Total)	Tin	6010	40
Toluene	108-88-3	Benzene, methyl-	8020	2
			8021	0.1
			8260	5
o-Toluidine	95-53-4	Benzenamine, 2-methyl-	8270	10
Toxaphene	See Note 10	Toxaphene	8080	2

APPENDIX II

LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUGGESTED METHODS[5]	PQL (ug/L)[6]
1,2,4-Trichlorobenzene	120-82-1	Benzene, 1,2,4-trichloro-	8021	0.3
			8120	0.5
			8260	10
			8270	10
1,1,1-Trichloroethane;Methylchloroform	71-55-6	Ethane, 1,1,1-trichloro-	8010	0.3
			8021	0.3
			8260	5
1,1,2-Trichloroethane	79-00-5	Ethane, 1,1,2-trichloro-	8010	0.2
			8260	5
Trichloroethylene; Trichloroethene	79-01-6	Ethane, trichloro-	8010	1
			8021	0.2
			8260	5
Trichlorofluoromethane; CFC-11	75-69-4	Methane, trichlorofluoro-	8010	10
			8021	0.3
			8260	5
2,4,5-Trichlorophenol	95-95-4	Phenol, 2,4,5-trichloro-	8270	10
2,4,6-Trichlorophenol	88-06-2	Phenol, 2,4,6-trichloro-	8040	5
			8270	10
1,2,3-Trichloropropane	96-18-4	Propane, 1,2,3-trichloro-	8010	10
			8021	5
			8260	15
0,0,0-Triethyl phosphorothioate	126-68-1	Phosphorothioic acid, 0,0,0-triethylester	8270	10
sym-Trinitrobenzene	99-35-4	Benzene, 1,3,5-trinitro-	8270	10
Vanadium	(Total)	Vanadium	6010	80
			7910	2000
			7911	40
Vinyl acetate	108-05-4	Acetic acid, ethenyl ester	8260	50
Vinyl chloride; Chloroethene	75-01-4	Ethene, chloro-	8010	2
			8021	0.4
			8260	10
Xylene (total)	See Note 11	Benzene, dimethyl-	8020	5
			8021	0.2
			8260	5

APPENDIX II

LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUGGESTED METHODS[5]	PQL (ug/L)[6]
Zinc	(Total)	Zinc	6010	20
			7950	50
			7951	0.5

Notes

[1]The regulatroy requirements pertain only to the list of substances; the right hand columns (Methods and PQL) are given for informational purposes only. See also footnotes 5 and 6.

[2]Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

[3]Chemical Abstracts Service registry number. Where "Total" is entered, all species in the groundwater that contain this element are included.

[4]CAS index are those used in the 9th Collective Index.

[5]Suggested Methods refer to analytical procedure numbers used in EPA Report SW-846 "Test Methods for Evaluating Solid Waste", third edition, November 1986, as revised, December 1987. Analytical details can be found in SW-846 and in documentation on file at the agency. CAUTION: The methods listed are representative SW-846 procedures and may not always be the most suitable method(s) for monitoring an analyte under the regulations.

[6]Practical Quantitation Limits (PQLs) are the lowest concentrations of analytes in groundwaters that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating conditions. The PQLs listed are generally stated to one significant figure. PQLs are based on 5 mL samples for volatile organics and 1 L samples for semivolatile organics. CAUTION: The PQL values in many cases are based only on a general estimate for the method and not on a determination for individual compounds; PQLs are not a part of the regulation.

[7]This substance is often called Bis(2-chloroisopropyl) ether, the name Chemical Abstracts Service applies to its noncommercial isomer, Propane, 2,2"-oxybis[2-chloro- (CAS RN 39638-32-9).

[8]Chlordane: This entry includes alpha-chlordane (CAS RN 5103-71-9), beta-chlordane (CAS RN 5103-74-2), gamma-chlordane (CAS RN 5566-34-7), and constituents of chlordane (CAS RN 57-74-9 and CAS RN 12789-03-6). PQL shown is for technical chlordane. PQLs of specific isomers are about 20 ug/L by method 8270.

[9]Polychlorinated biphenyls (CAS RN 1336-36-3); this category contains congener chemicals, including constituents of Aroclor 1016 (CAS RN 12674-11-2), Aroclor 1221 (CAS RN 11104-28-2), Aroclor 1232 (CAS RN 11141-16-5), Aroclor 1242 (CAS RN 53469-21-9), Aroclor 1248 (CAS RN 12672-29-6), Aroclor 1254 (CAS RN 11097-69-1), and Aroclor 1260 (CAS RN 11096-82-5). The PQL shown is an average value for PCB congeners.

[10]Toxaphene: This entry includes congener chemicals contained in technical toxaphene (CAS RN 8001-35-2), i.e., chlorinated camphene.

[11]Xylene (total): This entry includes o-xylene (CAS RN 96-47-6), m-xylene (CAS RN 108-38-3), p-xylene (CAS RN 106-42-3), and unspecified xylenes (dimethylbenzenes) (CAS RN 1330-20-7). PQLs for method 8021 are 0.2 for o-xylene and 0.1 for m- or p-xylene. The PQL for m-xylene is 2.0 ug/L by method 8020 or 8260.

Author: Russell A. Kelly.

Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.

History: ——— —, 1993.

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
LAND DIVISION - SOLID WASTE PROGRAM

CHAPTER 335-13-5
PROCEDURES FOR OBTAINING PERMITS

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335-13-5-.01 Disposal Permits. All solid waste shall be disposed of in a disposal facility permitted by the Department. Rules 335-13-5-.02 through 335-13-5-.06~~7~~ establish the minimum requirements and procedures for obtaining a solid waste disposal facility permit for existing and proposed facilities.~~--Individual-households with-valid-Certificate-of-Exceptions-and-drilling-waste-in which-disposal-is-regulated-by-the-State-Oil-and-Gas-Board are-exempted-from-these-requirements-as-noted-in 335-13-1-.12.~~
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-22A-5, 22-27-3, 22-27-5, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; ----- --, 1993.

335-13-5-.02 Permit Application. Existing and proposed solid waste disposal facilities shall obtain permits to construct and/or operate in accordance with the following:

(1) Solid waste disposal facilities proposed after the effective date of this Division shall submit the following in order to request a permit:

(a) Host government approval, as provided in the Code of Alabama 1975, § 22-27-48;

(b) Statement of consistency, as provided in the Code of Alabama 1975, § 22-27-48;

(c~~a~~) Facility design plans and operational procedures in accordance with Permit Application Procedures for Solid Waste Disposal Facilities as prepared by the Department; and

(d~~b~~) Technical data and reports to comply with 335-13-4-.01, 335-13-4-.11 through 335-13-4-.24 and this Division,

(e~~e~~) All technical reports, plans and specifications, plats, geological and hydrological reports required by this Division, prepared under the following:

1. Plans, specifications, operational procedures and other technical data, except as provided in 335-13-5-.02(1)(c)2. and 3., for the construction and operation of a facility shall be prepared by an engineer. The seal or signature and registration number of the design engineer shall be affixed to the plans, specifications and reports.

2. Reports, letters of certification and other documents and technical data concerning the siting standards of 335-13-4-.01 shall be prepared by a person with technical expertise in the field of concern.

3. Legal property descriptions and survey plats shall be by a land surveyor with the seal or signature and registration number of the land surveyor affixed.

(f) The name and mailing address of all adjacent landowners shall be submitted as part of a disposal facility's permit application.

(2) Solid waste disposal permits obtained under compliance with this Division shall be valid for the design life of the facility or as otherwise determined by the Department, but no longer than a period of five years. Permits, however, are subject to revocation under 335-13-5-.05 of this Division.

(3) Request for extension, renewal, or a new permit for any solid waste disposal facility~~,except as provided in 335-13-1-.12,~~ shall be filed with the Department by the operating agency at least 180 days prior to expiration date for existing permits or proposed construction date for new facilities.

(4) Prior to any change in the permitted service area, increasing the volume of waste received or changing the design or operating procedure as described in 335-13-5-~~.05(1)~~.06(1) and (2) and the current permit, the permittee shall request a modification of the permit as described in 335-13-5-~~.05(2)~~.06(3). This modification request must be filed with the Department at least 90 days prior to the anticipated change and shall receive approval from the Department prior to the implementation of the proposed change.

~~(5) The Department may delete provisions for plans and specifications by a engineer and monitoring requirements for landfills which will be utilized for the disposal of inert materials such as building debris, stumps, limbs and similar type waste.~~

~~(a) The following information shall be provided by the requesting agency to the Department for consideration:~~

~~1. Name and address of operating agency.~~

~~2. Waste type and estimated life of facility.~~

~~3. A location map and location by quarter Section, Township and Range; and~~

~~4. A written description of proposed operating procedures.~~

(5) Effect of non-compliance

(a) As determined by the Director, substantial non-compliance of another facility within the State, owned or operated by the permittee requesting reissuance of a permit, will be grounds for denial of permit reissuance until such non-compliance is corrected.

(b) The Director may deny a permit application if:

1. The applicant operates other permitted facilities within the State which are in substantial non-compliance, as determined by the Director, until such non-compliance is corrected;

2. The Director determines that a permit could not be issued that would result in compliance with applicable solid waste standards; or

3. The applicant could not comply with the permit as issued.

Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-5, 22-27-7, 22-27-48.
History: November 18, 1981; Amended: March 31, 1988 (Emergency Regulations), July 21, 1988; October 2, 1990.

335-13-5-.03 ~~Notices-of-Request-for-Public-Hearings~~Public Notice Procedures. The Department ~~may~~ shall provide notice and an opportunity for public hearing on disposal facility permits if determined necessary to meet the requirements of this Division. ~~If-the-Department determines-the-need-for-public-notice-and-public-hearing~~ The following procedures shall be observed.

(1) The Department shall ~~circulate-in-a-manner designed-to-inform~~ notify interested and potentially interested persons of the proposed disposal facility ~~and shall-include-at-least~~ by publishing ~~of~~ a notice in a newspaper of general circulation in the area.

(a) The notice shall be given ~~at-a-time-specified by-the-Department-but-in-all-cases-prior-to-the-submittal of-final-plans-per-335-13-5-.02(2)-and~~ not less than 35 days prior to the issuance of a permit.

(b) The notice shall contain the specific type and nature of the disposal facility, the type of waste to be disposed, the person or agency requesting the permit, and the descriptive location of the disposal facility, address and telephone number of the Department, and that interested persons may request a public hearing on the proposed disposal facility.

(c) Landowners adjacent to a proposed disposal facility shall receive a copy of public notice.

(2) Requests for public hearings shall be submitted in writing to the Department by interested persons.

(a) Frivolous, ~~or~~ insubstantial, or nontechnical requests shall be denied by the Department.

(b) Requests for public hearing must be submitted within 35 days after the publication of the public notice and must contain the following:

1. The name, address and telephone number of the person requesting the hearing.

2. A brief statement of the person's interest and the information the person wishes to submit.

3. The person's signature, if an individual, or the signature of a responsible officer of an organization or legal entity.

Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-22A-5, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988~~.~~; ----- --, 1993.

335-13-5-.04 ~~Notice of Public Hearing and Disposition~~ Procedures. The Department shall authorize a public hearing upon significant requests as provided in 335-13-5-.03(2).

(1) When a hearing has been authorized, the Department shall appoint a hearing officer to conduct the hearing and shall establish a time, date, and location for the hearing. The location for the hearing shall comply with the requirements of the Americans with Disabilities Act.

(2) The Department shall give notice of the public hearing in the manner set forth in 335-13-5-.03(1), and also to the persons requesting the hearing in 335-13-5-.03(2). The notice given not less than 35 days prior to the time of the public hearing shall include:

(a) A summary of the proposed permit.

(b) The place, time, and date of the hearing.

(c) The name, address and telephone number of an office at which interested persons may receive further information.

(3) ~~If a hearing was held pursuant to this rule,~~ The Department shall take one of the following actions after the hearing:

(a) Deny the permit~~, in which case, the Department shall state~~ stating in writing the reasons for denial and inform the person requesting the permit of appeal procedures in 335-13-8-.08~~.~~;

(b) Issue the permit ~~following proper permit application of 335-13-5-.01 and compliance~~ if the application complies with this Division~~.~~; or

(c) ~~The Department may~~ Require additional information, elements of design for the facility, and specify procedures for inclusion into ~~335-13-5-.01~~ the permit prior to issuance of the permit.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-22A-5, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988~~.~~; ----- --,1993.

335-13-5-.05 ~~Permit Modification~~ Denial, Suspension or Revocation.

(1) The Department may ~~modify,~~ deny, suspend or revoke any permit if the permittee is found to be in violation of any of the permit conditions, if the permittee fails to perform the permitted activity in accordance with the approved ~~plan~~ operational narrative or engineering drawings, if the permittee fails to seek a modification of the permit as required by the Rules, if an active site stops receiving waste for more than one year, or if ~~such activity~~ the design operations creates a nuisance or is inconsistent with the Act or this Division. ~~Permits may be modified at any time to include provisions of regulations or statute not in the existing permit.~~ In the event of ~~modification,~~ denial, suspension or revocation of a permit, the Department shall serve written notice of such action on the permittee and shall set forth in such notice the reason for such action. ~~Within 45 days from the effective date of these Rules, each solid waste disposal facility permittee shall submit to the Department the average daily volume of waste received and the geographical area normally or traditionally served by the facility. The area served may not include those areas where special waste is received with Departmental approval.~~

~~(1) Permit modification shall be required utilizing forms designated by the Department when the permittee proposes to modify its operation in any of the following ways:~~

~~(a) There is any change in the traditional or permitted service area. The traditional or permitted service area may not include those areas where special waste is received with Departmental approval. The~~

~~Director may temporarily or on a one-time basis waive permit modification requirements on a case-by-case basis for special waste or other solid waste if it is demonstrated that a disposal alternative is needed immediately to protect health or the environment.~~

~~(b) The average daily volume of waste specified by the permit for a disposal facility is proposed to be exceeded, or is exceeded for two or more consecutive reporting quarters, by 20 percent, or 100 tons/day, whichever is less.~~

~~1. The average daily volume of waste received at a disposal facility shall be calculated by dividing the total months receipts by the total number of days in the reporting month.~~

~~2. Volumes received shall be reported to the Department in a format specified by the Department.~~

~~(c) There will be a significant change in design or operational procedure (i.e., balefill, volume, hours of operation, fill sequence, liner design, etc.).~~

~~(2) Permittee shall request a permit modification in accordance with the following procedures:~~

~~(a) Submit a request for modification to the Department at least 90 days prior to the anticipated change.~~

~~(b) Identify each and every part of the permit or plans to be modified.~~

~~(c) Receive approval from the Department prior to implementing modification.~~

~~(3) Upon revocation of the permit, the permittee shall meet the closure requirements found in 335-13-4-.20.~~

(2) Upon revocation or suspension of the permit, or denial of the renewal of the permit, the permittee shall meet the closure requirements found in 335-13-4-.20.

Author: Russell A. Kelly.

Statutory Authority: Code of Alabama 1975, §§ 22-22A-5, 22-27-3, 22-27-5, 22-27-7.

History: November 18, 1981; Amended: March 31, 1988 (Emergency Regulations); July 21, 1988; October 2, 1990; ----- --, 1993.

335-13-5-.06 Permit Modification. The Department may modify any permit after receiving a satisfactory application that is found in compliance with ADEM rules and regulations. When necessary, the modification will be subject to the provisions of 335-13-5-.03 and 335-13-5-.04.

(1) Permit modification shall be required utilizing forms designated by the Department when the permittee proposes to modify its operation in any of the following ways:

(a) There is any change in the permitted service area. The Director may temporarily or on a one-time basis waive permit modification requirements on a case-by-case basis for special waste or other solid waste if it is demonstrated that a disposal alternative is needed immediately to protect health or the environment.

(b) Convert an industrial landfill (ILF) or construction/demolition landfill (C/DLF) to a municipal solid waste landfill (MSWLF).

(c) Addition of a liner and leachate collection system or any design change in existing permitted liner and leachate collection system.

(d) Addition of disposal acreage inside the permitted perimeter where design plans have not been previously submitted.

(2) A permit modification may be required, utilizing forms designated by the Department, when the permittee proposes to modify its operations or design in any of the following ways:

(a) Addition of a waste stream to a ILF or C/DLF.

(b) Addition or relocation of a monitoring well.

(c) Addition of sedimentation basins, silt fences, rip rap, or any other drainage control devises.

(d) Any operational changes that include:

1. Any change from the approved disposal method (i.e., trench method to area method or area method to trench method);

2. Any change from the approved form of waste (i.e., raw garbage, ash, or bales);

3. Any change in fill sequence; or

4. Conversion of a MSWLF to a ILF or C/DLF.

(e) Any change in the permitted final fill elevations.

(f) The average daily volume of waste specified by the permit for a disposal facility is proposed to be exceeded, or is exceeded for two or more consecutive reporting quarters, by 20 percent, or 100 tons/day, whichever is less.

1. The average daily volume of waste received at a disposal facility shall be calculated by dividing the total months receipts by the total number of days in the reporting month.

2. Volumes received shall be reported to the Department in a format specified by the Department.

(3) Permittee shall request a permit modification in accordance with the following procedures:

(a) Submit a request for modification to the Department at least 90 days prior to the anticipated change.

(b) Identify each and every part of the permit or plans to be modified.

(c) Submit revised plans and narratives as required by the Department.

(d) Receive approval from the Department prior to implementing modification.

(4) Modifications required under paragraph 335-13-5-.06(1) are subject to the provisions of 335-13-5-.03 and 335-13-5-.04.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-22A-5, 22-27-3, 22-27-5, 22-27-7.
History: ----- --, 1993.

335-13-5-.067 Transfer of Permit. Permits are not transferable~~from one person to another or from one site or facility to another~~ except as follows:

(1) A notification must be ~~filed with~~ submitted to and approved by the Department prior to any proposed transfer from one person or company to another or name change of any permitted facility.

(a) The notification must be ~~filed~~ submitted to the Department at least 30 days prior to the proposed transfer.

(b) Information regarding the transfer must be ~~filed~~ submitted on form(s) designated by the Department.

(2) ~~All permit transfers are subject to the provisions of 335-13-5-.03 and 335-13-5-.04.~~[Reserved]

Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-22-A-5, 22-27-7.
History: November 18, 1981; Amended: March 31, 1988 (Emergency Regulations); July 21, 1988; ----- --, 1993.

335-13-5-.08 Vertical Expansion. Existing MSWLF units may continue to operate past October 8, 1993, or the effective date of §258.1 of 40 CFR 258, Solid Waste Disposal Criteria, whichever is later, provided that the following requirements are met and approval is granted by the Department.

(1) A vertical expansion application request must be submitted to the Department. The application, at a minimum, shall include the following:

(a) An assessment of the existing groundwater data and groundwater monitoring system. The assessment shall include:

1. Submittals of past groundwater data and conclusions as to whether or not the groundwater has been impacted by the landfill.

2. Monitoring well data such as: well logs, total well depth, screen depth, depth to water level (MSL), indication/documentation of upgradient or downgradient well location, numbering sequence, etc. and conclusions as to whether or not the groundwater monitoring system is adequate.

(b) A plat or engineering drawing, designating the active footprint; i.e., area where waste has previously been disposed and has not reached final closure elevations. Areas that have the final closure cap in place will not be considered active areas.

(2) In determining whether to approve or deny the vertical expansion request, the Department shall consider the following criteria:

(a) If the groundwater analysis indicates no significant impact to the groundwater, the MSWLF will be allowed to fill vertically over the active footprint, according to their approved plans, until final closure elevations are reached, provided the active footprint is over a lined area with a leachate collection system. If the approved active footprint is over an unlined area, the MSWLF may not operate vertically past October 8, 1997.

(b) If the groundwater analysis indicates an increase over the background data (initial sampling data), and no sampling data has exceeded primary drinking water standards, unlined MSWLFs will be allowed to expand vertically until October 8, 1995 and MSWLFs operating over liners and leachate collection systems may operate according to the approved plans until final closure elevations are reached.

(c) If the groundwater analysis indicates an increase over the background data and exceeds the primary drinking water standards, the MSWLF must perform a groundwater assessment. After Departmental review of the groundwater assessment, a remediation plan (if required) must be submitted to and approved by the Department prior to October 9, 1993, or the effective date of §258.1 of 40 CFR 258, Solid Waste Disposal Criteria, whichever is later. If a remediation plan is approved by ADEM and implemented by the MSWLF unit, the facility may expand vertically until October 8, 1995.

(d) The active footprint shall be determined by the Department.

Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-22-A-5, 22-27-4, 22-27-7.
History: ----- --, 1993.

CHAPTER 22A.

ENVIRONMENTAL MANAGEMENT.

Sec.
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22-22A-16. Pollution control grant fund.

§ 22-22A-1. Short title.

This chapter shall be known and may be cited as "the Alabama Environmental Management Act." (Acts 1982, No. 82-612, p. 1111, § 1.)

Cross references. — As to the applicability of §§ 41-22-1 through 41-22-11 and 41-22-22 through 41-22-27 with regard to the Alabama department of environmental management at 12:01 A.M. on October 1, 1986, see § 41-22-27(f). As to the validity and adoption of rules of the Alabama department of environmental management, see also § 41-22-27(f). As to judicial review of any order of the environmental management commission modifying, approving or disapproving in an administrative action of the Alabama department of environmental management, see also § 41-22-27(f).

§ 22-22A-2. Legislative intent and purposes of chapter.

The legislature finds the resources of the state must be managed in a manner compatible with the environment, and the health and welfare of the citizens of the state. To respond to the needs of its environment and citizens, the state must have a comprehensive and coordinated program of environmental management. It is therefore the intent of the legislature to improve the ability of the state to respond in an efficient, comprehensive and

coordinated manner to environmental problems, and thereby assure for all citizens of the state a safe, healthful and productive environment.

(1) To this end an Alabama department of environmental management is created by this chapter within the executive branch of state government in order to effect the grouping of state agencies which have primary responsibility for administering environmental legislation into one department, to promote economy and efficiency in the operation and management of environmental programs, to eliminate overlapping or duplication of effort within the environmental programs of the state, to provide for timely resolution of permitting actions, to improve services to the citizens of the state, to protect human health and safety, to develop and provide for a unified environmental regulatory and permit system, to provide that the responsibility within the executive branch for the implementation of environmental programs and policies is clearly fixed and ascertainable, and to insure that government is responsive to the needs of the people and sufficiently flexible to meet changing conditions.

(2) It is also declared to be the intent of the legislature to retain for the state, within the constraints of appropriate federal law, the control over its air, land and water resources and to secure cooperation between agencies of the state, agencies of other states, interstate agencies and the federal government in carrying out these objectives.

(3) It is the intent of the legislature to recognize the unique characteristics of the Alabama coastal region and to provide for its protection and enhancement through a continued coastal area program.

(4) It is not the intent of the legislature to abrogate any of the powers or duties of the state board of health which are found in sections 22-2-1 through 22-2-14. (Acts 1982, No. 82-612, p. 1111, § 2.)

Cited in Save Our Dunes v. Pegues, 642 F. Supp. 393 (M.D. Ala. 1985); Save Our Dunes v. Pegues, 642 F. Supp. 393 (M.D. Ala. 1985); Save Our Dunes v. Alabama Dep't of Envtl. Mgt., 834 F.2d 984 (11th Cir. 1987).

§ 22-22A-3. Definitions.

For the purposes of this chapter, the following words and phrases, unless a different meaning is plainly required by the context or by legislation governing functions transferred by this chapter, shall have the following meanings:

(1) DEPARTMENT. The Alabama department of environmental management, established by this chapter.

(2) DIRECTOR. The director of the Alabama department of environmental management.

(3) DIVISION. A subdivision of the Alabama department of environmental management, which may be headed by a division chief. Such divisions may be divided into sections where appropriate.

(4) ENVIRONMENTAL MANAGEMENT COMMISSION. The environmental management commission of the Alabama department of environmental management.

(5) FUNCTION(S). A duty, power or program exercised by or assigned to a commission, board or the state health department, including all positions and personnel relating to the performance of such function, unless otherwise provided by this chapter.

(6) HEARING OFFICER. An attorney licensed to practice law in the state of Alabama, designated by the environmental management commission to hear appeals for the environmental management commission and to make findings of fact, conclusions of law and recommendations to the environmental management commission for its final decision.

(7) PERSON. Any and all persons, natural or artificial, including, but not limited to, any individual, partnership, association, society, joint stock company, firm, company, corporation, institution, trust, estate, or other legal entity or other business organization or any governmental entity, and any successor, representative, agent or agency of the foregoing.

(8) ADMINISTRATIVE ACTION(S). The issuance, modification, repeal or denial of any permit, license, certification, or variance, or the issuance, modification or repeal of any order, notice of violation, citation, rule or regulation by the department.

(9) All definitions of the Alabama Water Pollution Control Act, section 22-22-1. shall be the definitions of the department for its water pollution control program.

(10) All definitions found in section 22-23-31, relating to safe drinking water, shall be the definitions of the department for its safe drinking water program.

(11) All definitions of the Alabama Air Pollution Control Act, section 22-28-2, shall be the definitions of the department for its air pollution control program.

(12) All definitions found in section 22-24-1, relating to water well standards, shall be the definitions of the department for its water well standards program.

(13) All definitions found in section 22-25-1, relating to water and wastewater systems and treatment plants, shall be the definitions of the department for its water and wastewater systems and treatment plant operator program.

(14) All definitions found in section 22-27-2, relating to solid wastes, shall be the definitions of the department for its solid waste program.

(15) All definitions found in section 9-7-10, relating to the coastal area management program, shall be the definitions of the department and the office of state planning and federal programs for their coastal area program.

(16) All definitions found in section 22-30-3, relating to hazardous wastes, shall be the definitions of the department for its hazardous waste program. (Acts 1982, No. 82-612, p. 1111, § 3.)

§ 22-22A-4. Department of environmental management created; principal office; director; deputy director; divisions and division chiefs; transfer of functions; designation as state environmental control agency, etc.; contract with health department for routine bacteriological analyses.

(a) There is hereby created and established the Alabama department of environmental management to carry out the purposes of this chapter and to administer and enforce the provisions of this chapter and all functions transferred to the department by this chapter. The department shall maintain its principal office in the city of Montgomery, Montgomery county, Alabama.

(b) The department shall be under the supervision and control of an officer who shall be designated as the director of the Alabama department of environmental management. The director shall be an individual knowledgeable and experienced in environmental matters. The director shall employ such officers, agents and employees as he deems necessary to properly administer and enforce the programs and activities of the department and to fully implement the requirements of this chapter and the intent of the legislature. All powers, duties and functions transferred to the department by this chapter, except those specifically granted to the environmental management commission, shall be performed by the director; provided that the director may delegate the performance of such of his powers, duties and functions, to employees of the department, wherever it appears desirable and practicable in fulfilling the policies and purposes of this chapter. The director shall be appointed by and serve at the pleasure of the environmental management commission. The director shall be exempt from chapter 26 of Title 36. The pay of the director shall be set by the environmental management commission and shall be consistent with that of cabinet level appointees.

(c) There shall be a deputy director of the department who shall be a merit system employee. The deputy director shall assist the director and shall have charge and general supervision of the department in the absence or disability of the director. In the case of a vacancy in the office of director, the deputy director shall become the acting director of the department and shall have the full powers of the office of director until the environmental management commission appoints a successor to the director.

(d) The department shall be divided into such divisions as the director deems appropriate. Each division shall be supervised by a division chief who shall be selected by the director and shall be a merit system employee.

(e) The functions of the air pollution control commission and of the division of air pollution control in the state health department as set forth in sections 22-28-1 through 22-28-23 are transferred to the department on October 1, 1982.

(f) The functions of the water improvement commission, as set forth in sections 22-22-1 through 22-22-14 are transferred to the department on October 1, 1982.

(g) The functions of the state health department with respect to public water systems, as set forth in sections 22-23-30 through 22-23-53 are transferred to the department on October 1, 1982.

(h) The functions of the Alabama water well standards board, as set forth in sections 22-24-1 through 22-24-12 are transferred to the department on October 1, 1982.

(i) The functions of the state health department with respect to solid waste collection and disposal, as set forth in sections 22-27-1 through 22-27-7, which are specified below, are transferred to the department on October 1, 1982. Specifically, those functions of section 22-27-3 relating to the location and control of solid waste disposal by sanitary landfill, incineration, or composting; and the burning of solid wastes are transferred to the department. Those provisions of section 22-27-4 relating to the control of unauthorized dumping are transferred to the department. Those provisions of section 22-27-5 relating to the issuance of permits to individuals or corporations engaging in the disposal of solid wastes are transferred to the department. Those provisions of section 22-27-7 relating to the supervision and regulation of solid waste management are transferred to the department. Nothing in this chapter shall be construed to limit or curtail the authority of the state health department in the realm of sanitation or disease control and prevention, or in any matters relating to the public health which are not specifically transferred to the department by this chapter on October 1, 1982. Nothing in the chapter should be construed to transfer any function relating to collection of solid waste to the department. Such functions shall remain with the state health department or county health department as appropriate.

(j) Any permitting, regulatory and enforcement functions of the coastal area board, as set forth in sections 9-7-10 through 9-7-22, are transferred to the department on October 1, 1982.

(k) The functions of the state health department, with respect to hazardous waste management, as set forth in sections 22-30-1 through 22-30-24, are transferred to the department on October 1, 1982.

(*l*) The functions of the environmental health administration laboratory of the state health department are transferred to the department on October 1, 1982.

(m) The functions of the board of certification of water and wastewater systems personnel and the functions of the state health officer as set forth in sections 22-25-1 through 22-25-15 are transferred to the department on October 1, 1982.

(n) Beginning October 1, 1982, the department is hereby designated as the state environmental control agency for the purposes of federal environmental law. Specifically, the department is designated as the state air pollution control agency for the purposes of the Federal Clean Air Act, 42 U.S.C. 7401 et seq., as amended; as the state water pollution control agency for the purposes of the Federal Clean Water Act, 33 U.S.C. 1251 et seq., as amended; the state agency responsible for the promulgation and enforcement of drinking water regulations in accordance with the Federal Safe Drinking

Water Act, 42 U.S.C.A. 201 et seq., as amended; the state agency responsible for the promulgation and enforcement of solid and hazardous waste regulations in accordance with the Solid Waste Disposal Act, 42 U.S.C. 3251 et seq., as amended, including 42 U.S.C. 6901 et seq., as amended; and is hereby authorized to take all actions necessary and appropriate to secure to this state the benefits of federal environmental laws.

(o) Beginning October 1, 1982, the state health department shall provide certain routine bacteriological analyses to the Alabama department of environmental management and the department shall reimburse the state health department for the reasonable costs and expenses incurred in providing such analyses. For an appropriate period of time, the department shall contract with the state health department to provide the routine bacteriological analyses necessary to the department in its public water systems program. (Acts 1982, No. 82-612, p. 1111, § 4.)

§ 22-22A-5. Powers and functions of department; representation of department by attorney general in legal actions.

In addition to any other powers and functions which may be conferred upon it by law, the department is authorized beginning October 1, 1982 to:

(1) Administer appropriate portions of sections 9-7-10 through 9-7-20, which relate to permitting, regulatory and enforcement functions; administer and enforce the provisions and execute the functions of chapter 28 of this title; chapter 22 of this title; article 2 of chapter 23 of this title; chapter 30 of this title; appropriate portions of article 1 of chapter 27 of this title; sections 22-24-1 through 22-24-11; sections 22-25-1 through 22-25-15; and sections 22-36-1 through 22-36-10.

(2) Acting through the environmental management commission, promulgate rules, regulations and standards in order to carry out the provisions and intent of this chapter; provided, however, that prior to the promulgation of any state primary or secondary drinking water standard governed by sections 22-23-30 through 22-23-53 or any regulations dealing with hazardous wastes governed by sections 22-30-1 through 22-30-24, the department shall receive the approval of the state board of health. The state board of health shall provide the department a response to its request for approval within 60 days of receipt of such request unless such other time is mutually agreed upon by the department and the state board of health;

(3) Acting through the environmental management commission, adopt and promulgate rules, regulations and standards for the department, and to develop environmental policy for the state;

(4) Consistent with the provisions in subsection 22-22A-4(n), serve as the state agency responsible for administering federally approved or federally delegated environmental programs;

(5) Serve as the state's clearinghouse for environmental data. The clearinghouse shall be developed in coordination and cooperation with other governmental data collection and record keeping systems to provide for an

inventory, and for the cataloguing and dissemination of environmental information;

(6) Report, as appropriate, to the governor and to the legislature on the programs and activities of the department and to recommend needed changes in legislation or administrative practice;

(7) Develop, conduct and disseminate education and training programs. Pursuant to this authority, the department shall establish a citizens' advisory committee to provide input into such education and training programs;

(8) Enter into agreements and contracts, where appropriate, with other state agencies, the federal government or private individuals, in order to accomplish the purposes of this chapter;

(9) Establish and maintain regional or field offices in order to provide more effective and efficient services to the citizens of the state;

(10) Issue, modify, suspend or revoke orders, citations, notices of violation, licenses, certifications or permits;

(11) Hold hearings relating to any provision of this chapter or relating to the administration thereof;

(12) To enforce all provisions of this chapter and all provisions of law identified in subdivision (1) of this section and to file legal actions in the name of the department and to prosecute, defend or settle actions brought by or against the department or its agents. The attorney general shall represent the department in any and all legal actions brought by the department to enforce any provisions of this chapter; provided however, that if, within a reasonable time after the department refers the matter to him, he fails to file any such action, then the department may commence appropriate legal action. Nothing in this subdivision shall be construed so as to impair the authority of the attorney general to independently enforce the provisions of this chapter;

(13) When necessary to achieve conformance with sections 9-7-10 through 9-7-20, acquire fee simple or less than fee simple, interest in land, water and other property under the procedures of Title 18 or other means; provided, however, that such power shall not apply to property and interest therein which is devoted to public use;

(14) Apply for, where appropriate, accept, receive and administer grants or other funds or gifts from public and private agencies, including the federal government, for the purpose of carrying out any of the functions, purposes or provisions of this chapter or any of the functions or provisions transferred to the department by this chapter;

(15) Employ such professional, technical, clerical and other workers including attorneys and special counsel, and such consultants as are necessary and within available funds to carry out the purposes of this chapter;

(16) Adopt rules and regulations relating to charging and collecting fees sufficient to cover the reasonable anticipated costs to be incurred by the department and directly related to the issuance, reissuance, modification or

denial of any permit, license, certification or variance, such fees to include, but not be limited to, the reasonable anticipated cost of the examination and processing of applications, plans, specifications or any other data and any necessary public hearings and investigations; provided, however, that nothing in this subdivision shall be construed as modifying or affecting the provisions of section 22-24-5. A schedule of estimated reasonable anticipated costs shall be appended to rules and regulations with the understanding that fees may be higher or lower on a case-by-case basis;

(17) In addition to any other remedies provided by law, recover in a civil action from any person who has violated, or threatens to violate, any provision of this chapter, or any provision of law identified in subdivision (1) of this section, or any rule or regulation promulgated thereunder, or any order, or condition of any permit, license, certification or variance issued by the department pursuant thereto, the actual costs reasonably incurred by the department to prevent, minimize or abate any adverse effect on air, land or water resources which results or may result from such violation. Such civil actions may be filed in the circuit court of the county in which the defendant resides or does business, or in which the violation or threatened violation occurs or in which the adverse effect occurs; and

(18) a. Issue an order assessing a civil penalty to any person who violates any provision of law identified in subdivision (1) of this section, any rule, regulation or standard promulgated by the department, any provision of any order, or any condition of any permit, license, certification or variance issued by the department, provided however, that no such order shall be issued to a person —

1. If a civil action to recover a penalty for such violation has been commenced against such person as provided in paragraph b of this subdivision;

2. For any violation at a coal mining operation regulated under sections 9-16-70 through 9-16-107 or Title V of Public Law 95-87, 30 U.S.C. § 1251-1279;

3. If an order assessing a civil penalty for such violation has been issued to such person pursuant to subdivision (2) of subsection 22-28-23(b); or

4. Who is a responsible corporate officer subject to a civil action for the recovery of a penalty under paragraph b. of this subdivision.

Any order issued under this paragraph shall include findings of fact relied upon by the department in determining the alleged violation and the amount of the civil penalty and may be served in the manner provided for service of process in the Alabama Rules of Civil Procedure. Not later than 15 days after issuance of any such order, notice thereof shall be published for one day in a newspaper of general circulation in the county where the violation occurred. Where the department has issued an order finding that a violation has occurred and assessing a civil penalty, the person subject thereto shall pay the penalty in full within 30 days after issuance of such order unless such person has filed a timely request for a

hearing to contest the issuance of such order in accordance with section 22-22A-7, in which case the penalty assessed in the order as approved or modified by the environmental management commission shall be paid in full within 30 days after the order is approved or modified by the environmental management commission or, if an appeal thereof is taken to circuit court, within 42 days after the court affirms the order as approved or modified by the environmental management commission. An order shall not be issued under this paragraph until the person subject thereto has been afforded an opportunity for an informal conference with the director or his designated representative concerning the alleged violation and penalty assessment. Civil penalties assessed in an order under this paragraph and not paid as provided herein may be recovered in a civil action brought by the department in the circuit court of Montgomery county or the county in which the defendant does business.

b. Commence a civil action in the circuit court of the county in which the defendant or any material defendant resides or does business or in which the violation occurred to recover a civil penalty from such person for any violation of any provision of law identified in subdivision (1) of this section, any rule, regulation or standard promulgated by the department, any provision of any order or any condition of any permit, license, certification or variance issued by the department, provided however, that no such civil action may be commenced against a person if an order assessing a civil penalty for such violation has been issued to such person under paragraph a. of this subdivision. Whenever such person is a corporation and the violation is of a provision of law in chapter 22 of this title, or any rule, regulation or standard promulgated by the department thereunder, or any provision of any order or any condition of any permit, license, certification or variance issued by the department thereunder, the same civil penalties that may be imposed upon a person under this subdivision may be imposed upon the responsible corporate officers in a civil action. Any person having an interest which is or may be adversely affected may intervene as a matter of right in any civil action commenced under this paragraph. The attorney general may also commence a civil action under this paragraph.

c. Any civil penalty assessed or recovered under paragraph a. or b. of this subdivision shall not be less than $100.00 or exceed $25,000.00 for each violation, provided however, that the total penalty assessed in an order issued by the department under paragraph a. of this subdivision shall not exceed $250,000.00. Each day such violation continues shall constitute a separate violation for purposes of this subdivision. In determining the amount of any penalty, consideration shall be given to the seriousness of the violation, including any irreparable harm to the environment and any threat to the health or safety of the public; the standard of care manifested by such person; the economic benefit which delayed compliance may confer upon such person; the nature, extent and degree of success of such person's efforts to minimize or mitigate the

effects of such violation upon the environment; such person's history of previous violations; and the ability of such person to pay such penalty. Civil penalties may be assessed under this subdivision for any violation occurring within two years prior to the date of issuance of an order under paragraph a. of this subdivision or commencement of such civil action under paragraph b. of this subdivision. All civil penalties recovered under this subdivision by the department or attorney general shall be deposited into the state treasury to the credit of the general fund, except that portion which represents the reasonable costs incurred by the department or attorney general to recover such penalties which shall be deposited to the credit of the operating fund of the department or attorney general, whichever incurred such costs.

(19) Commence a civil action in the circuit court of the county in which the defendant or any material defendant resides or does business or in which the threatened or continuing violation of any provision of law identified in subdivision (1) of this section, any rule, regulation or standard promulgated by the department, any provision of any order, or any condition of any permit, license, certification or variance issued by the department. The attorney general or district attorney having jurisdiction in the circuit, county or territory in which the threatened or continuing violation occurs may also commence a civil action to enjoin such violation. In any such action, any person having an interest which is or may be adversely affected may intervene as a matter of right.

(20) Perform any other duty or take any other action necessary for the implementation and enforcement of this chapter. (Acts 1982, No. 82-612, p. 1111, § 5; Acts 1984, 1st Ex. Sess., No. 84-783, p. 163, § 1; Acts 1986, No. 86-542, p. 1053, § 1; Acts 1988, No. 88-537, p. 823, § 9.)

Code commissioner's note. — Acts 1986, No. 86-542, § 11 provides: "The provisions of this Act do not apply to any violation of sections 9-7-10 through 9-7-22; chapter 28 of title 22; article 2 of chapter 23 of title 22; chapter 30 of title 22; article 1 of chapter 27 of title 22; sections 22-24-1 through 22-24-11; sections 22-25-1 through 22-25-15; or chapter 22A of title 22 of Code of Alabama 1975, as amended, occurring prior to 12:01 a.m. on the effective date of this Act [April 30, 1986]. Such violations must be construed and the civil and criminal remedies applied according to the provisions of law existing at the time of the occurrence thereof in the same manner as if this Act had not been enacted."

Court denied department hearing by not allowing evidence on issue of penalties. — By not allowing the department of environmental management an opportunity to present evidence on the issue of penalties, where defendant had been held not to be in compliance with regulations by not hiring a certified operator, the trial court effectively denied the department a hearing as defined by subdivision (18). Alabama Dep't of Envtl. Mgt. v. Teasley-Mill Water Sys., 537 So. 2d 57 (Ala. Civ. App. 1988).

Dismissal of plaintiff's suit was a de facto approval of Alabama department of environmental management's action because it effectively denied plaintiff a hearing on its challenge to the permit issued to utility board, and plaintiff had standing to attack the issuance of the final National Pollutant Discharge Elimination System. Marshall Durbin & Co. v. Alabama Dep't of Envtl. Mgt., 537 So. 2d 496 (Ala. 1988).

Cited in Chemical Waste Mgt., Inc. v. Broadwater, 758 F.2d 1538 (11th Cir. 1985); Browning-Ferris Indus. of Ala., Inc. v. Alabama Dep't of Environmental Mgt., 799 F.2d 1473 (11th Cir. 1986).

§ 22-22A-6. Environmental management commission; powers and duties; composition; appointments; vacancies; qualifications; terms; chairman; quorum; regular and special meetings; effect of failure to attend three consecutive meetings; record of proceedings; compensation; expenses; ethical requirements.

(a) There is hereby created a seven member environmental management commission of the Alabama department of environmental management which shall have the following duties:

(1) To select a director for the department of environmental management and to advise the director on environmental matters which are within the department's scope of authority;

(2) To establish, adopt, promulgate, modify, repeal and suspend any rules, regulations or environmental standards for the department which may be applicable to the state as a whole or any of its geographical parts;

(3) To develop environmental policy for the state; and

(4) To hear and determine appeals of administrative actions.

(b) The environmental management commission shall be composed of seven members who are citizens of the state of Alabama. Initial members of the commission shall be appointed to places on the environmental management commission by the governor, lieutenant governor, and speaker of the house of representatives pursuant to the procedure set out in subsection (d) of this section with the advice and consent of the senate. Initial appointments shall be made on or before October 1, 1982. All subsequent appointments to places on the environmental management commission after the initial appointments shall be made by the governor with the advice and consent of the senate. No member of the environmental management commission may serve more than a total of 18 years. When a vacancy occurs during a period when the legislature is not in session to advise and consent, such appointee shall have the full power of the office until and unless the senate, upon the reconvening of the legislature, shall by affirmative vote refuse to consent in such appointment. Qualifications of the seven members shall be as follows:

(1) One member shall be a physician licensed to practice medicine in the state of Alabama and shall be familiar with environmental matters;

(2) One member shall be a professional engineer registered in the state of Alabama and shall be familiar with environmental matters;

(3) One member shall be an attorney licensed to practice law in the state of Alabama and shall be familiar with environmental matters;

(4) One member shall be a chemist possessing as a minimum a bachelor's degree from an accredited university or a veterinarian licensed to practice veterinary medicine in the state of Alabama and shall be familiar with environmental matters;

(5) One member that has been certified by the national water well association certification program;

(6) One member shall be a biologist or an ecologist possessing as a minimum a bachelor's degree from an accredited university and shall have training in environmental matters; and

(7) One member shall be a resident of the state for at least two years but shall not be required to have any specialized experience.

(c) At the expiration of the terms of all members initially appointed, their successors shall be promptly appointed by the governor for terms of six years. At the expiration of a term of office or in the event of a vacancy on the environmental management commission, the governor shall promptly make an appointment to fill the vacancy. The expiring term of an incumbent member shall be continued until an appointment is made.

(d) Provided however that the initial appointments to the environmental management commission shall be made as follows notwithstanding the other provisions of this chapter:

(1) The governor shall appoint three members of the environmental management commission, two of whom shall come from the voting members of the boards or commissions abolished by this chapter. The governor's three initial appointments shall fill the positions described in subdivisions (4), (6) and (7) of subsection (b) of this section. The terms of these initial position appointments shall be for six years.

(2) The lieutenant governor shall appoint two members of the environmental management commission, one who shall come from the voting members of the boards or commissions abolished by this chapter. The lieutenant governor's appointments pursuant to this subsection shall fill the positions described in subdivisions (1) and (5) of subsection (b) of this section. The term of the initial position described in subdivision (1) of subsection (b) of this section shall be for four years. The term of the initial position described in subdivision (5) of subsection (b) of this section shall be for two years.

(3) The speaker of the house of representatives shall appoint two members of the environmental management commission, one who shall come from the voting members of the boards or commissions abolished by this chapter. The speaker of the house of representatives' appointments pursuant to this subsection shall fill the positions described in subdivisions (2) and (3) of subsection (b) of this section. The term of the initial position described in subdivision (2) of subsection (b) of this section shall be for four years. The term of the initial position described in subdivision (3) of subsection (b) of this section shall be for two years.

(e) The environmental management commission shall select a chairman from among its members, and the chairman's term of office shall be determined by the environmental management commission, but shall not exceed three consecutive years. The environmental management commission shall not take official action unless a quorum is present. A quorum shall be any four of the seven members. Recusal of a member shall not affect the quorum.

(f) The environmental management commission shall meet regularly, at least once every two months at times and places to be fixed by the environmental management commission. Special meetings may be called at the discretion of the chairman of the environmental management commission and special meetings shall be called by him on written request of any four members to take up any matters within the jurisdiction of the environmental management commission. All members shall be notified of the time and place of any regular or special meeting in any one of the following ways: in writing or by telegram to a member's last known address as provided to the department or by telephone.

(g) Any member of the environmental management commission who misses three consecutive regularly scheduled meetings, shall immediately cease to be a member of the commission and the governor shall promptly appoint a new member with appropriate qualifications to fill the remainder of the term.

(h) The environmental management commission shall keep a complete and accurate record of the proceedings of all its meetings, a copy of which shall be kept on file in the office of the director and open to public inspection.

(i) (1) Each member shall receive $100.00 per day for each day of attendance at an official meeting. Members of the environmental management commission shall be reimbursed for expenses when attending meetings which are approved and certified by the director. Reimbursement shall be in accordance with sections 36-7-1 through 36-7-42;

(2) All proper expenses of the environmental management commission shall be paid from the appropriations to or funds of the department in the same manner as expenses of the department are paid.

(j) Members of the environmental management commission shall meet all requirements of the state ethics law and the conflict of interest provisions of applicable federal laws and regulations. (Acts 1982, No. 82-612, p. 1111, § 6.)

Cross references. — As to the applicability of §§ 41-22-1 through 41-22-11 and §§ 41-22-22 through 41-22-27 with regard to the Alabama department of environmental management at 12:01 A.M. on October 1, 1986, see § 41-22-27(f). As to the validity and adoption of rules of the Alabama department of environmental management, see also § 41-22-27(f). As to the judicial review of any order of the environmental management commission modifying, approving or disapproving in an administrative action of the Alabama department of environmental management, see also § 41-22-27(f).

Writ of certiorari was available to poultry processing plant which petitioned commission to amend water quality criteria and use classifications to review the commission's order dismissing the petition, where the petitioner had exhausted the administrative remedies available to it for seeking a rule change. Marshall Durbin & Co. v. Environmental Mgt. Comm'n, 495 So. 2d 79 (Ala. Civ. App. 1986).

One of the duties of commission is to adopt and promulgate ecological rules, regulations, and standards, and, in doing so, the commission may rely upon its expert knowledge of factors commonly known to it which are relevant to the issue before it. Marshall Durbin & Co. v. Environmental Mgt. Comm'n, 519 So. 2d 962 (Ala. Civ. App. 1987).

§ 22-22A-7. Hearings and procedures before commission; judicial enforcement of subpoenas, etc.; hearing officers; right to hearing; request for hearing; time and notice of hearing; issuance of order; stay of administrative action; evidence and record of proceedings; judicial review.

(a) Beginning October 1, 1982, the environmental management commission, in addition to any other authority which may be conferred upon it by law, shall have the power to:

(1) Develop and prescribe its own hearing procedures, unless otherwise specified by law; and

(2) Administer oaths, certify to official acts, take and cause to be taken depositions of witnesses, issue subpoenas, and compel the attendance of witnesses and the production of papers, books, accounts, payrolls, documents and records. In the event of failure of any person to comply with any subpoena lawfully issued, or on the refusal of any witness to produce evidence or to testify as to any matter regarding which he may be lawfully interrogated, it shall be the duty of any court of competent jurisdiction or of the judge thereof, upon the application of the environmental management commmission or its designee, to compel obedience by contempt proceedings, as in the case of disobedience of the requirements of a subpoena issued by such court or a refusal to testify therein. The fees of witnesses for attendance and travel shall be the same as fees of witnesses before courts of record and shall be paid from the funds of the department.

(b) (1) The environmental management commission may delegate the power to hear appeals which are before it to a hearing officer. Any such hearing conducted by a hearing officer shall be in accordance with rules and regulations prescribed by the environmental management commission pursuant to subdivision (1) of subsection (a) of this section, and in such case the hearing officer shall prepare findings of fact, conclusions of law and recommendations to the environmental management commission for its final decision.

(2) The environmental management commission may hire hearing officers to hear appeals which are before it. Such hearing officers shall be attorneys licensed to practice in the state of Alabama and shall be paid appropriately from department funds.

(c) Upon a proper request made in accordance with subdivisions (1) or (2) of this subsection and any hearing procedures prescribed by the environmental management commission, any person aggrieved by an administrative action of the department shall be entitled to a hearing before the environmental management commission or its designated hearing officer.

(1) Request for such hearing to contest an administrative action of the department, other than to contest the issuance of any rule or regulation or emergency order, must be filed with the environmental management commission within 15 days after notice to the aggrieved person by the department of its action, or if no notice to the aggrieved person is given or

required to be given by this chapter, within 30 days of the contested administrative action.

(2) Request for a hearing before the environmental management commission or its designated hearing officer to contest the issuance of any rule or regulation by the department must be filed with the environmental management commission within 45 days of the promulgation of the rule or regulation by the department; except, that if such request is based solely on grounds arising after such forty-fifth day, then any request for a hearing under this subdivision must be filed within 45 days after such grounds arise.

(3) The environmental management commission or its designated hearing officer shall within a reasonable time, not to exceed 45 days after receipt of a request in accordance with subdivisions (1) or (2) of this subsection, hold a hearing of which at least 15 days' written notice shall be given to such person requesting the hearing and any other named or necessary party. Within 30 days after such hearing, the environmental management commission shall issue an appropriate order modifying, approving or disapproving the department's administrative action. A copy of the environmental management commission's order shall be served upon all parties either personally, by registered mail or by certified mail return receipt requested. The notice and hearing requirements of this subsection shall not apply to emergency orders. Hearings on emergency orders shall be held before the environmental management commission and notice of such hearing as may be reasonable under the circumstances shall be given to such persons as the environmental management commission deems appropriate.

(4) Pending the determination by the environmental management commission, and upon application therefor, the environmental management commission may stay the operation of such administrative action upon such terms and conditions as it may deem proper.

(5) The parties shall not be bound by the strict rules of evidence prevailing in the courts. However, a full and complete record shall be kept of all proceedings before the environmental management commission. All testimony or comments given in any hearing before the environmental management commission shall be electronically or stenographically recorded, but need not be transcribed unless an appeal is taken to court or unless requested by any party who shall pay for the cost of transcription.

(6) Any order of the environmental management commission made pursuant to the above procedure, modifying, approving or disapproving the department's administrative action, constitutes a final action of the department and is appealable to the Montgomery county circuit court or the circuit court in which the applicant does business or resides for judicial review on the administrative record provided that such appeal is filed within 30 days after issuance of such order.

(7) Administrative action with respect to which review was or could have been obtained under this section shall not be subject to judicial review in

any civil or criminal proceeding for enforcement. (Acts 1982, No. 82-612, p. 1111, § 7; Acts 1986, No. 86-542, p. 1053, § 2.)

Code commissioner's note. — Acts 1986, No. 86-542, § 11 provides: "The provisions of this Act do not apply to any violation of sections 9-7-10 through 9-7-22; chapter 28 of title 22; article 2 of chapter 23 of title 22; chapter 30 of title 22; article 1 of chapter 27 of title 22; sections 22-24-1 through 22-24-11; sections 22-25-1 through 22-25-15; or chapter 22A of title 22 of Code of Alabama 1975, as amended, occurring prior to 12:01 a.m. on the effective date of this Act [April 30, 1986]. Such violations must be construed and the civil and criminal remedies applied according to the provisions of law existing at the time of the occurrence thereof in the same manner as if this Act had not been enacted."

Cross references. — As to judicial review of any order of the environmental management commission modifying, approving or disapproving an administrative action of the Alabama department of environmental management, see § 41-22-27(f).

Lack of prehearing discovery does not make the section facially invalid. It has been generally recognized that there is no basic constitutional right to prehearing discovery in administrative proceedings. The only possible argument is that the denial of prehearing discovery as applied in a particular case constitutes a denial of due process. This possibility of a due process violation, in the abstract, does not render the sections facially unconstitutional. Beyond this, it is noted that at least some provision for discovery is made by the Alabama Environmental Management Act. Dawson v. Cole, 485 So. 2d 1164 (Ala. Civ. App. 1986).

Lack of provision for postponement of "commencement" of hearing does not invalidate section. — It is clear that neither subsection (c)(3) of this section nor Alabama department of environmental management (ADEM) rule 2-1-.11 allows for any postponement of the "commencement" of the hearing. However, this does not make them facially invalid. Such a deadline is obviously necessary for the efficient administration of the ADEM's programs. In fact, it helps ensure the aggrieved party of a hearing. It in no way creates a hardship for the parties to an appeal. While the hearing must be commenced within the 45-day limit, adequate provision is made for any justified continuance. Dawson v. Cole, 485 So. 2d 1164 (Ala. Civ. App. 1986).

Aesthetic, environmental, or recreational concerns alone do not confer "aggrieved party" status; the complainant must show an adverse agency action somehow affected his interest in land. Save Our Dunes v. Alabama Dep't of Envtl. Mgt., 834 F.2d 984 (11th Cir. 1987).

Failure to show department actions adversely affected legal or equitable interests in land. — Plaintiffs consisted of various civic-minded and environmental organizations, whose members might not be citizens of this state, and plaintiffs claimed they used and enjoyed state's coastal beaches, but did not show how the department of environmental management's actions adversely affected their legal or equitable interests in land, plaintiffs did not establish that they were "aggrieved" within the meaning of this section. Save Our Dunes v. Alabama Dep't of Envtl. Mgt., 834 F.2d 984 (11th Cir. 1987).

Continuances. — Alabama department of environmental management (ADEM) rule 2-1-.11(8) provides that "at any time after the commencement of a hearing to contest an administrative action of the department, the commission (environmental management commission of ADEM) may on its own initiative, or on the motion of any party, adjourn the hearing to a later time." This power to continue the hearing adequately safeguards an aggrieved person's due process right to a meaningful hearing. If this person can show adequate justification for a continuance, such should be granted. Ultimately, the commission's (or hearing officer's) decision on this issue would be subject to judicial review. Dawson v. Cole, 485 So. 2d 1164 (Ala. Civ. App. 1986).

Extraordinary writ will lie to prevent agency from taking action beyond its authority. Baldwin County Comm'n v. Alabama Envtl. Mgt. Comm'n, 526 So. 2d 564 (Ala. 1988).

When the statute intends a quasi-judicial act to be final, the act may not thereafter be revoked. Baldwin County Comm'n v. Alabama Envtl. Mgt. Comm'n, 526 So. 2d 564 (Ala. 1988).

Cited in Save Our Dunes v. Pegues, 642 F. Supp. 393 (M.D. Ala. 1985).

§ 22-22A-8. Adoption of rules, regulations and standards; review by director; public notice and hearing.

(a) All rules, regulations or standards shall be adopted by and promulgated by the environmental management commission. With the exception of editorial changes, no rule, regulation or standard shall be adopted, amended or repealed unless such rule, regulation or standard has been reviewed by the director and until after a public hearing has been held. Unless different notice provisions are specifically required elsewhere by law, at least 45 days prior to the scheduled date of the hearing the department shall give notice of such hearing by public advertisement in the three newspapers of this state with the largest regional circulation of the date, time, place and purpose of such hearing; and make available to any person upon request copies of the proposed rules, regulations or standards, together with summaries of the reasons supporting their adoption, amendment or repeal.

(b) Any public hearing relating to the adoption, amendment or repeal of department rules, regulations or standards under this section shall be held before a department representative, who shall be designated by the environmental management commission. All such hearings shall be open to the public, and reasonable opportunity to be heard with respect to the subject of the hearing shall be afforded to any person. All testimony taken before the department representative shall be recorded and transcribed. The transcript, any exhibits or any written submissions to the department in relation to such hearings shall be open to public inspection.

(c) After such hearing, the department may revise the proposed rules, regulations or standards, before adoption in response to testimony, written submissions or exhibits introduced at the hearing, without conducting a further hearing on the revisions.

(d) Nothing in this section shall be construed to require a hearing prior to the issuance of any temporary emergency rule or regulation. (Acts 1982, No. 82-612, p. 1111, § 8.)

Cross references. — As to the applicability of §§ 41-22-1 through 41-22-11 and 41-22-22 through 41-22-27 with regard to the Alabama department of environmental management at 12:01 A.M. on October 1, 1986, see § 41-22-27(f). As to the validity and adoption of rules of the Alabama department of environmental management, see also § 41-22-27(f). As to judicial review of any order of the environmental management commission modifying, approving or disapproving in an administrative action of the Alabama department of environmental management, see also § 41-22-27(f).

Writ of certiorari was available to poultry processing plant which petitioned commission to amend water quality criteria and use classifications to review the commission's order dismissing the petition, where the petitioner had exhausted the administrative remedies available to it for seeking a rule change. Marshall Durbin & Co. v. Environmental Mgt. Comm'n, 495 So. 2d 79 (Ala. Civ. App. 1986).

§ 22-22A-9. Transfer of functions, personnel, equipment, funds, etc., to department of environmental management.

(a) All employees engaged in duties pertaining to the functions transferred by this chapter to the department, shall be assigned to the department on October 1, 1982, to perform their usual duties, subject to any action that may be appropriate thereafter in accordance with the laws and rules governing personnel and employees.

(b) All files, books, papers, records, equipment, furniture, motor vehicles, any other tangible property, and any other asset employed in carrying out the powers, duties and functions transferred by this chapter to the department shall, on October 1, 1982, be transferred to the department.

(c) All reports, documents, surveys, books, records, files, correspondence, papers or other writings in the possession of any department, division, bureau, board, commission or other agency, the functions, powers and duties of which have been transferred to the department by this chapter, or which have been employed in carrying out the functions, powers and duties transferred by this chapter to the department shall, on October 1, 1982, be transferred to the department.

(d) All funds, credits or other moneys held in connection with the functions transferred by this chapter, shall be transferred to the Alabama department of environmental management fund created by section 22-22A-11 on October 1, 1982. Subsequent to the transfer of all funds, credits or other moneys to the department for programs whose functions are transferred by this chapter to the department, the water improvement commission fund established by section 22-22-10; the safe drinking water fund established by section 22-23-51; the well driller licensing fund established by section 22-24-10; the operator's certification fund established by section 22-25-10; and the hazardous waste management fund established by section 22-30-23 are abolished, and any funds from any source whatsoever which may accrue to any of the foregoing funds in the future shall accrue to the Alabama department of environmental management.

(e) Any appropriation made for the purpose of carrying out the powers, duties and functions transferred by this chapter to the department, shall on October 1, 1982, be transferred and credited to the department for the purpose of carrying out such transferred powers, duties and functions.

(f) Except where in conflict with provisions of this chapter, on October 1, 1982, all rules, regulations, standards, comprehensive plans for the prevention, abatement and control of pollution in this state; and all orders, permits, licenses, certificates, bonds and variances of the departments, divisions, boards, commissions, or other agencies, relating to the functions transferred by this chapter to the department, are enforceable as the rules, regulations, standards, plans, orders, permits, licenses, certificates, bonds and variances of the department and shall continue to be effective until revised, amended, repealed or nullified pursuant to law.

(g) All pending business before the boards, commissions, or agencies affected by this chapter, relating to the functions transferred by this chapter to the department, shall be continued and acted upon by the department. All existing contracts, obligations and memoranda of understanding pertaining to the functions transferred by this chapter to the department, shall remain in force and effect and shall be performed by the department.

(h) All state officials required to maintain contact with or provide services to any agency, board or commission affected by this chapter shall continue to perform such services for the department unless otherwise directed by this chapter.

(i) Neither the abolition of any agency nor any of the transfers authorized by this chapter shall affect the validity of any action performed by such agency, board or commission affected by this chapter, prior to October 1, 1982.

(j) Except where required elsewhere by the chapter, on October 1, 1982, the performance of any such transferred duties or functions by the department or its respective divisions shall have the same effect as if done by the former agency, board or commission referred to or designated by law or contract. The reference to or designation of the former agency, board or commissions shall apply to the department.

(k) During an appropriate transition period after October 1, 1982, the state health department shall continue to assist the department in personnel and fiscal matters in order to effect the smooth transition of such functions to the department. (Acts 1982, No. 82-612, p. 1111, § 9.)

Code commissioner's note. — Sections 22-22-10, 22-23-51, 22-24-10, and 22-30-23, referred to in subsection (d) of this section, were repealed by Acts 1982, No. 82-612, p. 1111. Section 22-25-10, referred to in subsection (d) of this section, was repealed by Acts 1984, No. 84-783, § 4.

§ 22-22A-10. Transfer of functions, personnel, equipment, etc., of coastal area board to office of state planning and federal programs; exception.

(a) On October 1, 1982, all functions of the coastal area board, as set forth in sections 9-7-10 through 9-7-22, except those which relate to permitting, regulatory and enforcement functions, shall be transferred to the office of state planning and federal programs established pursuant to sections 41-9-205 through 41-9-214.

(b) All employees engaged in duties pertaining to the functions transferred by this section, shall be assigned to the office of state planning and federal programs on October 1, 1982 to perform their usual duties, subject to any action that may be appropriate thereafter in accordance with the laws and rules governing personnel and employees.

(c) All files, books, papers, records, equipment, furniture, motor vehicles, any other tangible property and any other asset employed in carrying out the powers, duties and functions transferred by this chapter to the office of state

planning and federal programs shall, on October 1, 1982, be transferred to the office of state planning and federal programs.

(d) All reports, documents, surveys, books, records, files, correspondence, papers or other writings in the possession of the coastal area board, the functions, powers and duties of which have been transferred to the office of state planning and federal programs by this chapter, or which have been employed in carrying out the functions, powers and duties transferred by this chapter to said office shall, on October 1, 1982, be transferred to the office of state planning and federal programs.

(e) All funds, credits or other moneys held in connection with the functions transferred by this chapter to the office of state planning and federal programs, shall be transferred to said office on October 1, 1982. Subsequent to the transfer of all funds, credits or other moneys to the office of state planning and federal programs, the coastal area board fund established by section 9-7-19 is abolished.

(f) Any appropriation made to the coastal area board for the purpose of carrying out the powers, duties and functions transferred by this chapter to the office of state planning and federal programs shall, on October 1, 1982, be transferred and credited to said office for the purpose of carrying out such transferred powers, duties and functions.

(g) The office of state planning and federal programs shall provide the department sufficient funds to administer the permitting, regulatory and enforcement functions of the coastal area management program from those federal funds obtained by the office for such purposes.

(h) All pending business before the coastal area board, relating to the functions transferred by this chapter to the office of state planning and federal programs, shall be continued and acted upon by said office. All existing contracts, obligations and memoranda of understanding pertaining to the functions herein transferred shall remain in force and effect and shall be performed by the office of state planning and federal programs.

(i) All state officials required to maintain contact with or provide services to the coastal area board shall continue to perform such services for the office of state planning and federal programs or as otherwise directed by this chapter.

(j) Neither the abolition of the coastal area board nor any of the transfers to the office of state planning and federal programs authorized by this chapter shall affect the validity of any action performed by the coastal area board, prior to October 1, 1982. (Acts 1982, No. 82-612, p. 1111, § 10.)

Code commissioner's note. — Section 9-7-19, referred to in subsection (e) of this section, was repealed by Acts 1982, No. 82-612, p. 1111. Section 9-7-22, referred to in subsection (a) of this section, was repealed by Acts 1986, No. 86-542, p. 1053.

§ 22-22A-11. Alabama department of environmental management fund.

There is hereby created a fund known as the Alabama department of environmental management fund. This fund shall consist of: (1) all appropriations; (2) all grants, gifts, bequests or donations; (3) all money derived through any source of federal aid; (4) all fees; (5) all moneys from any program whose functions were transferred to the department by this chapter; and (6) all moneys from any other source whatsoever. However, the department may not solicit or accept any gift or donation from any person that has any official request or action pending before the Alabama department of environmental management. All moneys deposited in said fund are hereby appropriated to the use of the department in addition to any other appropriations heretofore or hereafter made. The fund shall be used and expended by the department in accordance with the terms of the appropriations, gift, bequest, grant, donation or transfer from which said moneys are derived and in the absence of any such terms or stipulations, shall be expended by the department in furtherance of any of the provisions of this chapter. All necessary expenses of the department shall likewise be paid out of the fund on the requisition of the director as may be deemed advisable. (Acts 1982, No. 82-612, p. 1111, § 12; Acts 1984, 1st Ex. Sess., No. 84-783, p. 163, § 2; Acts 1986, No. 86-542, p. 1053, § 3.)

Code commissioner's note. — Acts 1986, No. 86-542, § 11 provides: "The provisions of this Act do not apply to any violation of sections 9-7-10 through 9-7-22; chapter 28 of title 22; article 2 of chapter 23 of title 22; chapter 30 of title 22; article 1 of chapter 27 of title 22; sections 22-24-1 through 22-24-11; sections 22-25-1 through 22-25-15; or chapter 22A of title 22 of Code of Alabama 1975, as amended, occurring prior to 12:01 a.m. on the effective date of this Act [April 30, 1986]. Such violations must be construed and the civil and criminal remedies applied according to the provisions of law existing at the time of the occurrence thereof in the same manner as if this Act had not been enacted."

§ 22-22A-12. Coastal resources advisory committee; composition; terms; chairman; meetings.

(a) There is hereby created a coastal resources advisory committee to advise the department and the office of state planning and federal programs on all matters concerning the coastal area. The committee shall consist of not less than seven members who shall be predominantly from Baldwin and Mobile counties.

(b) The initial members of the coastal resources advisory committee shall be the current coastal area board established by section 9-7-14, as amended and abolished by this chapter. The terms of the initial members of the committee shall be for one year beginning October 1, 1982.

(c) The subsequent membership of the coastal resources advisory committee shall be as follows:

(1) One member shall be a member of the Mobile city commission and shall be selected by that commission;

(2) One member shall be a member of the Mobile county commission and shall be selected by that commission;

(3) One member shall be a member of the Baldwin county commission and shall be selected by that commission;

(4) One member shall be an official of a municipal corporation in Baldwin county and shall be selected by the Baldwin county mayors association;

(5) One member shall be the commissioner of conservation and natural resources, who may designate an employee of his department to represent him on the committee;

(6) One member shall be the state geologist who may designate an employee of his agency to represent him on the committee; and

(7) One member shall be the director of the marine environmental science consortium.

The term of each of these members of the coastal resources advisory committee shall be consistent with his elective or appointive office.

(d) Additional members of the coastal resources advisory committee may be appointed by the governor for terms not to exceed four years and shall be eligible for reappointment.

(e) The committee shall meet initially to select a chairman and subsequent meetings of the committee shall be at the call of the chairman of the coastal resources advisory committee or the director of the office of state planning and federal programs. (Acts 1982, No. 82-612, p. 1111, § 13.)

§ 22-22A-13. Effect of chapter on powers of attorney general.

All remedies for the prevention and abatement of pollution given to the attorney general through the authority of this chapter are merely cumulative. Except as provided in subdivisions (12) and (15) of section 22-22A-5 nothing in this chapter shall be interpreted as negating or destroying any common law or statutory right, duty, power or authority of the attorney general of Alabama. (Acts 1982, No. 82-612, p. 1111, § 15.)

§ 22-22A-14. Repealed by Acts 1986, No. 86-472, p. 880, § 3, effective April 30, 1986.

§ 22-22A-15. Chapter does not repeal section 22-30-5.1.

No provision of this chapter shall be construed to repeal in whole or in part any provision of section 22-30-5.1. (Acts 1982, No. 82-612, p. 1111, § 14(e); Acts 1983, 2nd Ex. Sess., No. 83-131, p. 137, § 1.)

§ 22-22A-16. Pollution control grant fund.

(a) There is hereby created a fund known as the pollution control grant fund. This fund shall consist of

(1) All appropriations made to the fund; and

(2) All grants, gifts, bequests or donations made to the fund from any source whatsoever. This fund shall be used and expended by the Alabama department of environmental management in accordance with the terms of

the appropriation, gift, bequest, grant or donation from which said moneys are derived and in the absence of such terms or stipulations, shall be expended by said department in accordance with the provisions of subsection (b). All necessary expenses of said department in implementing the provisions of this section shall likewise be paid out of the fund on the requisition of the director of said department as may be deemed advisable.

(b) Except as provided in subsection (a), the Alabama department of environmental management is authorized to make grants to any county, municipality or public corporation, agency or instrumentality organized under the laws of the state, for the purpose of carrying out any air, land or water pollution control, prevention or abatement practices, measures, experiments or research, from the pollution control grant fund and to enter into and carry out contracts or agreements in connection therewith and include in any contract or agreement such conditions as it may deem reasonable and appropriate.

(c) Acting through the environmental management commission, the Alabama department of environmental management is authorized to promulgate rules, regulations and standards to carry out the provisions of this section. (Acts 1985, No. 85-755, p. 1255.)

CHAPTER 22B.

RECYCLING BY STATE AGENCIES.

Sec.
22-22B-1. Legislative findings.
22-22B-2. Definitions.
22-22B-3. State government program for waste reduction and the collection of recyclable wastes; planning and implementation; annual reports by agencies; what to be included in programs; coordination of efforts.
22-22B-4. Program for the management and marketing of recyclable materials; contracts authorized.
22-22B-5. Proceeds from sale of recycled materials; employee awards.

Effective date. — The act which added this chapter became effective April 19, 1990.

§ 22-22B-1. Legislative findings.

The legislature finds that:

(1) The state faces a looming crises in solid waste management related to the ever-increasing volumes of waste intended for disposal;

(2) The solid wastes presently disposed of in the state contain substantial volumes of materials which are capable of recovery and reuse if recycling programs are developed and implemented within the state;

(3) The failure to recover and recycle materials from solid waste results in the unnecessary waste and depletion of natural resources;

(4) The state government, through its departments and agencies, generates substantial amounts of solid wastes which could be recovered through a coordinated recycling program;

(5) A recycling program by state departments and agencies would serve to demonstrate to local governments and private businesses the practical benefits of and proper techniques for implementing such a program; and

(6) An effective recycling program within state government should be initiated by an agency with expertise in solid waste management, and such agency should serve as the point of coordination for the state's program. (Acts 1990, No. 90-564, § 1.)

§ 22-22B-2. Definitions.

As used in this chapter, the following terms shall have the following meanings, respectively, unless the context clearly indicates otherwise:

(1) PROGRAM FOR THE MANAGEMENT AND MARKETING OF RECYCLABLE MATERIALS. A formal program administered by state agencies and/or public school systems for the recycling of recyclable materials collected by state agencies and/or public school systems pursuant to a program for waste reduction and the collection of recyclable materials.

(2) PROGRAM FOR WASTE REDUCTION AND THE COLLECTION OF RECYCLABLE MATERIALS. A formal program implemented by state agencies and/or public school systems for the reduction of solid wastes generated by the operation

CHAPTER 27.

SOLID WASTE.

Article 1.

Solid Wastes Disposal Act.

Sec.
22-27-1. Short title.
22-27-2. Definitions.
22-27-3. Authority of local governing bodies as to methods of waste collections and disposal; approval of department; exception.
22-27-4. Hazardous wastes; unauthorized dumps; vermin controls.
22-27-5. Authority of localities to establish charges, fees, etc., and enter into mutual agreements or contracts; approval of department; licensing of private or corporate agencies; permits and bonds; nonpayment of fees, etc.
22-27-6. Authority to adopt resolution or ordinance; rules and regulations; noncompliance as public nuisance; citation; court proceedings.
22-27-7. Supervision and regulatory control; rules and regulations; penalty for violation of article.

Article 2.

Financing Solid Waste Collection and Disposal Facilities.

22-27-20. Definitions.
Sec.
22-27-21. Purpose and construction of article.
22-27-22. Authority of counties to issue and sell warrants; full faith and credit of county pledged to payment; restrictions on use of proceeds.
22-27-23. Special pledges for payment of principal and interest on warrants.
22-27-24. Refunding warrants.
22-27-25. Investment of trust funds in warrants.
22-27-26. Warrants and interest coupons as claims against county.
22-27-27. Conflicts with other laws; section 11-8-10 not applicable to warrants issued under this article.

Article 3.

Solid Waste Management Plan.

22-27-40. Legislative findings.
22-27-41. Legislative purpose.
22-27-42. Legislative intent.
22-27-43. Definitions.
22-27-44. Solid waste management advisory committee.
22-27-45. State solid waste management plan.
22-27-46. Regional planning and development commissions.
22-27-47. Local plans required.
22-27-48. Implementation of plans.
22-27-49. Moratorium on issuance of permits.

Cross references. — As to authorization for creation of solid waste disposal authorities in counties and municipalities, see chapter 89A of Title 11.

Definition of solid waste encompasses industrial as well as residential waste. — Therefore, the numerous references to solid waste throughout this chapter implicitly, if not directly, refer to industrial as well as residential waste. Waste Disposal, Inc. v. Stewart, 432 So. 2d 1255 (Ala. 1983).

ARTICLE 1.

SOLID WASTES DISPOSAL ACT.

Cited in Martin v. City of Trussville, 376 So. 2d 1089 (Ala. Civ. App. 1979).

Collateral references. — 39 C.J.S., Health, § 16.

61 Am. Jur. 2d, Pollution Control, §§ 100-103.

§ 22-27-1. Short title.

This article shall be known as the "Solid Wastes Disposal Act." (Acts 1969, No. 771, p. 1373, § 1.)

Code commissioner's note. — Acts 1986, No. 86-542, § 11 provides: "The provisions of this Act do not apply to any violation of sections 9-7-10 through 9-7-22; chapter 28 of title 22; article 2 of chapter 23 of title 22; chapter 30 of title 22; article 1 of chapter 27 of title 22; sections 22-24-1 through 22-24-11; sections 22-25-1 through 22-25-15; or chapter 22A of title 22 of Code of Alabama 1975, as amended, occurring prior to 12:01 a.m. on the effective date of this Act [April 30, 1986]. Such violations must be construed and the civil and criminal remedies applied according to the provisions of law existing at the time of the occurrence thereof in the same manner as if this Act had not been enacted."

Cited in Maintenance, Inc. v. Houston County, 438 So. 2d 741 (Ala. 1983).

§ 22-27-2. Definitions.

For the purpose of this article, the following terms shall have the meanings respectively ascribed to them by this section:

(1) SOLID WASTES. All putrescible and nonputrescible discarded materials, except household sewage and livestock and poultry wastes, including, but not limited to, garbage, rubbish, ashes, street and highway cleanings, dead animals, including offal, abandoned automobiles and such industrial wastes as are not controlled by other agencies.

(2) GARBAGE. Putrescible animal and vegetable wastes resulting from the handling, preparation, cooking and consumption of food, including wastes from markets, storage facilities, handling and sale of produce and other food products and excepting such materials that may be serviced by garbage grinders and handled as household sewage.

(3) ASHES. The solid residue from burning of wood, coal, coke or other combustible material used for heating or from incineration of solid wastes, but excepting solid residue, the storage or disposition of which is controlled by other agencies.

(4) RUBBISH. Nonputrescible solid wastes, excluding ashes, consisting of both combustible and noncombustible wastes. Combustible rubbish includes paper, rags, cartons, wood, furniture, rubber, plastics, yard trimmings, leaves and similar materials. Noncombustible rubbish includes glass, crockery, metal cans, metal furniture and like materials which will not burn at ordinary incinerator temperatures, not less than 1600 degrees Fahrenheit.

(5) OPEN DUMP. Any officially recognized place, land or building which serves as a final depository for solid wastes, whether or not burned or buried, which does not meet the minimum requirements for a sanitary landfill, except approved incinerators, compost plants and salvage yards.

(6) UNAUTHORIZED DUMP. Any collection of solid wastes either dumped or caused to be dumped or placed on any property either public or private, whether or not regularly used, and not under the control and supervision of any person or agency. An abandoned automobile, large appliance or similar large item of solid waste shall be considered as forming an unauthorized

dump within the meaning of this article, but not the careless littering of smaller individual items as tires, bottles, cans and the like. An unauthorized dump shall also mean any solid waste disposal site which does not meet the regulatory provisions of this article.

(7) SANITARY LANDFILL. A controlled area of land upon which solid waste is deposited and is compacted and covered with compacted earth each day as deposited, with no on-site burning of wastes, and so located, contoured and drained that it will not constitute a source of water pollution as determined by the Alabama department of environmental management.

(8) LANDFILL. A method of compaction and earth cover of solid wastes other than those containing garbage or other putrescible wastes, including, but not limited to, tree limbs and stumps, demolition materials, incinerator residues and like materials not constituting a health or nuisance hazard, where cover need not be applied on a per day used basis.

(9) HAZARDOUS WASTES. Those wastes defined in the Hazardous Waste Management Act of 1978, as amended (section 22-30-21 et seq.).

(10) INCINERATOR. A device designed to burn that portion of garbage and rubbish which will be consumed at temperatures generally ranging 1600 degrees Fahrenheit or over. The unburned residue from an incinerator, including metal, glass and the like shall be called ashes.

(11) COMPOSTING OR COMPOST PLANT. An officially controlled method or operation whereby putrescible solid wastes are broken down through microbic action to a material offering no hazard or nuisance factors to public health or well-being.

(12) HEALTH DEPARTMENT. An approved county or district health department, including the Alabama state department of public health and the affected state and county boards of health.

(13) HEALTH OFFICER. The state or affected county health officer or his designee.

(14) AGENCY. Any controlling agency, public or private, elected, appointed or volunteer utilizing methods approved by the health department for the purpose of controlling and supervising the collection and/or disposal of solid wastes.

(15) DEPARTMENT. The Alabama department of environmental management.

(16) DIRECTOR. The director of the Alabama department of environmental management. (Acts 1969, No. 771, p. 1373, § 1; Acts 1982, No. 82-612, p. 1111, § 11(f).)

This section is not unconstitutionally vague or ambiguous. State v. Clayton, 492 So. 2d 665 (Ala. Crim. App. 1986).

Standard established by this section is reasonably clear: Large items which, of necessity, have been intentionally "dumped or caused to be dumped" in an unmanaged area constitute an unauthorized dump, while smaller items usually considered to be litter, or scattered castoffs, do not constitute an unauthorized dump. While there may be an intermediate category of waste which could be characterized as medium-sized and purposely deposited on unsupervised property, the legislature's failure to delineate that category does not make the statute standardless. State v. Clayton, 492 So. 2d 665 (Ala. Crim. App. 1986).

This section gives fair notice that it is the

uncontrolled and unsupervised dumping of solid wastes which is prohibited. State v. Clayton, 492 So. 2d 665 (Ala. Crim. App. 1986).

Subdivision (6) of this section and § 22-27-4(b) are reasonable provisions enacted under state's police power to promote public health which, when measured by common understanding and practice, establish sufficiently clear standards of conduct. State v. Clayton, 492 So. 2d 665 (Ala. Crim. App. 1986).

The statute has actual and reasonable relation to maintenance and promotion of public health because the accumulation of garbage is a serious threat to the public health. State v. Clayton, 492 So. 2d 665 (Ala. Crim. App. 1986).

Reach of statute is sufficiently limited by legislature's enumeration of certain waste items which fall within and without the prohibition of the statute. State v. Clayton, 492 So. 2d 665 (Ala. Crim. App. 1986).

Purpose. — The solid waste disposal regulations are aimed at preventing public nuisances, public health hazards, and the despoliation of the environment that necessarily accompany the accumulation and unmanaged disposal of garbage, refuse, and filth. State v. Clayton, 492 So. 2d 665 (Ala. Crim. App. 1986).

Scope of statute. — The statute is focused so that its coverage extends only to the dumping of solid waste on property which is "not under the control and supervision of any person or agency." State v. Clayton, 492 So. 2d 665 (Ala. Crim. App. 1986).

Definition of solid waste encompasses industrial as well as residential waste. — Therefore, the numerous references to solid waste throughout this chapter implicitly, if not directly, refer to industrial as well as residential waste. Waste Disposal, Inc. v. Stewart, 432 So. 2d 1255 (Ala. 1983).

§ 22-27-3. Authority of local governing bodies as to methods of waste collections and disposal; approval of department; exception.

(a) *Generally.* — (1) The county commission or municipal governing body may, and is hereby authorized to, make available to the general public collection and disposal facilities for solid wastes in a manner acceptable to the department. The county commission or municipal governing body may provide such collection or disposal services by contract with private or other controlling agencies and may include house-to-house service or the placement of regularly serviced and controlled bulk refuse receptacles within reasonable (generally less than eight miles) distance from the farthest affected household and the wastes managed in a manner acceptable to the department.

(2) Any county commission or municipal governing body providing services to the public under the provisions of this article shall have the power and authority by resolution or ordinance to adopt rules and regulations providing for mandatory public participation in and subscription to such system of services. Such governing body may, in its discretion, submit the question of requiring such mandatory public participation to a vote of the qualified electors of the county or municipality as the case may be. If such governing body submits the question to the voters, then the governing body shall also provide for holding and canvassing the returns of the election and for the giving notice thereof for two consecutive weeks in a paper of general circulation in the county. Every person, household, business, industry or property generating solid wastes, garbage or ash as defined in this section shall participate in and subscribe to such system of service unless granted a certificate of exception as provided in subsection (g) of this section. Provided, however, any individual, household, business,

industry or property generating solid wastes that were sharing service for a period of at least 6 months may continue to share service without filing for a certificate of exception. An additional exception is granted to persons whose sole income is derived from social security benefits. Such persons are exempted from paying any fees required under this act. In the event such person, household, business, industry or property owner who has not been granted a certificate of exception refuses to participate in and subscribe to such system of service, the county commission or municipal governing body may in addition to any other remedy provided in this article bring an appropriate civil action in circuit court to compel such participation and subscription. Except as provided in subsection (g) of this section any person, firm or corporation violating such rules and regulations shall be in violation of the provisions of this article and shall be punished as provided in section 22-27-7.

(3) No county commission shall provide solid waste collection and disposal services within the corporate limits of a municipality without the express consent of the municipal governing body of such municipality nor shall any municipality provide solid waste collection and disposal services outside its corporate limits without the express consent of the county commission of the county in which it is situated.

(4) Any county providing door-to-door solid waste collection shall not reduce such service unless and until a letter has been sent to each resident or property or business owner receiving door to door service stating that such service will be reduced or changed and allowing at least 60 days for any resident, business owner, or property owner to call for a public hearing and for the county or municipality to hold such public hearing upon request.

(5) Any provision of this article to the contrary notwithstanding, no person, household, business, industry or property owner shall be required to pay any solid waste collection exemption or disposal fee chargeable under the provisions of this article unless solid waste collection and disposal services for which such charge was made were actually provided to such person, household, business, industry or property owner.

(b) *Solid waste officer.* — As used in this article, solid waste officer shall mean any county official or county employee designated by the county commission to exercise the authority and perform the duties delegated by this article to such official and such officer shall have the same powers of enforcement against persons violating the provisions of this article as do license inspectors with regard to persons violating revenue laws as provided under section 40-12-10 (i), (j), (k) and (n).

(c) *Fly ash, etc.* — As used in this article the terms "solid wastes", "garbage" and "ash" do not include fly ash waste, bottom ash waste, boiler slag waste or flue gas emission control waste which result from the combustion of coal or other fossil fuels at electric generating plants, nor shall such terms include any drilling discharges from oil or natural gas operations.

(d) *Garbage disposal.* — Garbage and rubbish containing garbage shall be disposed of by sanitary landfill, approved incineration, composting or by other

means now available or which may later become available as approved by the department. The method chosen and used shall also meet the requirements of the health department for sanitation and the protection of public health.

(e) *Burning.* — No garbage or rubbish containing garbage or other putrescible materials or hazardous wastes shall be burned except in approved incinerators meeting the necessary temperature requirements and air pollution controls as now established or as may later be established. The open burning of rubbish shall be permitted only under sharply controlled circumstances where sanitary landfill or landfill is not feasible and not in proximity to sanitary landfill or landfill operations where spread of fire to these operations may be a hazard in the opinion of the department.

(f) *Haulage.* — Trucks or other vehicles engaged in the business of hauling garbage and rubbish shall be so covered, secured or sealed that there will be no loss during haulage to cause littering of streets and highways, or cause a nuisance or hazard to the public health.

(g) *Exception.* — A person, household, business, industry or any property owner may store, haul and dispose of his own solid wastes on his land or otherwise, provided such storage, haulage or disposal is accomplished pursuant to a certificate of exception as provided in this subsection. In order to obtain a certificate of exception, an application, an application fee, and plan must be filed with the county health officer or his designee in the case of household solid waste or with the department in the case of solid waste from business or industry, setting out the proposed method of storing, hauling and disposing of solid waste so as to comply with rules and regulations adopted by the state or county boards of health or the department as appropriate and not create a public nuisance or hazard to the public health. The certification of exception application fee shall be established by the state board of health or the department, as the case may be, except that with regard to an individual household such fee shall be $10.00. The proceeds from such application fees are hereby appropriated to the state board of health or the department, as the case may be, to be used for the administration of the provisions of this article. The county health officer or his designee or the department as appropriate shall investigate such application and plan and issue a certificate of exception within the time set by the state board of health or the department, as the case may be (not to exceed sixty days in the case of an individual household), if such proposal will, in such officer's or designee's or the department's judgment, comply with such rules and regulations and adequately prevent a public nuisance or hazard to public health. A certificate of exception granted under authority of this section shall be valid for the period established by the department, except that in the case of an individual household such period shall not exceed one year. The county health officer or his designee or the department shall notify the county commission or municipal governing body in writing of the intention to grant a certificate of exception and no such certificate of exception shall be granted for an individual household without prior written approval of the county commission or municipal governing body as the case may be. Any persons who have been laid off from their jobs shall be

able to apply for a waiver to this bill while laid off. (Acts 1969, No. 771, p. 1373, § 2; Acts 1971, No. 2247, p. 3604, § 1; Acts 1982, No. 82-612, p. 1111, § 11(f); Acts 1989, No. 89-630, p. 1231, § 1.)

The 1989 amendment, effective May 5, 1989, designated former subsection (a) as subdivision (a)(1); added subdivisions (a)(2) through (a)(5); designated former subsections (b) through (e) as subsections (d) through (g); added present subsections (b)and (c); and in subsection (g) inserted "person" in the first sentence, inserted "an application fee" in the second sentence, inserted the third and fourth sentences, in the fifth sentence inserted "within the time set by the state board of health or the department, as the case may be (not to exceed sixty days in the case of an individual household)", and inserted "or the department's", and added the sixth through eighth sentences.

Provisions of subsection (a) of this section are permissive. Alabama State Bd. of Health ex rel. Baxley v. Chambers County, 335 So. 2d 653 (Ala. 1976).

Deadline provision of section 22-27-6 not applicable to subsection (a). — The introductory phrase of § 22-27-6 ("The accomplishment of solid waste management practices, within the meaning of this article . . ."), is one of limitation, restricting the operative effect of the deadline provision in § 22-27-6 to those practices outlined in subsections (b), (c), (d) and (e) of this section, and subsections (b) and (c) of § 22-27-4, which are mandatory by the terms of the article, and the phrase does not refer to the establishment provisions of subsection (a) of this section, which is permissive by its terms. Alabama State Bd. of Health ex rel. Baxley v. Chambers County, 335 So. 2d 653 (Ala. 1976).

Cited in Maintenance, Inc. v. Houston County, 438 So. 2d 741 (Ala. 1983).

Collateral references. — State and local regulation of private landowner's disposal of solid waste on own property. 37 ALR4th 635.

§ 22-27-4. Hazardous wastes; unauthorized dumps; vermin controls.

(a) *Hazardous wastes.* — Hazardous wastes shall be handled in accordance with the provisions of sections 22-30-1 through 22-30-24, and the regulations promulgated thereunder.

(b) *Unauthorized dumps.* — The formation of unauthorized dumps is hereby declared to be a public nuisance per se, a menace to public health, and a violation of this article and in addition to other remedies which are available may be enjoined through an action by the department in the circuit court of the state having jurisdiction over the property on which the violation occurred.

(c) *Vermin controls.* — Rodents and insects of public health importance, as rats, flies, mosquitoes and the like, shall be controlled in a manner satisfactory to the health department, and the closing out or conversion to sanitary landfill operations of existing open dumps shall, where deemed necessary by the health officer, be accompanied by an adequate rat eradication program to prevent the spread of rodents to nearby properties. (Acts 1969, No. 771, p. 1373, § 3; Acts 1982, No. 82-612, p. 1111, § 11(f).)

Cross references. — As to hazardous waste management generally, see § 22-30-1 et seq.

Section 22-27-2(6) and subsection (b) of this section are reasonable provisions enacted under state's police power to promote public health which, when measured by common understanding and practice, establish sufficiently clear standards of conduct. State v. Clayton, 492 So. 2d 665 (Ala. Crim. App. 1986).

The statute has an actual and reasonable relation to maintenance and promotion of public health because the accumulation of garbage is a serious threat to the public health. State v. Clayton, 492 So. 2d 665 (Ala. Crim. App. 1986).

This section is not unenforceable. State v. Clayton, 492 So. 2d 665 (Ala. Crim. App. 1986).

Deadline provision of section 22-27-6 ap-

plicable to subsections (b) and (c). — Introductory phrase of § 22-27-6 ("The accomplishment of solid waste management practices, within the meaning of this article . . ."), is one of limitation, restricting the operative effect of the deadline provision in § 22-27-6 to those practices outlined in subsections (b), (c), (d) and (e) of § 22-27-3, and subsections (b) and (c) of this section, which are mandatory by the terms of the article, and such phrase does not refer to the establishment provisions of subsection (a) of § 22-27-3, which is permissive by its terms. Alabama State Bd. of Health ex rel. Baxley v. Chambers County, 335 So. 2d 653 (Ala. 1976).

Collateral references. — State and local regulation of private landowner's disposal of solid waste on own property. 37 ALR4th 635.

§ 22-27-5. Authority of localities to establish charges, fees, etc., and enter into mutual agreements or contracts; approval of department; licensing of private or corporate agencies; permits and bonds; nonpayment of fees, etc.

(a) *Fees, etc.; mutual agreements or contracts.* — The county commission or municipality undertaking the responsibility for providing services to the public under this article may establish fees, charges and rates and may collect and disburse funds within cooperating areas or districts, inside or outside the corporate limits of municipalities or inside or outside of county boundaries, for the specific purpose of administering this article and providing and operating a solid waste program. Also, said county commission or public authority may enter into mutual agreements or contracts with the government bodies of other counties, municipalities, corporations or individuals, where deemed to be mutually economical and feasible, to jointly or individually collect, haul and/or dispose of solid wastes generated within the cooperating area. All contracts or mutual agreements under this article shall be subject to review by the health officer, and all such contracts and agreements shall be subject to cancellation upon 30 days' notice from said health officer with the concurrence of the department, any time said contracts or agreements fail to be in the best interest of the health, safety and welfare of the citizens residing in the affected area.

(b) *Private or corporate agencies.* — Individuals, corporations, partnerships or other agencies engaging in the collection and disposal of solid wastes are subject to this article. Governing bodies may assign territories, approve or disapprove disposal sites, with the concurrence of the health department, and shall establish and collect annual license fees from such firms and set rate schedules if a service fee is charged. In addition to any other approvals which are necessary for any contract between private or corporate agencies and governmental entities for the disposal of solid wastes, approval of the department shall be obtained.

(c) *Permits and bonds.* — Under subsection (b) of this section, no license shall be granted or fee collected without a permit issued by the state or county health department, renewable annually at the time licenses are due. Such permit shall be based upon performance and may be revoked for cause, including failure to perform under the provisions of this article and regulations adopted under authority of this article. No license shall be granted without the posting of a performance bond satisfactory to the

governing body. All solid waste disposal sites except those which have certificates of exception shall have a permit from the department.

(d) *Financial assurance.* — No permit for transportation of garbage by out-of-state transporters, for disposal of such garbage in a sanitary landfill in this state, shall be issued unless financial assurance is posted by such transporter with the health department.

The financial assurance shall be in an amount not less than $250,000 and must guarantee that such garbage does not contain any regulated hazardous waste, infectious waste, or explosive materials or debris. The financial assurance shall be provided in accordance with acceptable financial assurance instruments which include but are not limited to an escrow account, performance bond, or letter of credit. The health department shall promulgate regulations specifying the terms and conditions of financial assurance instruments, as appropriate.

(e) *Nonpayment of fees, etc.* — Any county commission or municipality establishing fees, charges and rates pursuant to subsection (a) of this section shall have the power and authority to adopt resolutions or ordinances providing that if the fees, charges or rates for the services furnished by the county commission or municipality, or licensee of either, under the provisions of said chapter, shall not be paid within 30 days after the same shall become due and payable, such county commission or municipality may, at the expiration of such 30-day period, suspend such services or may proceed to recover the amount of any such delinquency with interest in a civil action, or both. (Acts 1969, No. 771, p. 1373, § 5; Acts 1971, No. 2247, p. 3604, § 2; Acts 1979, No. 79-668, p. 1176; Acts 1982, No. 82-612, p. 1111, §§ 11(f), 14(a)(7); Acts 1988, No. 88-655, p. 1052; Acts 1988, 1st Ex. Sess., No. 88-858, p. 346.)

This section implicitly recognizes that the governing bodies may elect not to undertake responsibilities under this article. Alabama State Bd. of Health ex rel. Baxley v. Chambers County, 335 So. 2d 653 (Ala. 1976).

Charge is fee rather than tax. — The charge involved is a fee for a service provided by the city rather than a tax. Martin v. City of Trussville, 376 So. 2d 1089 (Ala. Civ. App.), cert. denied, 376 So. 2d 1095 (Ala. 1979).

And is mandatory. — Section 22-27-3(e) provides for a certificate of exception which allows a household, business, industry or any property owner to dispose of his own solid wastes. Without the exception, the garbage fees are mandatory. Martin v. City of Trussville, 376 So. 2d 1089 (Ala. Civ. App.), cert. denied, 376 So. 2d 1095 (Ala. 1979).

Customers were entitled to refund to extent assessment was tax. — The assessments permitted under § 11-47-135 and this section are service charges imposed to cover the cost of providing garbage services, not taxes, and the funds collected pursuant to its ordinance were taxes, not service fees imposed to cover the cost of providing garbage services; therefore, the water customers were entitled to a refund to the extent that the assessment under the ordinance was a tax. Town of Electric v. Mays, 547 So. 2d 96 (Ala. 1989).

This section did not permit either the fines or the imprisonment that the city's ordinance imposed for nonpayment of garbage service fees, and a municipal corporation could not pass any laws inconsistent with the general laws of this state; therefore, the portion of the city's ordinance that imposed fines and imprisonment for not paying the garbage service fees was inconsistent with state law, and the trial court did not err in striking that part of the ordinance. Town of Electric v. Mays, 547 So. 2d 96 (Ala. 1989).

Cited in Waste Disposal, Inc. v. Stewart, 432 So. 2d 1255 (Ala. 1983); Maintenance, Inc. v. Houston County, 438 So. 2d 741 (Ala. 1983).

Collateral references. — Regulation and licensing of private garbage or rubbish removal services. 83 ALR2d 799.

§ 22-27-6. Authority to adopt resolution or ordinance; rules and regulations; noncompliance as public nuisance; citation; court proceedings.

(a) The county commission may by resolution or ordinance provide for the orderly collection of fees charged under the provisions of this article. Such commission may establish periodic payment systems and is authorized to purchase necessary supplies and materials and employ personnel necessary to effectuate any such periodic payment system. Such periodic payment system may be effected by the county through negotiation with any one or more public or private utilities providing service in the county for the periodic billing of such fees and the collection thereof on behalf of the county by one or more such utilities. Any delinquency in any such payment shall constitute a violation of this article and entitle the county to pursue any remedy provided in this article. The county may agree to pay reasonable compensation to any such utility for its services in connection with the collection and payment to the county of all such sums so collected. The county commission shall adopt such rules and regulations as it deems necessary to implement the provisions of this article.

(b) Whenever the solid waste officer shall find that any person, household, business, industry or any property owner has failed to subscribe to the county solid waste collection program and pay the required solid waste collection and disposal fees or has failed to obtain a certificate of exception in violation of this article such failure shall constitute a public nuisance. The solid waste officer shall thereupon cite such delinquent to appear before the solid waste officer within 10 days at the courthouse of the county in which the citation is issued and to show cause why subscription has not been made, such fees have not been paid or an exemption has not been obtained and, at the same time, shall file with the county commission a copy of such citation showing service on the delinquent. Should such delinquent appear timely before the solid waste officer and cannot give satisfactory proof that he has obtained a certificate of exception such officer shall cause the delinquent to subscribe to the solid waste collection and disposal program and pay the required fees. If such delinquent shall fail or refuse to subscribe to such program and pay such fees, the solid waste officer shall institute or cause to be instituted proceedings as provided in section 22-27-7 against such delinquent before any court having jurisdiction of such offense. Should such delinquent fail to appear before the solid waste officer within the time allowed such officer shall institute or cause to be instituted proceedings as provided in section 22-27-7 against such delinquent before any court having jurisdiction of such offense. (Acts 1969, No. 771, p. 1373, § 4; Acts 1989, No. 89-630, p. 1231, § 2.)

The 1989 amendment, effective May 5, 1989, rewrote this section.

Introductory phrase of section restricts operative effect of deadline provision. — The introductory phrase of this section ("The accomplishment of solid waste management practices, within the meaning of this article ...") is one of limitation, restricting the operative effect of the deadline provision in this section to those practices outlined in subsections (b), (c), (d) and (e) of § 22-27-3, and subsections (b) and (c) of § 22-27-4, which are

CHAPTER 22.

WATER POLLUTION CONTROL.

Collateral references.
Liability insurance coverage for violations of antipollution laws. 87 ALR4th 444.

CHAPTER 22A.

ENVIRONMENTAL MANAGEMENT.

Cross references. — As to immunity for persons responding to oil spills, see § 6-5-332.2.

§ 22-22A-1. Short title.

Cited in Island Bay Utils., Inc. v. Dep't of Envtl. Mgt., 587 So. 2d 1210 (Ala. Civ. App. 1991).

§ 22-22A-2. Legislative intent and purposes of chapter.

"Dunes" aggrieved person analysis incorrect. — The Eleventh Circuit "Dunes" rule that a person cannot challenge an Alabama department of environmental management (ADEM) decision unless that person owns a property interest directly affected by the decision is simply not the law in Alabama. In cases involving appeals from ADEM decisions and in other cases, the Alabama supreme court has allowed "aggrieved" persons standing to appeal despite the fact that they did not own property affected by the decision in question. Graves v. Fowl River Protective Ass'n, 572 So. 2d 446 (Ala. 1990).

Standing to appeal ADEM decision analyzed broadly. — Matters of environmental protection and regulation are of great significance to the citizens of Alabama; a citizen's statutory right to appeal an ADEM decision should be interpreted broadly. Graves v. Fowl River Protective Ass'n, 572 So. 2d 446 (Ala. 1990).

§ 22-22A-7. Hearings and procedures before commission; judicial enforcement of subpoenas, etc.; hearing officers; right to hearing; request for hearing; time and notice of hearing; issuance of order; stay of administrative action; evidence and record of proceedings; judicial review.

Hearing officer does not have co-equal statutory authority with commission. — The hearing officer appointed by the commission does not have co-equal statutory authority with the commission, and the commission may reject his findings even though not clearly erroneous, if the other evidence provides sufficient support for its decision. Alabama Envtl. Mgt. Comm'n v. Fisher Indus. Serv. Inc., 586 So. 2d 908 (Ala. Civ. App. 1991).

Plaintiff's dismissal of all claims except money damages prevented hearing and appeal. — This section mandates the Department of Environmental Management Commission to make a decision and issue an appropriate order after a hearing; however, plaintiff's dismissal of all claims but those related to money damages prevented the holding of the requested hearing. Therefore, there was no order from which plaintiff could appeal. Island Bay Utils., Inc. v. Dep't of Envtl. Mgt., 587 So. 2d 1210 (Ala. Civ. App. 1991).

Judicial review of an order of the commission will be in accordance with subdivision (c)(6), if the order was entered pursuant to the procedures in subsection (c). Alabama Envtl.

Mgt. Comm'n v. Fish Indus. Serv. Inc., 586 So. 2d 908 (Ala. Civ. App. 1991).

"Dunes" aggrieved person analysis incorrect. — The Eleventh Circuit "Dunes" rule that a person cannot challenge an Alabama department of environmental management (ADEM) decision unless that person owns a property interest directly affected by the decision is simply not the law in Alabama. In cases involving appeals from ADEM decisions and in other cases, the Alabama supreme court has allowed "aggrieved" persons standing to appeal despite the fact that they did not own property affected by the decision in question. Graves v. Fowl River Protective Ass'n, 572 So. 2d 446 (Ala. 1990).

Standing to appeal ADEM decision analyzed broadly. — Matters of environmental protection and regulation are of great significance to the citizens of Alabama; a citizen's statutory right to appeal an ADEM decision should be interpreted broadly. Graves v. Fowl River Protective Ass'n, 572 So. 2d 446 (Ala. 1990).

Commission approval of sewage discharge in Mobile Bay reversed. — Where record indicates that water quality violations may result or will likely result if the permit is granted, even with commission's suggested permit limitations, discharge permit should be denied. Graves v. Fowl River Protective Ass'n, 572 So. 2d 446 (Ala. 1990).

§ 22-22A-12. Coastal resources advisory committee; composition; terms; chairman; meetings.

Code commissioner's note. — Acts 1992, No. 92-592, § 3 provides: "The Alabama Department of Environmental Management is required and directed to prepare an environmental impact study of the coastal waters, estuaries, and estuarine sanctuaries located in counties containing coastal areas in order to insure that the legislative findings contained in this act are infused into the implementation of the State Solid Waste Management Plan as it applies to those counties containing coastal areas. The environmental impact study shall provide a full and fair discussion of significant environmental impact that any new sanitary landfill or any expansion of an existing sanitary landfill may have on coastal waters, estuaries, and estuarine sanctuaries located in counties containing coastal areas. The environmental impact study shall contain concise, clear statements supported by evidence gathered by the department after having made the necessary environmental analyses. In developing and completing the environmental impact study, the department shall: (1) Summarize, review, and evaluate, using all available information, the environmental impact to coastal waters, estuaries, and estuarine sanctuaries located within counties containing coastal areas which may result from the permitting and construction of new sanitary landfills and the expansions of existing sanitary landfills within the counties. Those impacts shall be discussed in proportion to their significance. (2) Estimate, using acceptable averaging methods, the general volumes of solid waste expected to be generated and disposed of within all existing sanitary landfills located within counties containing coastal areas for the next 10 years. (3) Make available for distribution the data and information gathered in preparation of the environmental impact study to those counties containing coastal areas, the municipalities within those counties, and other affected interests. (4) Receive public comment and input on the environmental impact study. (5) Submit the environmental impact study to the Legislature not later than January 1, 1995."

Acts 1992, No. 92-592, § 4 provides: "For the purpose of conducting and completing environmental impact study required by this act, there is imposed a moratorium upon the permitting and construction of any new sanitary landfills and upon the permitting and construction of expansions of any existing sanitary landfills in any county containing a coastal area. The environmental impact study shall be conducted and completed during the moratorium period imposed by this act. The moratorium shall not apply to modifications of existing sanitary landfills within the counties for the limited purpose of changing liner and leachate collection design, changes in waste streams from within the landfill's designated service area, changes in sequence of fill, and changes to incorporate new technology, or changes intended to bring a facility into compliance with statutes and regulations. The moratorium also shall not apply to a lateral expansion of a publicly owned sanitary landfill onto property owned by the local county/municipality, provided the regulatory permitting process is underway upon passage of this bill and the facility is designated in the county/city solid waste plan. The moratorium shall not apply to industrial landfills other than an asbestos landfill within counties containing coastal areas. The moratorium imposed by this section

CHAPTER 25.

WATER AND WASTEWATER SYSTEMS AND TREATMENT PLANTS.

Collateral references.
Liability insurance coverage for violations of antipollution laws. 87 ALR4th 444.

CHAPTER 26.

SEWAGE COLLECTION, TREATMENT AND DISPOSAL FACILITIES.

Collateral references.
Liability insurance coverage for violations of antipollution laws. 87 ALR4th 444.

§ 22-26-7. Certain land subdivided for single-family residences and not having access to public sewer not subject to subdivision regulations of state board of health.

Cited in Turner v. Clutts, 565 So. 2d 92 (Ala. 1990).

CHAPTER 27.

SOLID WASTE.

Collateral references. — Liability insurance coverage for violations of antipollution laws. 87 ALR4th 444.

ARTICLE 1.

SOLID WASTES DISPOSAL ACT.

§ 22-27-1. Short title.

Constitutionality. — The Solid Wastes Disposal Act provides specific guidelines and criteria for county or local governments to follow in the issuance of waste permits, and is, therefore, not unconstitutionally vague and capricious. Ex parte Lauderdale County, 565 So. 2d 623 (Ala.), cert. denied, — U.S. —, 111 S. Ct. 153, 112 L. Ed. 2d 118 (1990).

§ 22-27-5. Authority of localities to establish charges, fees, etc., and enter into mutual agreements or contracts; approval of department; licensing of private or corporate agencies; permits and bonds; nonpayment of fees, etc.

Approval and license required. — No waste collection and disposal site, unless specifically excepted by this article, can legally operate without a license issued by a county or other local governmental entity. Although there are other approvals that must be obtained, unless an agency is excepted, it cannot operate without approval of the appropriate governmental agency. Ex parte Launderdale County, 565 So. 2d 623 (Ala.), cert. denied, — U.S. —, 111 S. Ct. 153, 112 L. Ed. 2d 118 (1990).

County commission did not exceed its authority by requiring that, prior to its licensing of a site, an Alabama department of environmental management permit must be procured. Ex parte Launderdale County, 565 So. 2d 623 (Ala.), cert. denied, — U.S. —, 111 S. Ct. 153, 112 L. Ed. 2d 118 (1990).

ARTICLE 3.

SOLID WASTE MANAGEMENT PLAN.

§ 22-27-45. State solid waste management plan.

Code commissioner's note. — Acts 1992, No. 92-592, § 3 provides: "The Alabama Department of Environmental Management is required and directed to prepare an environmental impact study of the coastal waters, estuaries, and estuarine sanctuaries located in counties containing coastal areas in order to insure that the legislative findings contained in this act are infused into the implementation of the State Solid Waste Management Plan as it applies to those counties containing coastal areas. The environmental impact study shall provide a full and fair discussion of significant environmental impact that any new sanitary landfill or any expansion of an existing sanitary landfill may have on coastal waters, estuaries, and estuarine sanctuaries located in counties containing coastal areas. The environmental impact study shall contain concise, clear statements supported by evidence gathered by the department after having made the necessary environmental analyses. In developing and completing the environmental impact study, the department shall: (1) Summarize, review, and evaluate, using all available information, the environmental impact to coastal waters, estuaries, and estuarine sanctuaries located within counties containing coastal areas which may result from the permitting and construction of new sanitary landfills and the expansions of existing sanitary landfills within the counties. Those impacts shall be discussed in proportion to their significance. (2) Estimate, using acceptable averaging methods, the general volumes of solid waste expected to be generated and disposed of within all existing sanitary landfills located within counties containing coastal areas for the next 10 years. (3) Make available for distribution the data and information gathered in preparation of the environmental impact study to those counties containing coastal areas, the municipalities within those counties, and other affected interests. (4) Receive public comment and input on the environmental impact study. (5) Submit the environmental impact study to the Legislature not later than January 1, 1995."

Acts 1992, No. 92-592, § 4 provides: "For the purpose of conducting and completing environmental impact study required by this act, there is imposed a moratorium upon the permitting and construction of any new sanitary landfills and upon the permitting and construction of expansions of any existing sanitary landfills in any county containing a coastal area. The environmental impact study shall be conducted and completed during the moratorium period imposed by this act. The moratorium shall not apply to modifications of existing sanitary landfills within the counties for the limited purpose of changing liner and leachate collection design, changes in waste streams from within the landfill's designated service area, changes in sequence of fill, and changes to incorporate new technology, or changes intended to bring a facility into compliance with statutes and regulations. The moratorium also shall not apply to a lateral expansion of a publicly owned sanitary landfill onto property owned by the local county/municipality, provided the regulatory permitting process is underway upon passage of this bill and the facility is designated in the county/city solid waste plan. The moratorium shall not apply to industrial landfills other than an asbestos landfill within counties containing coastal areas. The moratorium imposed by this section shall continue until January 1, 1995, when it shall expire."

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ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Jim Folsom
Governor

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DATE: 8/3/93

TO:

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ORGANIZATION: EPA Region IV - OSW

FACSIMILE PHONE: 404-347-5205

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FROM:

NAME: Lynn Garthright

OFFICE PHONE: 205-271-7740

NUMBER OF PAGES TO FOLLOW: 2

ADEM FORM 223 5/93

AL-002

APPENDIX II

LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUGGESTED METHODS[5]	PQL (ug/L)[6]
Acenaphthene	83-32-9	Acenaphthylene, 1,2-dihydro-	8100	200
			8270	10
Acenaphthylene	208-96-8	Acenaphthylene	8100	200
			8270	10
Acetone	67-64-1	2-Propanone	8260	100
Acetonitrile; Methyl cyanide	75-05-8	Acetonitrile	8015	100
Acetophenone	98-86-2	Ethanone, 1-phenyl-	8270	10
2-Acetylaminofluorene; 2-AAF	53-96-3	Acetamide, N-9H-fluoren-2-yl-	8270	20
Acrolein	107-02-8	2-Propenal	8030	5
			8260	100
Acrylonitrile	107-13-1	2-Propenenitrile	8030	5
			8260	200
Aldrin	309-00-2	1,4,5,8,-Dimethanonaphthalene 1,2,3,4,10,10-hexachloro- 1,4,4a,5,8,8a-hexahydro-(1α,4α, 4aβ,5α,8α,8aβ)-	8080	0.05
			8270	10
Allyl chloride	107-05-1	1-Propene, 3-chloro-	8010	5
			8260	10
4-Aminobiphenyl	92-67-1	[1,1'-Biphenyl]-4-amine	8270	20
Anthracene	120-12-7	Anthracene	8100	200
			8270	10
Antimony	(Total)	Antimony	6010	300
			7040	2000
			7041	30
Arsenic	(Total)	Arsenic	6010	500
			7060	10
			7061	20
Barium	(Total)	Barium	6010	20
			7080	1000

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LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUGGESTED METHODS[5]	PQL (ug/L)[6]
Benzene	71-43-2	Benzene	8020	2
			8021	0.1
			8260	5
Benzo[a]anthracene; Benzanthracene	56-55-3	Benz[a]anthracene	8100	200
			8270	10
Benzo[b]fluoranthene	205-99-2	Benz[e]acephenanthrylene	8100	200
			8270	10
Benzo[k]fluoranthene	207-08-9	Benzo[k]fluoranthene	8100	200
			8270	10
Benzo[ghi]perylene	191-24-2	Benzo[ghi]perylene	8100	200
			8270	10
Benzo[a]pyrene	50-32-8	Benzo[a]pyrene	8100	200
			8270	10
Benzyl alcohol	100-51-6	Benzenemethanol	8270	20
Beryllium	(Total)	Beryllium	6010	3
			7090	50
			7091	2
alpha-BHC	319-84-6	Cyclohexane, 1,2,3,4,5,6-hexachloro-(1α,2α,3β,4α,5β,6β)-	8080	0.05
			8270	10
beta-BHC	319-85-7	Cyclohexane, 1,2,3,4,5,6-hexachloro-(1α,2β,3α,4β,5α,6β)-	8080	0.05
			8270	20
delta-BHC	319-86-8	Cyclohexane, 1,2,3,4,5,6-hexachloro-(1α,2α,3α,4β,5α,6β)-	8080	0.1
			8270	20
gamma-BHC; Lindane	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-(1α,2α,3β,4α,5α,6β)-	8080	0.05
			8270	20
Bis(2-chloroethoxy)methane	111-91-1	Ethane, 1,1[1]-[methylenebis(oxy)] bis[2-chloro-	8110	5
			8270	10
Bis(2-chloroethyl) ether; Dichloroethyl ether	111-44-4	Ethane, 1,1[1]-oxybis[2-chloro-	8110	3
			8270	10
Bis(2-chloro-1-methylethyl) ether 2,2'-Dichlorodisopropyl ether; DCIP. See note 7	108-60-1	Propane, 2,2[1]-oxybis[1-chloro-	8110	10
			8270	10

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ALABAMA
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October 8, 1993

Kelly Ewing
Office of Solid Waste
Waste Management Division
U.S. EPA Region IV
345 Courtland St., N.E.
Atlanta, GA 30365

Dear Mr. Ewing:

RE: Alabama's Program Authorization for Subtitle D

The purpose of this letter is to formally request partial final approval of Alabama's solid waste permit program with the exception of financial assurance. As you are aware, the State does not have legislative authority for the financial assurance requirements under Subtitle D. The following is a compliance schedule for obtaining legislative authority. This includes changing the definition of solid waste which has been discussed in previous correspondence.

July , 1994 - Enabling legislation passed to authorize the Department to adopt regulations for financial assurance.

August, 1994 - Department begins rulemaking process.

January, 1995 - Regulations finalized.

Also, I am enclosing a copy of the final Solid Waste Program regulations, a revised program description, and revised checklists. Please replace these items in your application. An Attorney General's Statement with the revised checklists was forwarded to Alabama's Attorney General on September 28, 1993. As of the date of this letter, the Department has not received the signed Statement. If you have any questions, please contact Lynn Garthright at 205/271-7740.

Sincerely,

Sue R. Robertson, Chief
Land Division

SRR/LG/dr:3723 pg. 2

C: Russell A. Kelly

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ALABAMA'S PROGRAM DESCRIPTION

I. INTRODUCTION

Prior to the Solid Waste Disposal Act of 1969, the Alabama Department of Public Health (ADPH) responded to open dumps on a complaint basis. Normally these complaints involved vector problems or public nuisances. For many years, this task was accomplished by two, or at times, less employees of the ADPH. On September 12, 1969, the Solid Waste Disposal Act was passed with an effective date of September 12, 1971. A statewide survey performed by ADPH personnel revealed approximately 412 open burning dumps handling all types of wastes. By September 1971, 30-40% of these burning dumps had been abolished. The remaining were issued Notices of Violations (NOV) and required to obtain a letter of approval to operate from the ADPH. The remaining approved dumps were required to operate in compliance with the 1969 Solid Waste Disposal Act. In 1980, formal permits to operate were issued to landfills by the ADPH. The Solid Waste staff at that time included approximately six employees. In 1982, a comprehensive program of environmental management for the State was established with the enactment by the Alabama Legislature of the Alabama Environmental Management Act. The law created the Alabama Environmental Management Commission and established the Alabama Department of Environmental Management (ADEM), which absorbed several commissions, agencies and programs that had been responsible for implementing environmental laws. Disposal of solid waste was transferred from the ADPH to ADEM. Collection, storage and transportation remained with the ADPH. ADEM regulations were adopted and the Solid Waste Disposal Act has been amended on several occasions. ADEM has permitted sanitary, inert, and industrial landfills from 1982 until present. The Division 13 Solid Waste Regulations have also been revised on numerous occasions. ADEM currently has authority over disposal and incineration of solid waste only. However, current pending legislation, if passed, would expand ADEM's authority to management of solid waste and include disposal, treatment, composting, recycling, transfer stations, etc. Collection and transportation would remain with the ADPH. Regulation and statutes are currently being revised to meet the minimum Subtitle D requirements which become effective October 9, 1993. Copies of the statutes, proposed regulations, and checklists are found in Attachments F. and G.

Act 89-824 (passed in May 1989) required each county and/or municipality to submit to ADEM a plan for the management of solid waste generated within its boundaries. The plans at a minimum were required to include the following:

(1) Describe and explain the general origin, and weight or volume of solid waste currently generated within the jurisdiction's boundaries.

(2) Identify current methods of collection and haulage of solid waste within the jurisdiction.

(3) Identify and describe the facilities where solid waste is currently being disposed or processed and the remaining available permitted capacity of such facilities and the capacity of such facilities and the capacity which could be made available through the reasonable expansion of such facilities.

(4) Provide a description of current or planned recycling programs and an analysis of their impact on waste generated within the jurisdiction.

(5) Address the requirements proposed under Subtitle D of the Federal Resource Conservation and Recovery Act, 42 U.S.C. Section 6941 as amended and identify and explain those actions the jurisdictions should take to assure proper management of its wastes under these requirements; thus, counties are required to address and take into consideration Subtitle D while developing their 10 year solid waste management plans.

(6) Propose procedures for the identification and elimination of unauthorized dumps in the jurisdiction.

(7) Describe and explain the general origin and weight or volume of solid waste reasonably expected to be generated within the jurisdiction annually during the next ten years.

(8) Provide for the development or expansion of solid waste management systems in a manner that is consistent with the needs of the area; taking into account planning, zoning, population and development estimates, and economics of the jurisdiction and the protection of air, water, landfill and other natural resources.

(9) Identify any current agreements between the jurisdiction and other units of local government or public authorities for the joint use of solid waste processing or disposal facilities and evaluate the need for and feasibility of entering into such agreements in the future.

(10) Identify any current contractual agreements with private entities for the collection, processing or disposal of solid waste and evaluate the need for and feasibility of entering into such agreements in the future.

(11) Identify the general location within a county where solid waste processing or disposal facilities and recycling programs may be located, and identify the site of each facility if a site has already been chosen.

(12) For any facility expected to serve the jurisdiction's future needs that is located or is proposed to be located outside the jurisdiction, the plan shall explain in detail the reasons for selecting such a facility.

(13) The plan shall include such other information as ADEM may require by regulation.

II. JURISDICTION AND RESPONSIBILITIES

The Alabama Department of Environmental Management as established by §§22-22A-1, et. seq., Code of Alabama 1975, is the sole agency responsible for the disposal of solid waste, except within the boundaries of the designated tribal land of the Poarch Band of Creek Indians in Escambia County. The Alabama Department of Public Health has sole authority over the collection, storage, and transportation of solid waste; however, ADPH and ADEM share a role in regulating and abating illegal or unauthorized disposal areas.

ADEM is centrally located in Montgomery with field offices strategically stationed in Decatur, Birmingham, and Mobile. Thus, the core functions of Alabama's solid waste program lie within the central office, with support functions available from the field offices.

The Land Division of ADEM is responsible for the Solid Waste program which is placed within the Solid Waste Branch. The Solid Waste Branch's functions include the regulation of medical wastes and promotion of recycling activities as well as the compliance and enforcement activities for landfills. The Engineering Services Branch provides support for the permitting of landfills. The Hydrogeology support is provided by the Groundwater Branch of the Water Division. Legal support is provided by the Office of General Counsel. Organization charts illustrating ADEM's and the Land Division's organization are provided in Attachment A.

Responsibilities for the Solid Waste Program are defined below:

(a) **Land Division Chief** - responsible for all permitting and compliance activities/decisions. Makes final recommendations to the Director concerning permits and compliance issues. Further responsible for new legislation and regulation revisions. Directly supervises Branch Chiefs.

(b) **Solid Waste Branch Chief** - responsible for coordination between the Solid Waste Branch, Engineering Services Branch, Field Operations and Groundwater Branch. Oversees compliance inspections, Special Waste Unit and advises Land Division Chief concerning compliance issues, new legislation and regulations revisions. Supervises Compliance Section Chief and Solid Waste Branch Staff.

(c) **Compliance Section Chief** - Mostly responsible for supervising field inspectors. Also supervises Special Waste Unit Chief. Advises Solid Waste Branch Chief concerning compliance issues and trains compliance staff.

(d) **Special Waste Unit Chief** - Coordinates and supervises the Special Waste Unit. Responsible for approving non-hazardous industrial waste for disposal and implementing the Medical Waste Program. Medical Waste Program includes both compliance and permitting issues. Inspectors in this unit are trained to perform landfill inspections.

(e) **Field Operations Division** - Provides field support for sampling monitoring wells, sedimentation ponds, leachate ponds, etc. at existing and proposed landfills.

(f) **Office of General Counsel** - Provides legal interpretations of existing statutes, serves as hearing officers during ADEM public hearings and defends the Solid Waste Branch in case of legal suits. Also advises on legal issues concerning new legislation and regulations.

(g) **Engineering Services Branch** - Implements the permitting programs for landfills. Gives technical guidance concerning compliance matters, performs on-site reviews to observe construction and operation of landfills, and coordinates with Solid Waste personnel. Also advises Land Division Chief concerning permitting decisions.

(h) **Hydrogeology Unit** - Provide reports and recommendations to the Solid Waste Branch and Engineering Services Branch concerning the geology and hydrogeology of existing and proposed landfills.

III. NUMBER OF MSWLFS

There are currently 95 MSWLFs (sanitary) permitted to receive household solid waste. Projections show that 75-85 of these MSWLFs will close or cease accepting household municipal solid waste by October 9, 1993. Three existing MSWLF's may meet the Subtitle D design criteria at this time. Three new regional MSWLFs have been permitted and should also meet Subtitle D. In 1969, 412 open burning dumps were inventoried. It is not clear if they all were accepting municipal solid waste.

IV. STAFF RESOURCES FOR MSWLF PERMIT PROGRAM IMPLEMENTATION

There is a total of 26 solid waste work years devoted to the entire solid waste program. This includes legal, clerical and field support. The following illustrates the core personnel that support the permitting, compliance, and enforcement aspects of Alabama's solid waste program.

LAND DIVISION CHIEF
SUE R. ROBERTSON, B.S.ChE., M.S.ChE., P.E.

	Work Years
Solid Waste Branch	
Chief, Russell A. Kelly, B.S.C.E., P.E.	1.0
Solid Waste Compliance Section	
Chief, John Narramore, M.P.A.	6.0
Walter Nichols, M.P.A. (Recycling and Compliance Field Inspector)	
Allen Shehane, B.S. (Compliance Field Inspector)	
Archie Pennington, B.S. (Compliance Field Inspector)	
Andy Baker, B.S. (Compliance Field Inspector)	
Jeannie Birks, B.S. (Compliance Field Inspector)	
Special Waste Unit	
Chief, Lindsay Mothershed, B.S.	3.5
Ben Norman, B.S. (Petroleum Contaminated Waste)	
Yvette Williamson, B.S. (Special Handling Waste)	
Bruce Garrett, B.S. (Medical Waste)	
Engineering Services Branch	
Chief, Wm. Gerald Hardy, B.S.ChE., P.E.	5.3
Glen Smith, B.S.C.E., P.E.	
Rao Malladi, B.S.C.E., M.S.C.E.	
Bill Wood, B.S.E.	
Gary Hawkins, B.S.A.E.	
Scott Hutchinson, B.S.C.E., E.I.T.	
Hydrogeology Unit (Water Division's Groundwater Branch)	2.25
Chief, Fred C. Mason, B.S., Geology	
Enid Bittner, Ph.D., Geology	
Joel Payton, B.S., Geology	
Dale Case, B.S., Geology	
Ron Hicks, B.S., Geology	
David Lavoy, B.S., Geology	
Dennis Hallman, B.S., Geology	
Kathy Keller, B.S., Geology	

Additionally, the following two persons perform solid waste inspections but work from the Birmingham Field Office:

	Work Years
Brian Laney, B.S.	2.0
Mike Griffin, B.S.	

V. PERMITTING PROCEDURES

ADEM's solid waste disposal facility (landfill) permitting program was initiated with ADEM's formation in 1982. Prior to that date, solid waste disposal facilities had been regulated by the Alabama Department of Public Health. The landfill permitting program established that the effective life of a permit was not to exceed five years. Thus, most existing landfill permits were reissued in 1987 that would be effective until 1992.

In 1988, ADEM revised its solid waste regulations to incorporate many of the provisions of the proposed Subtitle D regulations at that time. These revisions included siting standards, the requirement for a single liner and leachate collection system, groundwater monitoring provisions, closure/post-closure, etc. Therefore, new landfills for MSW after 1988, were required to comply with these requirements.

As previously discussed, in May of 1989, the Alabama Legislature passed a law erecting a two year moratorium on the siting of any new solid waste management facilities. During this two year moratorium, ADEM was required to develop a comprehensive statewide solid waste management plan that was to address the solid waste management needs of all counties for a ten year period.

Upon promulgation of the Subtitle D regulations on October 9, 1991, ADEM Land Division was faced with the necessity of educating the regulated community on the new requirements. To educate the regulated community, ADEM held two one-day seminars beginning in November 1991 on the requirements of "Subtitle D". This included permitting procedures for new, expired and expiring landfill permits (see Attachment B.). Also, a form letter was developed (see Attachment C.) to be sent to all existing permitted MSW landfills requesting a permit renewal. This letter outlined the basic requirements and time frames for submitting revised permit applications and/or closure plans.

In August 1992, after learning that EPA would allow vertical expansions of existing MSW landfills, ADEM mailed a form letter (see Attachment C.) to all existing permitted MSW landfills. This letter outlined the procedures for requesting a vertical expansion. The letter also stated the requirements to be met in order to be a candidate for vertical expansion and explained the liabilities to be incurred by disposing of MSW on an existing landfill after October 8, 1993.

The statewide elections held in November 1992 resulted in many new officials being elected to office at the local, city, and county level. In an effort to educate these "new" officials and others, ADEM again held a series of seminars on solid waste management issues (see Attachment B.). These one-day seminars included a discussion of the status of Subtitle D as well as a discussion of the solid waste permitting procedures.

The solid waste permitting procedures developed by ADEM's Land Division in 1991 are included in Attachment D. These procedures include each step in the process and a conservative time estimate for the completion of each step.

VI. COMPLIANCE MONITORING REQUIREMENTS

Overall statutory authority for the regulations is shown in Rule 335-13-1-.02, pursuant to the Code of Alabama 1975, §§ 22-27-7, 22-22A-5, and 22-22A-8. Compliance monitoring is conducted in accordance with standards set forth in Division 13 regulations pursuant to the Solid Waste Disposal Act of 1969. Rule 335-13-6-.01 of the ADEM Administrative Code, Division 13, provides for the unannounced periodic inspections of all solid waste facilities as well as right-of-entry. Additionally, Rule 335-13-4-.12 requires that design plans, operational reports for construction, maintenance, operation, and closure be prepared in accordance with Rule 335-13-5-.02. This information is part of a permit application and is on record with the permit file. Other records required are groundwater monitoring reports, 335-13-4(4); explosive gas monitoring reports, 335-13-4-.16(6)(b); and records of average daily volume, 335-13-4-.22(18). Additionally, industrial wastes disposed of at permitted landfills must be certified non-hazardous. These records are kept on file; renewal is annually. Rule 335-13-4-.26 describes procedures for the management and disposal of special wastes, including industrial wastes.

An inspection will include checking for compliance with the operational and management requirements under Rules 335-13-4-.14, 335-13-4-.16, 335-13-4-.19, 335-13-4-.21, 335-13-4-.22, 335-13-5-.02, and 335-13-5-.05. A copy of the checklist is shown in Attachment E. The filed inspection, combined with file reviews, insures that compliance monitoring is adequate in determining obedience with program requirements. Under current regulations, monitoring for explosive gas is done annually unless otherwise required. Results must be submitted to the ADEM for evaluation. Under current regulations, groundwater monitoring is performed bi-annually; however, the regulations will be modified to be consistent with Subtitle "D". Monitoring parameters are specified in the permit, and proposed Rules 335-13-4-.14 and 335-13-4-.27. Also, additional testing and sampling may be done if review of submitted data or field conditions reveal the need. These activities are usually coordinated with the ADEM Field Operations Division in order to insure that proper techniques are used and the chain of custody is maintained.

Enforcement Authority

Proposed Federal Section 239.8(a) & (b)

Section 22-22A-5(10), Code of Alabama 1975 authorizes the Alabama Department of Environmental Management (ADEM) to "issue, modify, suspend or revoke orders, citations, notices of violation, licenses,

certifications or permits". Orders issued under authority of this subpart (i.e., orders without civil penalities) may be issued immediately without a prior hearing. Section 22-22A-5(12) authorizes ADEM "to enforce all provisions of law identified in subdivision (1) of this section [which include Article 1 of the Solid Wastes Disposal Act], and to file legal actions in the name of the department. . . ." (Bracketed material added).

Section 22-27-2(6), Code of Alabama 1975 defines an unauthorized dump as "any solid waste disposal site which does not meet the regulatory provisions of the [Solid Wastes Disposal Act]". Section 22-27-4(b) declares unauthorized dumps to be a public nuisance per se and a menace to public health that may be enjoined through an action by ADEM in circuit court. Section 22-22A-5(19) also authorizes ADEM to commence a civil action to enjoin the violation or threatened violation of any provision of law, any rule, regulation or standard promulgated by ADEM, any provision of any order, or any condition of any permit, license, certification or variance issued by ADEM.

Next, section 22-27-7 grants ADEM such regulatory control over the management of solid wastes as may be necessary to enforce the requirements of ADEM, and it authorizes ADEM to adopt such rules regulations as may be needed to meet the requirements of the article.

Proposed Federal Section 239.8(c)

Section 22-22A-5(18)(a) authorizes ADEM to issue an administrative order assessing civil penalties (up to $25,000.00 per violation) for a violation of any provision of law, any rule, regulation or standard promulgated by ADEM, any provision of any order, or any condition of any permit, license, certification or variance issued by ADEM. Additionally, section 22-22A-5(18)(b) authorizes ADEM to commence a civil action to recover a civil penalty for the violation of any provision of law, any rule, regulation or standard promulgated by ADEM, any provision of any order, or any condition of any permit, license, certification or variance issued by ADEM. Finally, section 22-22A-5(20) authorizes ADEM to take any action necessary for the implementation and enforcement of this Chapter.

Intervention in Civil Enforcement Proceedings

Section 22-22A-5(18)(b), which authorizes ADEM to commence a civil action to recover civil penalties for any statutory or regulatory violation or the violation of any permit, order, license, certificate, standard or variance, allows any person having an interest which is or may be adversely affected to intervene in the civil action as a matter or right. Section 22-22A-5(17), which authorizes ADEM to commence a civil action to enjoin any of the aforesaid violations, allows any person having an interest which is or may be adversely affected to intervene as a matter of right.

Section 22-22A-7(c) entitles any person aggrieved by an administrative action (i.e., the issuance, denial, modification, or revocation of a Notice of Violation, order, permit citation, licenses, certification, or variance) to an administrative hearing before the Environmental Management Commission.

Finally, Rule 24(a) of the Alabama Rules of Civil Procedure is virtually identical to Rule 24(a), F.R.C.P.

VII. DEMONSTRATION OF COMPLIANCE WITH PART 258

Subpart A - General

Section 258.1 Purpose, Scope, and Applicability

The purpose of this subpart is to establish minimum national criteria under the Resource Conservation and Recovery Act (RCRA or the Act), as amended, for all municipal solid waste landfill (MSWLF) units and under the Clear Water Act, as amended, for municipal solid waste landfills that are used to dispose of sewage sludge. These minimum national criteria ensure the protection of human health and the environment.

ADEM Administrative Code Rule, 335-13-1-.01 Purpose. states "The purpose of this Division is to establish minimum criteria for use under the Act, as amended, for the processing, recycling and disposal of solid waste and the design, location and operation of solid waste disposal facilities". ADEM Administrative Code, Rule 335-13-1-.02 Statutory Authority. states "The Department is authorized to promulgate these rules and regulations under and by virtue of authority granted in the Code of Alabama 1975, §§22-27-7, 22-22A-5 and 22-22A-8".

ADEM current regulations apply to all landfills including municipal solid waste, construction/demolition debris and non-hazardous industrial waste landfills. Subtitle D applies to MSWLF's only. Design criteria, operational criteria, monitoring criteria, etc. are different for the three types of landfills under ADEM regulations; however, they do apply to some degree. Subtitle D allows for some exemptions (i.e., small quantity, annual interruptions, 25 inches or less annual rainfall). These exemptions are not allowed under ADEM regulations. Closure for landfills receiving waste after October 9, 1991, but stop receiving waste before October 9, 1993 are similar under Subtitle D and ADEM regulations. This includes post-closure care and monitoring.

Section 258.2 - Definitions

Definitions under Subtitle D §258.2 are similar to definitions found in current ADEM Administrative Code R. 335-13-1-.03. Any definitions in §258.2 not found under Rule 335-13-1-.03 are currently being added. Major language differences are also being corrected in ADEM's proposed revised regulations in an effort to be consistent with Subtitle D §258.2.

A comparison of the definitions can be found with the attached checklists to the legal certification letter found in Attachment F., and proposed revised regulations located in Attachment G.

Section 258.3 Consideration of Other Laws

Both the Clear Water Act and Clean Air Act must be considered during the permitting and operation of solid waste disposal facilities. Under the Clean Water Act, a facility or practice shall be located so as to protect water quality. The ADEM Administrative Code R. states:

> Rule 335-13-4-.01(3)(b). A facility or practice shall not cause a discharge of pollutants into waters of the State, including wetlands, that is in violation of the requirements of the National Pollutant Discharge Elimination System (NPDES), Alabama Water Pollution Control Act, Code of Alabama 1975, §§22-22-1 to 22-22-14.
>
> Rule 335-13-4-.01(3)(c). A facility or practice shall not cause a discharge of dredged materials or fill material into waters of the State that is in violation of the requirements under Section 404 of the Clean Water Act, as amended.
>
> Rule 335-13-4-.01 (3)(d). A facility or practice shall not cause non-point source pollution of waters of the State, including wetlands, that violates any requirements of an areawide and Statewide water quality management plan that has been approved under the Alabama Water Pollution Control Act.
>
> Rule 335-13-4-.01(4). A facility or practice shall not allow an unpermitted discharge to the waters of the State as defined by the Alabama Water Pollution Control Act.
>
> Also, new stormwater regulations require additional stormwater runoff permits for landfills accepting industrial waste and general permits for construction of sites larger than five acres. A wellhead protection program for the State of Alabama has been approved by EPA. This program encourages and will eventually require that all water systems develop a wellhead protection plan.

Rule 335-13-4-.21(1). Open burning of solid waste at any landfill, sanitary landfill or other disposal facility shall not occur unless approved by ADEM.

The Air Division of ADEM regulates/permits emissions from municipal solid waste incinerators, solid waste air curtain destructions, etc.

No variances will be granted under Chapter 335-13-8 that are less stringent than the federal criteria for MSWLFs.

Subpart B - Locational Criteria

(1) **§258.10 - Airport Safety**

Rule 335-13-4-.01(5) - prohibits siting any MSWLF unit within 10,000 feet of any airport runway end. The 5000 foot buffer for piston-type aircraft is not allowed under ADEM regulations. The 10,000 foot buffer is required for both turbo-jet and piston-type aircraft.

(2) **§258.10 - Floodplains**

Rule 335-13-4-.01(1) is consistent with §258.10.

(3) **§258.12 - Wetlands**

Existing Rules 335-13-4-.01(3)(e) and (3)(f) prohibit disposal facilities in wetlands. Subtitle D allows for mitigation of wetlands under certain conditions.

(4) **§258.13 - Fault Areas**

Rule 335-13-4-.01(6) - This rule is proposed to be modified to reflect Subtitle D language.

(5) **§258.14 - Seismic Impact Zones**

Rule 335-13-4-.01(6) - This rule is proposed to be modified to reflect Subtitle D language.

(6) **§258.15 - Unstable Areas**

Rule 335-13-4-.01(6) - This rule is proposed to be modified to reflect Subtitle D language.

(7) **§258.16 Closure of Existing Units**

Rule 335-13-4-.20 - Closure is very similar under ADEM and Subtitle D. There are some language differences and ADEM regulations are proposed to be modified to reflect the minimum Subtitle D requirements.

All of the location restrictions under ADEM apply to construction/demolition debris landfills and industrial landfills in addition to municipal solid waste landfills. Subtitle D applies only to MSWLF's. ADEM regulations, where deficient, are being revised to reflect minimum Subtitle D criteria. ADEM regulations are also more stringent in some areas concerning location restrictions (i.e. Rule 335-13-4-.01(4)(a)). The bottom elevation of solid waste liner systems shall be a minimum of five feet above the seasonal high groundwater table or bedrock or as determined by ADEM under Rule 335-13-4-.01(7). Facilities shall not be located in archaeologically or historically sensitive areas as determined by the Alabama Historical Commission.

Rule 335-13-4-.01 applies to both new and existing MSWLF units. New units must demonstrate compliance with the siting standards (locational restrictions) in the permit application. Existing units should presently be in compliance with these standards since State siting standards were equivalent with Federal standards since 1988. All of the existing MSWLFs operating under the new 40 CFR 258 (vertical expansion) are currently being processed for permit renewal. However, existing units must continue to demonstrate compliance with these standards during the permit renewal process.

Subpart C - Operating Criteria

(1) **§258.20 Procedures for Excluding Hazardous Waste**

These requirements are essentially the same as current ADEM regulations; however, they are proposed to be modified to include PCBs. Current ADEM regulations also set forth additional reporting information for permittees receiving waste from outside the State.

(2) **§258.21 Cover Material Requirements**

Rule 335-13-4-.22(1)(a) is consistent with §258.21; however, ADEM is more stringent in not allowing the granting of waivers from the regulations due to seasonal weather conditions since the climate of this State does not exhibit extreme seasonal climatic changes.

(3) **§258.22 Disease Vector Control**

Rule 335-13-4-.22(12)is being modified to be consistent with §258.22.

(4) **§258.23 Explosive Gas Control**

Rule 335-13-4-.16 is being modified to be consistent with §258.23. This Rule is more stringent than Subtitle D in that explosive gas monitoring is extended to C/DLFs and ILFs.

(5) **§258.24 Air Criteria**

Existing Rule 335-13-4-.21(1) is consistent with §258.24(b). Rule 335-13-4-.22(23) is proposed to be added to be consistent with §258.24(a).

(6) **§258.25 Access Requirements**

Existing Rule 335-13-4-.19 is proposed to be modified to be consistent with §258.25.

(7) **§258.26 Run-on/Run-off Control**

Rule 335-13-4-.17 is proposed to be modified to be consistent with §258.26; however, ADEM is more stringent in adding language to include closed portions of the landfill, as well as the active portions.

(8) **§258.27 Surface Water Requirements**

Existing Rule 335-13-4-.01 is consistent with §258.27.

(9) **§258.28 Liquids Restrictions**

Rule 335-13-4-.22(20) is proposed to be added to be consistent with §258.28. Approved equivalent liner designs that are also approved for leachate recirculation must include a flexible membrane liner. No approved equivalent liner designs lacking a flexible membrane liner will be approved for leachate recirculation.

(10) **§258.29 Recordkeeping Requirements**

Rule 335-13-4-.29 is proposed to be added to be consistent with §258.29.

<u>Subpart D - Design Criteria; §258.40</u>

The design criteria for MSWLF's in Alabama will be the same as Subtitle D in the proposed revised regulations. The major areas where Alabama will be more stringent will be in specifying a minimum 5 foot separation between the bottom of the liner system and the top of bedrock and/or the seasonal high groundwater elevation. The other more stringent area is

in the requirement for liners. The proposed revised regulations will state that multiple liners, including composite liners, may be required if determined necessary by ADEM.

Subpart E - Groundwater Monitoring

ADEM is being more stringent by establishing the applicability date for groundwater monitoring compliance to be October 9, 1993. Existing regulations have required groundwater monitoring at sanitary (MSWLF) landfills since 1988. The following Rules are proposed to be added to be consistent with §§258.50-258.58 as follows:

§258.50 Applicability	Rule 335-13-4-.27(1) through (6)
§258.51 Groundwater Monitoring System	Rule 335-13-4-.27(7) through (10)
§258.53 Groundwater Sampling and Analysis	Rule 335-13-4-.27(11) through (19)
§258.54 Detection Monitoring Program	Rule 335-13-4-.27(20) through (22)
§258.55 Assessment Monitoring Program	Rule 335-13-4-.27(23) through (32)
§258.56 Assessment of Corrective Measures	Rule 335-13-4-.27(33) through (36)
§258.57 Selection of Remedy Rule	Rule 335-13-4-.27(37) through (41)
§258.58 Implementation of the Corrective Action Program	Rule 335-13-4-.27(42) through (48)

Subpart F - Closure and Post-Closure Care

ADEM is proposing to modify the existing regulations to be consistent with §258.60 and §258.61 under Rules 335-13-4-.20 and 335-13-4-.29. ADEM is more stringent than Subtitle D in applying closure and post-closure care requirements to all landfills, not just MSWLFs.

ADEM's existing regulations are more explicit and/or stringent than Subtitle D in the following ways:

(1) Rule 335-13-4-.20(3) describes final soil cover grading fully to include slope requirements.

(2) Rule 335-13-4-.20(4) disallows deep rooted vegetation as a form of vegetative cover.

(3) In the proposed regulations, ADEM will not allow an owner or operator to stop managing leachate as set forth under §258.61(a)(2).

(4) In the proposed regulations, ADEM will require detail design drawings for closure of existing and proposed landfill units.

Subpart G - Financial Assurance Criteria

The effective date of the federal regulations under §258.70 is April 9, 1995 (except state and federal sites which are exempt). There are no State sites in Alabama and there are four federal sites presently operating (Anniston Army Depot, Ft. McClellan, Redstone Arsenal and Ft. Rucker). Ft. McClellan is the only federal facility that will remain open after October 9, 1993. All other facilities in Alabama will be subject to Subpart G on April 9, 1995.

At this time, ADEM is reserving Rule 335-13-4-.28 for financial assurance until statutory authority is obtained. All references to financial assurance in ADEM's proposed regulations defer to the federal regulations.

LR#242

PART 258 CRITERIA §258.1 PURPOSE, SCOPE, AND APPLICABILITY	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) The purpose of this Part is to establish minimum national criteria under the Resource Conservation and Recovery Act (RCRA or the Act), as amended, for all municipal solid waste landfill (MSWLF) units and under the Clean Water Act, as amended, for municipal solid waste landfills that are used to dispose of sewage sludge. These minimum national criteria ensure the protection of human health and the environment.	335-13-1-.01
(b) These Criteria apply to owners and operators of new MSWLF units, existing MSWLF units, and lateral expansions, except as otherwise specifically provided in this part; all other solid waste disposal facilities and practices that are not regulated under Subtitle C of RCRA are subject to the criteria contained in part 257.	335-13-1-.01 The State Regulations became effective on October 2, 1990.
(c) These Criteria do not apply to municipal solid waste landfill units that do not receive waste after October 9, 1991. (d) MSWLF units that receive waste after October 9, 1991 but stop receiving waste before October 9, 1993 are exempt from all the requirements of this part 258, except the final cover requirement specified in section 258.60(a). The final cover must be installed within six months of the last receipt of wastes. Owners or operators of MSWLF units described in this paragraph that fail to complete cover installation within this six month period will be subject to all the requirements of this part 258, unless otherwise specified.	335-13-1-.01 -- The revised State Regulations became effective on November 2, 1993 and the previous regulations were effective since October 2, 1990. The State Regulations do not include provisions for exemptions of existing landfills. Previous requirements for cover have been effective since October 2, 1990
(e) All MSWLF units that receive waste on or after October 9, 1993 must comply with all requirements of this part 258 unless otherwise specified.	The State Regulations for these provisions became effective on November 2, 1993.

PART 258 CRITERIA §258.1 PURPOSE, SCOPE, AND APPLICABILITY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(f)(1) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions that dispose of less than twenty [20] tons of municipal solid waste daily, based on an annual average are exempt from subparts D and E of this part, so long as there is no evidence of existing groundwater contamination from the MSWLF unit, and the MSWLF unit serves:	The State Regulations do not include provisions for exemptions from subparts D & E for owners/ operators of new, existing, or lateral expansions of MSWLF units.
(i) a community that experiences an annual interruption of at least three consecutive months of surface transportation that prevents access to a regional waste management facility, or	The State Regulations do not include provisions for exemptions from subparts D & E for owners/ operators of new, existing, or lateral expansions of MSWLF units.
(ii) a community that has no practicable waste management alternative and is located in an area that annually receives less than or equal to 25 inches of precipitation.	The State Regulations do not include provisions for exemptions from subparts D & E for owners/ operators of new, existing, or lateral expansions of MSWLF units.
(2) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions that meet the criteria in paragraph (f)(1)(i) or (f)(1)(ii) of this section must place in the operating record information demonstrating this.	The State Regulations do not include provisions for exemptions from subparts D & E for owners/ operators of new, existing, or lateral expansions of MSWLF units.
(3) If the owner or operator of a new MSWLF unit, existing MSWLF unit, or lateral expansion has knowledge of groundwater contamination resulting from the unit that has asserted the exemption in paragraph (f)(1)(i) or (f)(1)(ii) of this section, the owner or operator must notify the State Director of such contamination and, thereafter, comply with subparts D and E of this part.	The State Regulations do not include provisions for exemptions from subparts D & E for owners/ operators of new, existing, or lateral expansions of MSWLF units.

PART 258 CRITERIA §258.1 PURPOSE, SCOPE, AND APPLICABILITY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(g) Municipal solid waste landfill units failing to satisfy these criteria are considered open dumps for purposes of State solid waste management planning under RCRA.	335-13-1-.13 335-13-1-.03
(h) Municipal solid waste landfill units failing to satisfy these criteria constitute open dumps, which are prohibited under Section 4005 of RCRA.	335-13-1-.13 335-13-1-.03
(i) Municipal solid waste landfill units containing sewage sludge and failing to satisfy these Criteria violate Sections 309 and 405(e) of the Clean Water Act.	335-13-4-.22(22)
(j) The effective date of this part is October 9, 1993, except subpart G of this part 258 is effective April 9, 1994.	The effective date of the State Solid Waste Regulations is October 2, 1990. Revisions to 335-13-1 and 335-13-4 became effective on November 2, 1993.

PART 258 CRITERIA §258.2 DEFINITIONS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
Unless otherwise noted, all terms contained in this part are defined by their plain meaning. This section contains definitions for terms that appear throughout this part; additional definitions appear in the specific sections to which they apply.	335-13-1-.03
"Active life" means the period of operation beginning with the initial receipt of solid waste and ending at completion of closure activities in accordance with §258.60 of this part.	335-13-1-.03
"Active portion" means that part of a facility or unit that has received or is receiving wastes and that has not been closed in accordance with §258.60 of this part.	335-13-1-.03
"Aquifer" means a geological formation, group of formations, or portion of a formation capable of yielding significant quantities of groundwater to wells or springs.	335-13-1-.03
"Commercial solid waste" means all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial wastes.	335-13-1-.03
"Director of an approved State" means the chief administrative officer of a State agency responsible for implementing the State municipal solid waste permit program or other system of prior approval that is deemed to be adequate by EPA under regulations published pursuant to Section 4005 of RCRA.	335-13-1-.03
"Existing MSWLF unit" means any municipal solid waste landfill unit that is receiving solid waste as of the effective date of this part (October 9, 1993). Waste placement in existing units must be consistent with past operating practices or modified practices to ensure good management.	335-13-1-.03

PART 258 CRITERIA §258.2 DEFINITIONS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
"Facility" means all contiguous land and structures, other appurtenances, and improvements on the land used for the disposal of solid waste.	335-13-1-.03
"Groundwater" means water below the land surface in a zone of saturation.	335-13-1-.03
"Household waste" means any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).	335-13-1-.03
"Industrial solid waste" means solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under Subtitle C of RCRA. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: Electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.	335-13-1-.03
"Lateral expansion" means a horizontal expansion of the waste boundaries of an existing MSWLF unit.	335-13-1-.03
"Leachate" means a liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.	335-13-1-.03

PART 258 CRITERIA §258.2 DEFINITIONS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
"Municipal solid waste landfill unit" means a discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under §257.2. A MSWLF unit also may receive other types of RCRA Subtitle D wastes, such as commercial solid waste, nonhazardous sludge, small quantity generator waste and industrial solid waste. Such a landfill may be publicly or privately owned. A MSWLF unit may be a new MSWLF unit, an existing MSWLF unit or a lateral expansion.	335-13-1-.03
"New MSWLF unit" means any municipal solid waste landfill unit that has not received waste prior to the effective date of this part (October 9, 1993).	335-13-1-.03
"Open burning" means the combustion of solid waste without:	335-13-1-.03
(1) Control of combustion air to maintain adequate temperature for efficient combustion,	335-13-1-.03
(2) Containment of the combustion reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion, and	335-13-1-.03
(3) Control of the emission of the combustion products.	335-13-1-.03
"Operator" means the person(s) responsible for the overall operation of a facility or part of a facility.	335-13-1-.03
"Owner" means the person(s) who owns a facility or part of a facility.	335-13-1-.03
"Run-off" means any rainwater, leachate, or other liquid that drains over land from any part of a facility.	335-13-1-.03
"Run-on" means any rainwater, leachate, or other liquid that drains over land onto any part of a facility.	335-13-1-.03

PART 258 CRITERIA §258.2 DEFINITIONS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
"Saturated zone" means that part of the earth's crust in which all voids are filled with water.	335-13-1-.03
"Sludge" means any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.	335-13-1-.03
"Solid waste" means any garbage, or refuse, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved materials in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permit under 33 U.S.C. 1342, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).	335-13-1-.03
"State" means any of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Marianas Islands.	335-13-1-.03 of the State Regulations defines "State" as the State of Alabama.
"State Director" means the chief administrative officer of the State agency responsible for implementing the State municipal solid waste permit program or other system of prior approval.	The State Regulations do not include a definition for "State Director"; however, 335-13-1-.03 defines "Director" as the Director of the Alabama Department of Environmental Management.
"Uppermost aquifer" means the geologic formation nearest the natural ground surface	335-13-1-.03

PART 258 CRITERIA §258.2 DEFINITIONS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
that is an aquifer, as well as, lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.	
"Waste management unit boundary" means a vertical surface located at the hydraulically downgradient limit of the unit. This vertical surface extends down into the uppermost aquifer.	335-13-1-.03

PART 258 CRITERIA §258.3 CONSIDERATION OF OTHER FEDERAL LAWS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
The owner or operator of a municipal solid waste landfill unit must comply with any other applicable Federal rules, laws, regulations, or other requirements.	335-13-4-.01(8)

§§258.4 - 258.9 [Reserved]

SUBPART B -- LOCATION RESTRICTIONS
§258.10 AIRPORT SAFETY

(a) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions that are located within 10,000 feet (3,048 meters) of any airport runway end used by turbojet aircraft or within 5,000 feet (1,524 meters) of any airport runway end used by only piston-type aircraft must demonstrate that the units are designed and operated so that the MSWLF unit does not pose a bird hazard to aircraft.	335-13-4-.01(5) 335-13-4-.01(5)(a)
(b) Owners or operators proposing to site new MSWLF units and lateral expansions located within a five-mile radius of any airport runway end used by turbojet or piston-type aircraft must notify the affected airport and the Federal Aviation Administration (FAA).	335-13-4-.01(5)(a)
(c) The owner or operator must place the demonstration in paragraph (a) of this section in the operating record and notify the State Director that it has been placed in the operating record.	335-13-4-.01 335-13-4-.29(1)(b)1.
(d) For purposes of this section:	335-13-1-.03
(1) "Airport" means public-use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.	335-13-1-.03

PART 258 CRITERIA §258.11 FLOODPLAINS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(2) "Bird hazard" means an increase in the likelihood of bird/aircraft collisions that may cause damage to the aircraft or injury to its occupants.	335-13-1-.03
(a) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions located in 100-year floodplains must demonstrate that the unit will not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a hazard to human health and the environment. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record.	335-13-4-.01(1)
(b) For purposes of this section:	335-13-1-.03
(1) "Floodplain" means the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, that are inundated by the 100-year flood.	335-13-1-.03
(2) "100-year flood" means a flood that has a 1-percent or greater chance of recurring in any given year or a flood of a magnitude equalled or exceeded once in 100 years on the average over a significantly long period.	335-13-1-.03
(3) "Washout" means the carrying away of solid waste by waters of the base flood.	335-13-1-.03

PART 258 CRITERIA §258.12 WETLANDS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) New MSWLF units and lateral expansions shall not be located in wetlands, unless the owner or operator can make the following demonstrations to the Director of an approved State:	335-13-4-.01(3)(e) 335-13-4-.01(3)(f) The State Regulations are more stringent in omitting this wetlands demonstration provision.
(1) Where applicable under Section 404 of the Clean Water Act or applicable State wetlands laws, the presumption that a practicable alternative to the proposed landfill is available which does not involved wetlands is clearly rebutted:	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(2) The construction and operation of the MSWLF unit will not:	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(i) Cause or contribute to violations of any applicable State water quality standard,	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(ii) Violate any applicable toxic effluent standard or prohibition under Section 307 of the Clean Water Act,	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(iii) Jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat, protected under the Endangered Species Act of 1973, and	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(iv) Violate any requirement under the Marine Protection, Research, and Sanctuaries Act of 1972 for the protection of a marine sanctuary;	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(3) The MSWLF unit will not cause or contribute to significant degradation of wetlands. The owner/operator must demonstrate the integrity of the MSWLF unit and its ability to protect ecological resources by addressing the following factors:	The State Regulations are more stringent in omitting this wetlands demonstration provision.

PART 258 CRITERIA §258.12 WETLANDS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(i) Erosion, stability, and migration potential of native wetland soils, muds and deposits used to support the MSWLF unit;	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(ii) Erosion, stability, and migration potential of dredged and fill materials used to support the MSWLF unit;	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(iii) The volume and chemical nature of the waste managed in the MSWLF unit;	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(iv) Impacts on fish, wildlife, and other aquatic resources and their habitat from release of the solid waste;	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(v) The potential effects of catastrophic release of waste to the wetland and the resulting impacts on the environment; and	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(vi) Any additional factors, as necessary, to demonstrate that ecological resources in the wetland are sufficiently protected.	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(4) To the extent required under Section 404 of the Clean Water Act or applicable State wetlands laws, steps have been taken to attempt to achieve no net loss of wetlands (as defined by acreage and function) by first avoiding impacts to wetlands to the maximum extent practicable as required by paragraph (a)(1) of this section, then minimizing unavoidable impacts to the maximum extent practicable, and finally offsetting remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions (e.g., restoration of existing degraded wetlands or creation of man-made wetlands); and	The State Regulations are more stringent in omitting this wetlands demonstration provision.

PART 258 CRITERIA §258.12 WETLANDS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(5) Sufficient information is available to make a reasonable determination with respect to these demonstrations.	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(b) For purposes of this section, wetlands means those areas that are defined in 40 CFR 232.2(r).	335-13-1-.03

PART 258 CRITERIA
§258.13 FAULT AREAS

(a) New MSWLF units and lateral expansions shall not be located within 200 feet (60 meters) of a fault that has had displacement in Holocene time unless the owner or operator demonstrates to the Director of an approved State that an alternative setback distance of less than 200 feet (60 meters) will prevent damage to the structural integrity of the MSWLF unit and will be protective of human health and the environment.	335-13-4-.01(6)(c)
(b) For the purposes of this section:	335-13-1-.03
(1) "Fault" means a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side.	335-13-1-.03
(2) "Displacement" means the relative movement of any two sides of a fault measured in any direction.	335-13-1-.03
(3) "Holocene" means the most recent epoch of the Quaternary period, extending from the end of the Pleistocene Epoch to the present.	335-13-1-.03

PART 258 CRITERIA §258.14 SEISMIC IMPACT ZONES	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) New MSWLF units and lateral expansions shall not be located in seismic impact zones, unless the owner or operator demonstrates to the Director of an approved State/Tribe that all containment structures, including liners, leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record.	335-13-4-.01(6)(d)
(b) For the purposes of this section:	335-13-1-.03
(1) "Seismic impact zone" means an area with a ten percent or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth's gravitational pull paragraph (g) of this section, will exceed 0.10g in 250 years.	335-13-1-.03
(2) "Maximum horizontal acceleration in lithified earth material" means the maximum expected horizontal acceleration depicted on a seismic hazard map, with a 90 percent or greater probability that the acceleration will not be exceeded in 250 years, or the maximum expected horizontal acceleration based on a site-specific seismic risk assessment.	335-13-1-.03
(3) "Lithified earth material" means all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock that formed by crystallization of magma or by induration of loose sediments. This term does not include man-made materials, such as fill, concrete, and asphalt, or unconsolidated earth materials, soil, or regolith lying at or near the earth surface.	335-13-1-.03

PART 258 CRITERIA §258.15 UNSTABLE AREAS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions located in an unstable area must demonstrate that engineering measures have been incorporated into the MSWLF unit's design to ensure that the integrity of the structural components of the MSWLF unit will not be disrupted. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record. The owner or operator must consider the following factors, at a minimum, when determining whether an area is unstable:	335-13-4-.01(6)(e)
(1) On-site or local soil conditions that may result in significant differential settling;	335-13-4-.01(6)(e)1.
(2) On-site or local geologic or geomorphologic features; and	335-13-4-.01(6)(e)2.
(3) On-site or local human-made features or events (both surface and subsurface).	335-13-4-.01(6)(e)3.
(b) For purposes of this section:	335-13-1-.03
(1) "Unstable area" means a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components responsible for preventing releases from a landfill. Unstable areas can include poor foundation conditions, areas susceptible to mass movements, and karst terrains.	335-13-1-.03
(2) "Structural components" means liners, leachate collection systems, final covers, run-on/run-off systems, and any other component used in the construction and operation of the MSWLF that is necessary for protection of human health and the environment.	335-13-1-.03
(3) "Poor foundation conditions" means those areas where features exist which	335-13-1-.03

PART 258 CRITERIA §258.15 UNSTABLE AREAS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
indicate that a natural or man-induced event may result in inadequate foundation support for the structural components of an MSWLF unit.	
(4) "Areas susceptible to mass movement" means those areas of influence (i.e., areas characterized as having an active or substantial possibility of mass movement) where the movement of earth material at, beneath, or adjacent to the MSWLF unit, because of natural or man-induced events, results in the downslope transport of soil and rock material by means of gravitational influence. Areas of mass movement include, but are not limited to, landslides, avalanches, debris slides and flows, soil fluctuation, block sliding, and rock fall.	335-13-1-.03
(5) "Karst terrains" means areas where karst topography, with its characteristic surface and subterranean features, is developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in karst terrains include, but are not limited to, sinkholes, sinking streams, caves, large springs, and blind valleys.	335-13-1-.03

PART 258 CRITERIA §258.16 CLOSURE OF EXISTING MSWLFS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Existing MSWLF units that cannot make the demonstration specified in §§285.10(a) pertaining to airports, 258.11(a) pertaining to floodplains, or 258.15(a) pertaining to unstable areas, must close by October 9, 1996, in accordance with §258.60 of this part and conduct post-closure activities in accordance with §258.61 of this part. (b) The deadline for closure required by paragraph (a) of this section may be extended up to two years if the owner or operator demonstrates to the Director of an approved State that: (1) There is no available alternative disposal capacity; (2) There is no immediate threat to human health and the environment. **Note to Subpart B:** MSWLF siting requirements shall take into consideration wellhead protection areas and wellhead protection requirements established pursuant to an EPA-approved state Wellhead Protection Program in accordance with Section 1428 of the Safe Drinking Water Act.	The State Regulations are more stringent in not allowing the provisions of §258.16 (a) and (b).

§§258.17 - 258.19 [Reserved]

SUBPART C -- OPERATING CRITERIA §258.20 PROCEDURES FOR EXCLUDING THE RECEIPT OF HAZARDOUS WASTE	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Owners or operators of all MSWLF units must implement a program at the facility for detecting and preventing the disposal of regulated hazardous wastes as defined in part 261 of this chapter and polychlorinated biphenyls (PCB) wastes as defined in part 761 of this chapter. This program must include, at a minimum:	335-13-4-.21 335-13-4-.21(3)(a)
(1) Random inspections of incoming loads unless the owner or operator takes other steps to ensure that incoming loads do not contain regulated hazardous wastes or PCB wastes;	335-13-4-.21(3)(a)1.
(2) Records of any inspections;	335-13-4-.21(3)(a)3.
(3) Training of facility personnel to recognize regulated hazardous waste and PCB wastes; and	335-13-4-.21(3)(a)4.
(4) Notification of State Director of authorized States under Subtitle C of RCRA or the EPA Regional Administrator if in an unauthorized State if a regulated hazardous waste or PCB waste is discovered at the facility.	335-13-4-.21(3)(a)5.
(b) For purposes of this section, "regulated hazardous waste" means a solid waste that is a hazardous waste, as defined in 40 CFR 261.3, that is not excluded from regulation as a hazardous waste under 40 CFR 261.4(b) or was not generated by a conditionally exempt small quantity generator as defined in §261.5 of this chapter.	335-13-1-.03

PART 258 CRITERIA §258.21 COVER MATERIAL REQUIREMENTS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Except as provided in paragraph (b) of this section, the owners or operators of all MSWLF units must cover disposed solid waste with six inches of earthen material at the end of each operating day, or at more frequent intervals if necessary, to control disease vectors, fires, odors, blowing litter, and scavenging.	335-13-4-.22(1) 335-13-4-.22(1)(a)
(b) Alternative materials of an alternative thickness (other than at least six inches of earthen material) may be approved by the Director of an approved State if the owner or operator demonstrates that the alternative material and thickness control disease vectors, fires, odors, blowing litter, and scavenging without presenting a threat to human health and the environment.	335-13-4-.22(1)(a)
(c) The Director of an approved State may grant a temporary waiver from the requirement of paragraph (a) and (b) of this section if the owner or operator demonstrates that there are extreme seasonal climatic conditions that make meeting such requirements impractical.	The State Regulations do not contain a waiver provision and are therefore more stringent. 335-13-4-.22(13) requires that the facility provide for disposal activities in adverse weather.

PART 258 CRITERIA §258.22 DISEASE VECTOR CONTROL	
(a) Owners or operators of all MSWLF units must prevent or control on-site populations of disease vectors using techniques appropriate for the protection of human health and the environment.	335-13-4-.22(12)
(b) For purposes of this section, "disease vectors" means any rodents, flies, mosquitoes, or other animals, including insects, capable of transmitting disease to humans.	335-13-1-.03

PART 258 CRITERIA §258.23 EXPLOSIVE GASES CONTROL	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Owners or operators of all MSWLF units must ensure that:	335-13-4-.16
(1) The concentration of methane gas generated by the facility does not exceed 25 percent of the lower explosive limit for methane in facility structures (excluding gas control or recovery system components); and	335-13-4-.16(2)
(2) The concentration of methane gas does not exceed the lower explosive limit for methane at the facility property boundary.	335-13-4-.16(1)
(b) Owners or operators of all MSWLF units must implement a routine methane monitoring program to ensure that the standards of paragraph (a) of this section are met.	335-13-4-.16(6)
(1) The type and frequency of monitoring must be determined based on the following factors:	335-13-4-.16(6)(a)
(i) Soil conditions;	335-13-4-.16(6)(a)1.
(ii) The hydrogeologic conditions surrounding the facility;	335-13-4-.16(6)(a)2.
(iii) The hydraulic conditions surrounding the facility; and	335-13-4-.16(6)(a)3.
(iv) The location of facility structures and property boundaries.	335-13-4-.16(6)(a)4.
(2) The minimum frequency of monitoring shall be quarterly.	335-13-4-.16(6)(b)
(c) If methane gas levels exceeding the limits specified in paragraph (a) of this section are detected, the owner or operator must:	335-13-4-.16(6)(c)
(1) Immediately take all necessary steps to ensure protection of human health and notify the State Director;	335-13-4-.16(6)(c)1.

PART 258 CRITERIA §258.23 EXPLOSIVE GASES CONTROL (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(2) Within seven days of detection, place in the operating record the methane gas levels detected and a description of the steps taken to protect human health; and	335-13-4-.16(6)(c)2.
(3) Within 60 days of detection, implement a remediation plan for the methane gas releases, place a copy of the plan in the operating record, and notify the State Director that the plan has been implemented. The plan shall describe the nature and extent of the problem and the proposed remedy.	335-13-4-.16(6)(c)3.
(4) The Director of an Approved State may establish alternative schedules for demonstrating compliance with paragraphs (c)(2) and (3) of this section.	The State Regulations are more stringent in omitting the alternative schedule provision.
(d) For purposes of this section, "lower explosive limit" means the lowest percent by volume of a mixture of explosive gases in air that will propagate a flame at 25 C and atmospheric pressure.	335-13-1-.03 335-13-4-.16(6)(c)3.

PART 258 CRITERIA §258.24 AIR CRITERIA	
(a) Owners or operators of all MSWLFs must ensure that the units do not violate any applicable requirements developed under a State Implementation Plan (SIP) approved or promulgated by the Administrator pursuant to Section 110 of the Clean Air Act, as amended.	335-13-4-.22(23)
(b) Open burning of solid waste, except for the infrequent burning of agricultural wastes, silvicultural wastes, landclearing debris, diseased trees, or debris from emergency clean-up operations, is prohibited at all MSWLF units.	335-13-4-.21(1) 335-13-4-.21(1)(a) 335-13-4-.21(1)(b) 335-13-4-.21(1)(c) 335-13-4-.21(1)(d)

PART 258 CRITERIA §258.25 ACCESS REQUIREMENTS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
Owners or operators of all MSWLF units must control public access and prevent unauthorized vehicular traffic and illegal dumping of wastes by using artificial barriers, natural barriers, or both, as appropriate to protect human health and the environment.	335-13-4-.19

PART 258 CRITERIA §258.26 RUN-ON/RUN-OFF CONTROL SYSTEMS	
(a) Owners or operators of all MSWLF units must design, construct, and maintain:	335-13-4-.17
(1) A run-on control system to prevent flow onto the active portion of the landfill during the peak discharge from a 25-year storm;	335-13-4-.17(1)
(2) A run-off control system from the active portion of the landfill to collect and control at least the water volume resulting from a 24-hour, 25-year storm.	335-13-4-.17(2)
(b) Run-off from the active portion of the landfill unit must be handled in accordance with §258.27(a) of this part.	335-13-4-.17(3)

PART 258 CRITERIA §258.27 SURFACE WATER REQUIREMENTS	
MSWLF units shall not:	335-13-4-.01
(a) Cause a discharge of pollutants into waters of the United States, including wetlands, that violates any requirements of the Clean Water Act, including, but not limited to, the National Pollutant Discharge Elimination System (NPDES) requirements, pursuant to Section 402.	335-13-4-.01(3)(b)

PART 258 CRITERIA §258.27 SURFACE WATER REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(b) Cause the discharge of a nonpoint source of pollution to waters of the United States, including wetlands, that violates any requirement of an area-wide or State-wide water quality management plan that has been approved under Section 208 or 319 of the Clean Water Act, as amended.	335-13-4-.01(3)(d)

PART 258 CRITERIA §258.28 LIQUIDS RESTRICTIONS	
(a) Bulk or noncontainerized liquid waste may not be placed in MSWLF units unless:	335-13-4-.22(20)
(1) The waste is household waste other than septic waste; or	335-13-4-.22(20)(a)
(2) The waste is leachate or gas condensate derived from the MSWLF unit and the MSWLF unit, whether it is a new or existing MSWLF or lateral expansion, is designed with a composite liner and leachate collection system as described in §258.40 (a)(2) of this part. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record.	335-13-4-.22(20)(b)
(b) Containers holding liquid waste may not be placed in a MSWLF unit unless:	335-13-4-.22(20)(c)
(1) The container is a small container similar in size to that normally found in household waste;	335-13-4-.22(20)(c)1.
(2) The container is designed to hold liquids for use other than storage; or	335-13-4-.22(20)(c)2.
(3) The waste is household waste.	335-13-4-.22(20)(c)3.

PART 258 CRITERIA §258.28 LIQUIDS RESTRICTIONS(Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(c) For purposes of this section:	335-13-1-.03
(1) "Liquid waste" means any waste material that is determined to contain "free liquids" as defined by Method 9095 (Paint Filter Liquids Test), as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Pub. No. SW-846).	335-13-1-.03
(2) "Gas condensate" means the liquid generated as a result of gas recovery process(es) at the MSWLF unit.	335-13-1-.03
PART 258 CRITERIA §258.29 RECORDKEEPING REQUIREMENTS	
(a) The owner or operator of a MSWLF unit must record and retain near the facility in an operating record or in an alternative location approved by the Director of an approved State the following information as it becomes available:	335-13-4-.29(1)
(1) Any location restriction demonstration required under subpart B of this part;	335-13-4-.29(1)(b)1.
(2) Inspection records, training procedures, and notification procedures required in §258.20 of this part;	335-13-4-.29(1)(c)2.
(3) Gas monitoring results from monitoring and any remediation plans required by §258.23 of this part;	335-13-4-.29(1)(c)1.
(4) Any MSWLF unit design documentation for placement of leachate or gas condensate in a MSWLF unit as required under §258.28(a)(2) of this part;	335-13-4-.29(1)(b)2.
(5) Any demonstration, certification, finding monitoring, testing, or analytical data required by subpart E of this part;	335-13-4-.29(1)(c)4.
(6) Closure and post-closure care plans and any monitoring, testing, or analytical data as required by §§258.60 and 258.61 of this part; and	335-13-4-.29(1)(b)3. 335-13-4-.29(1)(c)3.

PART 258 CRITERIA §258.29 RECORDKEEPING REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(7) Any cost estimates and financial assurance documentation required by subpart G of this part.	335-13-4-.29(1)(d)
(8) Any information demonstrating compliance with small community exemption as required by §258.1(f)(2).	The State has omitted the small community exemption provisions since they are not applicable in this region.
(b) The owner/operator must notify the State Director when the documents from paragraph (a) of this section have been placed or added to the operating record, and all information contained in the operating record must be furnished upon request to the State Director or be made available at all reasonable times for inspection by the State Director.	335-13-4-.29(2)
(c) The Director of an approved State can set alternative schedules for recordkeeping and notification requirements as specified in paragraphs (a) and (b) of this section, except for the notification requirements in §258.10(b) and §258.55(g)(1)(iii).	335-13-4-.29(3)

§§258.30 - 258.39 [Reserved]

SUBPART D — DESIGN CRITERIA §258.40 DESIGN CRITERIA	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) New MSWLF units and lateral expansions shall be constructed:	335-13-4-.18
(1) In accordance with a design approved by the Director of an approved State or as specified in §258.40(e) for unapproved States. The design must ensure that the concentration values listed in Table 1 of this section will not be exceeded in the uppermost aquifer at the relevant point of compliance, as specified by the Director of an approved State under paragraph (d) of this section, or	335-13-4-.18 335-13-4-.18(8)a. 335-13-1-.03
(2) With a composite liner, as defined in paragraph (b) of this section and a leachate collection system that is designed and constructed to maintain less than a 30-cm depth of leachate over the liner.	335-13-4-.18 335-13-1-.03
(b) For purposes of this section, "composite liner" means a system consisting of two components; the upper component must consist of a minimum 30-mil flexible membrane liner (FML), and the lower component must consist of at least a two-foot layer of compacted soil with a hydraulic conductivity of no more than 1 x 10^{-7} cm/sec. FML components consisting of High Density Polyethylene (HDPE) shall be at least 60-mil thick. The FML component must be installed in direct and uniform contact with the compacted soil component.	335-13-1-.03
(c) When approving a design that complies with paragraph (a)(1) of this section, the Director of an approved State shall consider at least the following factors:	335-13-4-.18(8) 335-13-4-.18(8)(b)
(1) The hydrogeologic characteristics of the facility and surrounding land;	335-13-4-.18(8)(b)1.
(2) The climatic factors of the area; and	335-13-4-.18(8)(b)2.

PART 258 CRITERIA §258.40 DESIGN CRITERIA (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(3) The volume and physical and chemical characteristics of the leachate.	335-13-4-.18(8)(b)3.
(d) The relevant point of compliance specified by the Director of an approved State shall be no more than 150 meters from the waste management unit boundary and shall be located on land owned by the owner of the MSWLF unit. In determining the relevant point of compliance, State Director shall consider at least the following factors:	335-13-4-.12(14)
(1) The hydrogeologic characteristics of the facility and surrounding land;	335-13-4-.12(14)(a)
(2) The volume and physical and chemical characteristics of the leachate;	335-13-4-.12(14)(b)
(3) The quantity, quality, and detection, of flow of groundwater;	335-13-4-.12(14)(c)
(4) The proximity and withdrawal rate of the groundwater users;	335-13-4-.12(14)(d)
(5) The availability of alternative drinking water supplies;	335-13-4-.12(14)(e)
(6) The existing quality of the groundwater, including other sources of contamination and their cumulative impacts on the groundwater and whether groundwater is currently used or reasonably expected to be used for drinking water;	335-13-4-.12(14)(f)
(7) Public health, safety, and welfare effects; and	335-13-4-.12(14)(g)
(8) Practicable capability of the owner or operator.	335-13-4-.12(14)(h)
(e) If EPA does not promulgate a rule establishing the procedures and requirements for State compliance with RCRA Section 4005(c)(1)(B) by October 9, 1993, owners and operators in unapproved States may utilize a design meeting the performance standard in § 258.40(a)(1) if the following conditions are met:	Alabama intends to become an authorized State and therefore, does not need the provisions of this reference.

PART 258 CRITERIA §258.40 DESIGN CRITERIA (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(1) The State determines the design meets the performance standard in § 258.40(a)(1);	Alabama intends to become an authorized State and therefore, does not need the provisions of this reference.
(2) The State petitions EPA to review its determination; and	Alabama intends to become an authorized State and therefore, does not need the provisions of this reference.
(3) EPA approves the State determination or does not disapprove the determination within 30 days.	Alabama intends to become an authorized State and therefore, does not need the provisions of this reference.

TABLE 1

Chemical	MCL (mg/l)
Arsenic	0.05
Barium	1.0
Benzene	0.005
Cadmium	0.01
Carbon tetrachloride	0.005
Chromium (hexavalent)	0.05
2,4-Dichlorophenoxy acetic acid	0.1
1,4-Dichlorobenzene	0.075
1,2-Dichloroethane	0.005
1,1-Dichloroethylene	0.007
Endrin	0.0002
Fluoride	4
Lindane	0.004
Lead	0.015
Mercury	0.002
Methoxychlor	0.1
Nitrate	10
Selenium	0.01
Silver	0.05
Toxaphene	0.005
1,1,1-Trichloromethane	0.2
Trichloroethylene	0.005
2,4,5-Trichlorophenoxy acetic acid	0.01
Vinyl Chloride	0.002

See 335-13-4-.18 for Table 1.

SUBPART E -- GROUNDWATER MONITORING AND CORRECTIVE ACTION §258.50 APPLICABILITY	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) The requirements in this part apply to MSWLF units, except as provided in paragraph (b) of this section.	335-13-4-.27(1)
(b) Groundwater monitoring requirements under §258.51 through §258.55 of this part may be suspended by the Director of an approved State for a MSWLF unit if the owner or operator can demonstrate that there is no potential for migration of hazardous constituents from that MSWLF unit to the uppermost aquifer (as defined in §258.2) during the active life of the unit and the post-closure care period. This demonstration must be certified by a qualified groundwater scientist and approved by the Director of an approved State, and must be based upon:	335-13-4-.27(2)
(1) Site-specific field collected measurements, sampling, and analysis of physical, chemical, and biological processes affecting contaminant fate and transport, and	335-13-4-.27(2)(a)
(2) Contaminant fate and transport predictions that maximize contaminant migration and consider impacts on human health and environment.	335-13-4-.27(2)(b)
(c) Owners and operators of MSWLF units must comply with the groundwater monitoring requirements of this part according to the following schedule unless an alternative schedule is specified under paragraph (d) of this section:	335-13-4-.27(3)
(1) Existing MSWLF units and lateral expansions less than one mile from a drinking water intake (surface or subsurface) must be in compliance with the groundwater monitoring requirements specified in §§258.51 - 258.55 by October 9, 1994;	335-13-4-.27(3)(a)
(2) Existing MSWLF units and lateral expansions greater than one mile but less than two miles from a drinking water intake (surface or subsurface) must be in	335-13-4-.27(3)(a)

PART 258 CRITERIA §258.50 APPLICABILITY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
compliance with the groundwater monitoring requirements specified in §§258.51 - 258.55 by October 9, 1995;	
(3) Existing MSWLF units and lateral expansions greater than two miles from a drinking water intake (surface or subsurface) must be in compliance with the groundwater monitoring requirements specified in §§258.51 - 258.55 by October 9, 1996.	335-13-4-.27(3)(a)
(4) New MSWLF units must be in compliance with the groundwater monitoring requirements specified in §§258.51 - 258.55 before waste can be placed in the unit.	335-13-4-.27(3)(b)
(d) The Director of an approved State may specify an alternative schedule for the owners or operators of existing MSWLF units and lateral expansions to comply with the groundwater monitoring requirements specified in §§258.51 - 258.55. This schedule must ensure that 50 percent of all existing MSWLF units are in compliance by October 9, 1994 and all existing MSWLF units are in compliance by October 9, 1996. In setting the compliance schedule, the Director of an approved State must consider potential risks posed by the unit to human health and the environment. The following factors should be considered in determining potential risk:	335-13-4-.27(3) No alternative schedule is allowed for MSWLFs under State regulations. MSWLFs must adhere to 335-13-4-.27(3)(a) and (3)(b).
(1) Proximity of human and environmental receptors;	335-13-4-.27(3)
(2) Design of the MSWLF unit;	335-13-4-.27(3)
(3) Age of the MSWLF unit;	335-13-4-.27(3)
(4) The size of the MSWLF unit;	335-13-4-.27(3)
(5) Types and quantities of wastes disposed including sewage sludge; and	335-13-4-.27(3)
(6) Resource value of the underlying aquifer, including:	335-13-4-.27(3)

PART 258 CRITERIA §258.50 APPLICABILITY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(i) Current and future uses;	335-13-4-.27(3)
(ii) Proximity and withdrawal rate of users; and	335-13-4-.27(3)
(iii) Groundwater quality and quantity.	335-13-4-.27(3)
(e) Once established at a MSWLF unit, groundwater monitoring shall be conducted throughout the active life and post-closure care period of that MSWLF unit as specified in §258.61.	335-13-4-.27(4)
(f) For the purposes of this subpart, a qualified groundwater scientist is a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields as may be demonstrated by State registration, professional certifications, or completion of accredited university programs that enable that individual to make sound professional judgements regarding groundwater monitoring, contaminant fate and transport, and corrective-action.	335-13-1-.03
(g) The Director of an approved State may establish alternative schedules for demonstrating compliance with §258.51(d)(2), pertaining to notification of placement of certification in operating record; §258.54(c)(1), pertaining to notification that statistically significant increase (SSI) notice is in operating record; §258.54(c)(2) and (3), pertaining to an assessment monitoring program; §258.55(b), pertaining to sampling and analyzing Appendix II constituents; §258.55(d)(1), pertaining to placement of notice (Appendix II constituents detected) in record and notification of notice in record; §258.55(d)(2), pertaining to sampling for Appendix I and II to this part; §258.55(g),	335-13-4-.27(5)

PART 258 CRITERIA §258.50 APPLICABILITY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
pertaining to notification (and placement of notice in record) of SSI above groundwater protection standard; §§258.55(g)(1)(iv) and 258.56(a), pertaining to assessment of corrective measures; §258.57(a), pertaining to selection of remedy and notification of placement in record; §258.58(c)(4), pertaining to notification of placement in record (alternative corrective action measures); and §258.58(f), pertaining to notification of placement in record (certification of remedy completed).	

PART 258 CRITERIA
§258.51 GROUNDWATER MONITORING SYSTEMS

(a) A groundwater monitoring system must be installed that consists of a sufficient number of wells, installed at appropriate locations and depths, to yield groundwater samples from the uppermost aquifer (as defined in §258.2) that:	335-13-4-.27(6)
(1) Represent the quality of background groundwater that has not been affected by leakage from a unit. A determination of background quality may include sampling of wells that are not hydraulically upgradient of the waste management area where:	335-13-4-.27(6)(a)
(i) Hydrogeologic conditions do not allow the owner or operator to determine what wells are hydraulically upgradient; or	335-13-4-.27(6)(a)1.
(ii) Sampling at other wells will provide an indication of background groundwater quality that is as representative or more representative than that provided by the upgradient wells; and	335-13-4-.27(6)(a)2.
(2) Represent the quality of groundwater passing the relevant point of compliance specified by Director of an approved State under §258.40(d) or at the waste management unit boundary in unapproved States. The downgradient monitoring system must be installed at the relevant point of compliance specified by the Director of an approved State under §258.40(d) or at the waste management unit boundary in unapproved States that ensures detection of groundwater contamination in the uppermost aquifer. When physical obstacles preclude installation of groundwater monitoring wells at the relevant point of compliance at existing units, the down-gradient monitoring system may be installed at the closest practicable distance hydraulically down-gradient from the relevant point of compliance specified by the Director of an approved State under §258.40 that ensure detection of groundwater contamination in the uppermost aquifer.	335-13-4-.27(6)(b) 335-13-4-.12(14)

PART 258 CRITERIA §258.51 GROUNDWATER MONITORING SYSTEMS(Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(b) The Director of an approved State may approve a multi-unit groundwater monitoring system instead of separate groundwater monitoring systems for each MSWLF unit when the facility has several units, provided the multi-unit groundwater monitoring system meets the requirement of §258.51(a) and will be as protective of human health and the environment as individual monitoring systems for each MSWLF unit, based on the following factors:	335-13-4-.27(7)
(1) Number, spacing, and orientation of the MSWLF units;	335-13-4-.27(7)(a)
(2) Hydrogeologic setting;	335-13-4-.27(7)(b)
(3) Site history;	335-13-4-.27(7)(c)
(4) Engineering design of the MSWLF units, and	335-13-4-.27(7)(d)
(5) Type of waste accepted at the MSWLF units.	335-13-4-.27(7)(e)
(c) Monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole. This casing must be screened or perforated and packed with gravel or sand, where necessary, to enable collection of groundwater samples. The annular space (i.e., the space between the bore hole and well casing) above the sampling depth must be sealed to prevent contamination of samples and the groundwater.	335-13-4-.27(8)
(1) The owner or operator must notify the State Director that the design, installation, development, and decommission of any monitoring wells, piezometers and other measurement, sampling, and analytical devices documentation has been placed in the operating record; and	335-13-4-.27(8)(a)

PART 258 CRITERIA §258.51 GROUNDWATER MONITORING SYSTEMS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(2) The monitoring wells, piezometers, and other measurement, sampling, and analytical devices must be operated and maintained so that they perform to design specifications throughout the life of the monitoring program.	335-13-4-.27(8)(b)
(d) The number, spacing, and depths of monitoring systems shall be:	335-13-4-.27(9)
(1) Determined based upon site-specific technical information that must include thorough characterization of:	335-13-4-.27(9)(a)
(i) Aquifer thickness, groundwater flow rate, groundwater flow direction including seasonal and temporal fluctuations in groundwater flow; and	335-13-4-.27(9)(a)1.
(ii) Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer; including, but not limited to: thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.	335-13-4-.27(9)(a)2.
(2) Certified by a qualified groundwater scientist or approved by the Director of an approved State. Within 14 days of this certification, the owner or operator must notify the State Director that the certification has been placed in the operating record.	335-13-4-.27(9)(b)

§258.52 [Reserved]

PART 258 CRITERIA §258.53 GROUNDWATER SAMPLING AND ANALYSIS REQUIREMENTS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) The groundwater monitoring program must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide an accurate representation of groundwater quality at the background and downgradient wells installed in compliance with §258.51(a) of this part. The owner or operator must notify the State Director that the sampling and analysis program documentation has been placed in the operating record and the program must include procedures and techniques for:	335-13-4-.27(10)
(1) Sample collection;	335-13-4-.27(10)(a)
(2) Sample preservation and shipment;	335-13-4-.27(10)(b)
(3) Analytical procedures;	335-13-4-.27(10)(c)
(4) Chain of custody control; and	335-13-4-.27(10)(d)
(5) Quality assurance and quality control.	335-13-4-.27(10)(e)
(b) The groundwater monitoring program must include sampling and analytical methods that are appropriate for groundwater sampling and that accurately measure hazardous constituents and other monitoring parameters in groundwater samples. Groundwater samples shall not be field-filtered prior to laboratory analysis.	335-13-4-.27(11)
(c) The sampling procedures and frequency must be protective of human health and the environment.	335-13-4-.27(12)
(d) Groundwater elevations must be measured in each well immediately prior to purging, each time groundwater is sampled. The owner or operator must determine the rate and direction of groundwater flow each time groundwater is sampled. Groundwater elevations in wells which monitor the same waste management area must be measured within a period of time short enough to avoid temporal variations in groundwater	335-13-4-.27(13)

PART 258 CRITERIA §258.53 GROUNDWATER SAMPLING AND ANALYSIS REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
flow which could preclude accurate determination of groundwater flow rate and direction.	
(e) The owner or operator must establish background groundwater quality in a hydraulically upgradient or background well(s) for each of the monitoring parameters or constituents required in the particular groundwater monitoring program that applies to the MSWLF unit, as determined under §258.54(a), or §258.55(a) of this part. Background groundwater quality may be established at wells that are not located hydraulically upgradient from the MSWLF unit if it meets the requirements of §258.51(a)(1).	335-13-4-.27(14)
(f) The number of samples collected to establish groundwater quality data must be consistent with the appropriate statistical procedures determined pursuant to paragraph (g) of this section. The sampling procedures shall be those specified under §258.54(b) for detection monitoring, §258.55(b) and (d) for assessment monitoring, and §258.56(b) of corrective action.	335-13-4-.27(15)
(g) The owner or operator must specify in the operating record one of the following statistical methods to be used in evaluating groundwater monitoring data for each hazardous constituent. The statistical test chosen shall be conducted separately for each hazardous constituent in each well.	335-13-4-.27(16)
(1) A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.	335-13-4-.27(16)(a)
(2) An analysis of variance (ANOVA) based on ranks followed by multiple comparisons procedures to identify	335-13-4-.27(16)(b)

PART 258 CRITERIA §258.53 GROUNDWATER SAMPLING AND ANALYSIS REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.	
(3) A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.	335-13-4-.27(16)(c)
(4) A control chart approach that gives control limits for each constituent.	335-13-4-.27(16)(d)
(5) Another statistical test method that meets the performance standards of §258.53(h). The owner or operator must place a justification for this alternative in the operating record and notify the State Director of the use of this alternative test. The justification must demonstrate that the alternative method meets the performance standards of §258.53(h).	335-13-4-.27(16)(e)
(h) Any statistical method chosen under §258.53(g) shall comply with the following performance standards, as appropriate:	335-13-4-.27(17)
(1) The statistical method used to evaluate groundwater monitoring data shall be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used. If the distributions for the constituents differ, more than one statistical method may be needed.	335-13-4-.27(17)(a)

PART 258 CRITERIA §258.53 GROUNDWATER SAMPLING AND ANALYSIS REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(2) If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a groundwater protection standard, the test shall be done at a Type I error level no less than 0.01 for each testing period. If a multiple comparisons procedure is used, the Type I experiment wise error rate for each testing period shall be no less than 0.05; however, the Type I error of no less than 0.01 for individual well comparisons must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.	335-13-4-.27(17)(b)
(3) If a control chart approach is used to evaluate groundwater monitoring data, the specific type of control chart and its associated parameter values shall be protective of human health and the environment. The parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.	335-13-4-.27(17)(c)
(4) If a tolerance interval or a predictional interval is used to evaluate groundwater monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, shall be protective of human health and the environment. These parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.	335-13-4-.27(17)(d)
(5) The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment. Any practical	335-13-4-.27(17)(e)

PART 258 CRITERIA §258.53 GROUNDWATER SAMPLING AND ANALYSIS REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
quantitation limit (pql) that is used in the statistical method shall be the lowest concentration level that can be reliablyachieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.	
(6) If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.	335-13-4-.27(17)(f)
(i) The owner or operator must determine whether or not there is a statistically significant increase over background values for each parameter or constituent required in the particular groundwater monitoring program that applies to the MSWLF unit, as determined under §§258.54(a) or 258.55(a) of this part.	335-13-4-.27(18)
(1) In determining whether a statistically significant increase has occurred, the owner or operator must compare the groundwater quality of each parameter or constituent at each monitoring well designated pursuant to §258.51(a)(2) to the background value of that constituent, according to the statistical procedures and performance standards specified under paragraphs (g) and (h) of this section.	335-13-4-.27(18)(a)
(2) Within a reasonable period of time after completing sampling and analysis, the owner or operator must determine whether there has been a statistically significant increase over background at each monitoring well.	335-13-4-.27(18)(b)

PART 258 CRITERIA §258.54 DETECTION MONITORING PROGRAM	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Detection monitoring is required at MSWLF units at all groundwater monitoring wells defined under §§258.51(a)(1) and (a)(2) of this part. At a minimum, a detection monitoring program must include the monitoring for the constituents listed in Appendix I of this part.	335-13-4-.27(19)
(1) The Director of an approved State may delete any of the Appendix I monitoring parameters for a MSWLF unit if it can be shown that the removed constituents are not reasonably expected to be contained in or derived from the waste contained in the unit.	335-13-4-.27(19)(a)
(2) The Director of an approved State may establish an alternative list of inorganic indicator parameters for a MSWLF unit, in lieu of some or all of the heavy metals (constituents 1-15 in Appendix I to this part), if the alternative parameters provide a reliable indication of inorganic releases from the MSWLF unit to the groundwater. In determining alternative parameters, the Director shall consider the following factors:	335-13-4-.27(19)(b)
(i) The types, quantities, and concentrations of constituents in waste managed at the MSWLF unit;	335-13-4-.27(19)(b)1.
(ii) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the MSWLF unit;	335-13-4-.27(19)(b)2.
(iii) The detectability of indicator parameters, waste constituents, and reaction products in the groundwater; and	335-13-4-.27(19)(b)3.
(iv) The concentration or values and coefficients of variation of monitoring parameters or constituents in the groundwater background.	335-13-4-.27(19)(b)4.

PART 258 CRITERIA §258.54 DETECTION MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(b) The monitoring frequency for all constituents listed in Appendix I to this part, or in the alternative list approved in accordance with paragraph (a)(2) of this section, shall be at least semiannual during the active life of the facility (including closure) and the post-closure period. A minimum of four independent samples from each well (background and downgradient) must be collected and analyzed for the Appendix I constituents, or the alternative list approved in accordance with paragraph (a)(2) of this section, during the first semiannual sampling event. At least one sample from each well (background and downgradient) must be collected and analyzed during subsequent semiannual sampling events.	335-13-4-.27(20)
The Director of an approved State may specify an appropriate alternative frequency for repeated sampling and analysis for Appendix I constituents, or the alternative list approved in accordance with paragraph (a)(2) of this section, during the active life (including closure) and the post-closure care period. The alternative frequency during the active life (including closure) shall be no less than annual. The alternative frequency shall be based on consideration of the following factors:	335-13-4-.27(20)
(1) Lithology of the aquifer and unsaturated zone;	335-13-4-.27(20)(a)
(2) Hydraulic conductivity of the aquifer and unsaturated zone;	335-13-4-.27(20)(b)
(3) Groundwater flow rates;	335-13-4-.27(20)(c)
(4) Minimum distance between upgradient edge of the MSWLF unit and downgradient monitoring well screen (minimum distance of travel); and	335-13-4-.27(20)(d)
(5) Resource value of the aquifer.	335-13-4-.27(20)(e)

PART 258 CRITERIA §258.54 DETECTION MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(c) If the owner or operator determines, pursuant to §258.53(g) of this part, that there is a statistically significant increase over background for one or more of the constituents listed in Appendix I to this part, or in the alternative list approved in accordance with paragraph (a)(2) of this section, at any monitoring well at the boundary specified under §258.51(a)(2), the owner or operator:	335-13-4-.27(21)
(1) Must, within 14 days of this finding, place a notice in the operating record indicating which constituents have shown statistically significant changes from background levels, and notify the State director that this notice was placed in the operating record; and	335-13-4-.27(21)(a)
(2) Must establish an assessment monitoring program meeting the requirements of §258.55 of this part within 90 days except as provided for in paragraph (c)(3) of this section.	335-13-4-.27(21)(b)
(3) The owner/operator may demonstrate that a source other than a MSWLF unit caused the contamination or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. A report documenting this demonstration must be certified by a qualified groundwater scientist or approved by the Director of an approved State and be placed in the operating record. If a successful demonstration is made and documented, the owner or operator may continue detection monitoring as specified in this section. If, after 90 days, a successful demonstration is not made, the owner or operator must initiate an assessment monitoring program as required in §258.55.	335-13-4-.27(21)(c)

PART 258 CRITERIA §258.55 ASSESSMENT MONITORING PROGRAM	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Assessment monitoring is required whenever a statistically significant increase over background has been detected for one or more of the constituents listed in Appendix I or in the alternative list approved in accordance with §258.54(a)(2).	335-13-4-.27(22)
(b) Within 90 days of triggering an assessment monitoring program, and annually thereafter, the owner or operator must sample and analyze the groundwater for all constituents identified in Appendix II of this part. A minimum of one sample from each downgradient well must be collected and analyzed during each sampling event. For any constituent detected in the downgradient wells as the result of the complete Appendix II analysis, a minimum of four independent samples from each well (background and downgradient) must be collected and analyzed to establish background for the new constituents.	335-13-4-.27(23)
The Director of an approved State may specify an appropriate subset of wells to be sampled and analyzed for Appendix II constituents during assessment monitoring. The Director of an approved State may delete any of the Appendix II monitoring parameters for a MSWLF unit if it can be shown that the removed constituents are not reasonably expected to be in or derived from the waste contained in the unit.	335-13-4-.27(23)
(c) The Director of an approved State may specify an appropriate alternate frequency for repeated sampling and analysis for the full set of Appendix II constituents required by §258.55(b) of this part, during the active life (including closure) and post-closure care of the unit considering the following factors:	335-13-4-.27(24)
(1) Lithology of the aquifer and unsaturated zone;	335-13-4-.27(24)(a)
(2) Hydraulic conductivity of the aquifer and unsaturated zone;	335-13-4-.27(24)(b)

PART 258 CRITERIA §258.55 ASSESSMENT MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(3) Groundwater flow rates;	335-13-4-.27(24)(c)
(4) Minimum distance between upgradient edge of the MSWLF unit and downgradient monitoring well screen (minimum distance of travel);	335-13-4-.27(24)(d)
(5) Resource value of the aquifer; and	335-13-4-.27(24)(e)
(6) Nature (fate and transport) of any constituents detected in response to this section.	335-13-4-.27(24)(f)
(d) After obtaining the results from the initial or subsequent sampling events required in paragraph (b) of this section, the owner or operator must:	335-13-4-.27(25)
(1) Within 14 days, place a notice in the operating record identifying the Appendix II constituents that have been detected and notify the State Director that this notice has been placed in the operating record;	335-13-4-.27(25)(a)
(2) Within 90 days, and on at least a semiannual basis thereafter, resample all wells specified by §258.51(a) to this part, conduct analyses for all constituents in Appendix I to this part or in the alternative list approved in accordance with §258.54(a)(2), and for those constituents in Appendix II to this part that are detected in response to paragraph (b) of this section, and record their concentrations in the facility operating record. At least one sample from each well (background and downgradient) must be collected and analyzed during these sampling events.	335-13-4-.27(25)(b)
The Director of an approved State may specify an alternative monitoring frequency during the active life (including closure) and the post closure period for the constituents referred to in this paragraph. The alternative frequency for Appendix I constituents, or the alternative list approved in accordance with §258.54(a)(2), during the active life (including closure)	335-13-4-.27(25)(b)

PART 258 CRITERIA §258.55 ASSESSMENT MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
shall be no less than annual. The alternative frequency shall be based on consideration of the factors specified in paragraph (c) of this section;	
(3) Establish background concentrations for any constituents detected pursuant to paragraphs (b) or (d)(2) of this section; and	335-13-4-.27(25)(c)
(4) Establish groundwater protection standards for all constituents detected pursuant to paragraph (b) or (d) of this section. The groundwater protection standards shall be established in accordance with paragraphs (h) or (i) of this section.	335-13-4-.27(25)(d)
(e) If the concentrations of all Appendix II constituents are shown to be at or below background values, using the statistical procedures in §258.53(g), for two consecutive sampling events, the owner or operator must notify the State Director of this finding and may return to detection monitoring.	335-13-4-.27(26)
(f) If the concentrations of any Appendix II constituents are above background values, but all concentrations are below the groundwater protection standard established under paragraphs (h) or (i) of this section, using the statistical procedures in §258.53(g), the owner or operator must continue assessment monitoring in accordance with this section.	335-13-4-.27(27)
(g) If one or more Appendix II constituents are detected at statistically significant levels above the groundwater protection standard established under paragraphs (h) or (i) of this section in any sampling event, the owner or operator must, within 14 days of this finding, place a notice in the operating record identifying the Appendix II constituents that have exceeded the groundwater protection standard and notify the State Director and all appropriate local government officials that the notice has been placed in the operating record.	335-13-4-.27(28)

PART 258 CRITERIA §258.55 ASSESSMENT MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
The owner or operator also:	335-13-4-.27(28)(a)
(1)(i) Must characterize the nature and extent of the release by installing additional monitoring wells as necessary;	335-13-4-.27(28)(a)1.
(ii) Must install at least one additional monitoring well at the facility boundary in the direction of contaminant migration and sample this well in accordance with §258.55(d)(2);	335-13-4-.27(28)(a)2.
(iii) Must notify all persons who own the land or reside on the land that directly overlies any part of the plume of contamination if contaminants have migrated off-site if indicated by sampling of wells in accordance with §258.55(g)(1); and	335-13-4-.27(28)(a)3.
(iv) Must initiate an assessment of corrective measures as required by §255.56 of this part within 90 days; or	335-13-4-.27(28)(a)4.
(2) May demonstrate that a source other than a MSWLF unit caused the contamination, or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. A report documenting this demonstration must be certified by a qualified groundwater scientist or approved by the Director of an approved State and placed in the operating record. If a successful demonstration is made the owner or operator must continue monitoring in accordance with the assessment monitoring program pursuant to §258.55, and may return to detection monitoring if the Appendix II constituents are at or below background as specified in §258.55(e). Until a successful demonstration is made, the owner or operator must comply with §258.55(g) including initiating an assessment of corrective measures.	335-13-4-.27(28)(b)

PART 258 CRITERIA §258.55 ASSESSMENT MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(h) The owner or operator must establish a groundwater protection standard for each Appendix II constituent detected in the groundwater. The groundwater protection standard shall be:	335-13-4-.27(29)
(1) For constituents for which a maximum contaminant level (MCL) has been promulgated under Section 1412 of the Safe Drinking Water Act (codified) under 40 CFR part 141, the MCL for that constituent;	335-13-4-.27(29)(a)
(2) For constituents for which MCLs have not been promulgated, the background concentration for the constituent established from wells in accordance with §258.51(a)(1); or	335-13-4-.27(29)(b)
(3) For constituents for which the background level is higher than the MCL identified under subparagraph (h)(1) of this section or health based levels identified under §258.55(i)(1), the background concentration.	335-13-4-.27(29)(c)
(i) The Director of an approved State may establish an alternative groundwater protection standard for constituents for which MCLs have not been established. These groundwater protection standards shall be appropriate health based levels that satisfy the following criteria:	335-13-4-.27(30)
(1) The level is derived in a manner consistent with Agency guidelines for assessing the health risks of environmental pollutants (51 FR 33992, 34006, 34014, 34028, September 24, 1986);	335-13-4-.27(30)(a)
(2) The level is based on scientifically valid studies conducted in accordance with the Toxic Substances Control Act Good Laboratory Practice Standards (40 CFR part 792) or equivalent;	335-13-4-.27(30)(b)

PART 258 CRITERIA §258.55 ASSESSMENT MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(3) For carcinogens, the level represents a concentration associated with an excess lifetime cancer risk level (due to continuous lifetime exposure) with the 1 x 10^{-4} to 1 x 10^{-6} range; and	335-13-4-.27(30)(c)
(4) For systemic toxicants, the level represents a concentration to which the human population (including sensitive subgroups) could be exposed to on a daily basis that is likely to be without appreciable risk of deleterious effects during a lifetime. For purposes of this subpart, systemic toxicants include toxic chemicals that cause effects other than cancer or mutation.	(c)335-13-4-.27(30)(d)
(j) In establishing groundwater protection standards under paragraph (i) of this section, the Director of an approved State may consider the following:	335-13-4-.27(31)
(1) Multiple contaminants in the groundwater;	335-13-4-.27(31)(a)
(2) Exposure threats to sensitive environmental receptors; and	335-13-4-.27(31)(b)
(3) Other site-specific exposure or potential exposure to groundwater.	335-13-4-.27(31)(c)

PART 258 CRITERIA §258.56 ASSESSMENT OF CORRECTIVE MEASURES	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Within 90 days of finding that any of the constituents listed in Appendix II have been detected at a statistically significant level exceeding the groundwater protection standards defined under §258.55(h) or (i) of this part, the owner or operator must initiate an assessment of corrective measures. Such an assessment must be completed within a reasonable period of time.	335-13-4-.27(32)
(b) The owner or operator must continue to monitor in accordance with the assessment monitoring program as specified in §258.55.	335-13-4-.27(33)
(c) The assessment shall include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy as described under §258.57, addressing at least the following:	335-13-4-.27(34)
(1) The performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts, and control of exposure to any residual contamination;	335-13-4-.27(34)(a)
(2) The time required to begin and complete the remedy;	335-13-4-.27(34)(b)
(3) The costs of remedy implementation; and	335-13-4-.27(34)(c)
(4) The institutional requirements such as State or local permit requirements or other environmental or public health requirements that may substantially affect implementation of the remedy(s).	335-13-4-.27(34)(d)
(d) The owner or operator must discuss the results of the corrective measures assessment, prior to the selection of remedy, in a public meeting with interested and affected parties.	335-13-4-.27(35)

PART 258 CRITERIA §258.57 SELECTION OF REMEDY	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Based on the results of the corrective measures assessment conducted under §258.56, the owner or operator must select a remedy that, at a minimum, meets the standards listed in paragraph (b) of this section. The owner or operator must notify the State Director, within 14 days of selecting a remedy, a report describing the selected remedy has been placed in the operating record and how it meets the standards in paragraph (b) of this section.	335-13-4-.27(36)
(b) Remedies must:	335-13-4-.27(36)
(1) Be protective of human health and the environment;	335-13-4-.27(36)(a)
(2) Attain the groundwater protection standard as specified pursuant to §§258.55(h) or (i);	335-13-4-.27(36)(b)
(3) Control the source(s) of releases so as to reduce or eliminate, to the maximum extent practicable, further releases of Appendix II constituents into the environment that may pose a threat to human health or the environment; and	335-13-4-.27(36)(c)
(4) Comply with standards for management of wastes as specified in §258.58(d).	335-13-4-.27(36)(d)
(c) In selecting a remedy that meets the standards of §258.57(b), the owner or operator shall consider the following evaluation factors:	335-13-4-.27(37)
(1) The long- and short-term effectiveness and protectiveness of the potential remedy(s), along with the degree of certainty that the remedy will prove successful based on consideration of the following:	335-13-4-.27(37)(a)
(i) Magnitude of reduction of existing risks;	335-13-4-.27(37)(a)1.

PART 258 CRITERIA §258.57 SELECTION OF REMEDY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(ii) Magnitude of residual risks in terms of likelihood of further releases due to waste remaining following implementation of a remedy;	335-13-4-.27(37)(a)2.
(iii) The type and degree of long-term management required, including monitoring, operation, and maintenance;	335-13-4-.27(37)(a)3.
(iv) Short-term risks that might be posed to the community, workers, or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and redisposal or containment;	335-13-4-.27(37)(a)4.
(v) Time until full protection is achieved;	335-13-4-.27(37)(a)5.
(vi) Potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to human health and the environment associated with excavation, transportation, redisposal, or containment;	335-13-4-.27(37)(a)6.

PART 258 CRITERIA §258.57 SELECTION OF REMEDY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(vii) Long-term reliability of the engineering and institutional controls; and	335-13-4-.27(37)(a)7.
(viii) Potential need for replacement of the remedy.	335-13-4-.27(37)(a)8.
(2) The effectiveness of the remedy in controlling the source to reduce further releases based on consideration of the following factors:	335-13-4-.27(37)(b)
(i) The extent to which containment practices will reduce further releases;	335-13-4-.27(37)(b)1.
(ii) The extent to which treatment technologies may be used.	335-13-4-.27(37)(b)2.
(3) The ease or difficulty of implementing a potential remedy(s) based on consideration of the following types of factors:	335-13-4-.27(37)(c)
(i) Degree of difficulty associated with constructing the technology;	335-13-4-.27(37)(c)1.
(ii) Expected operational reliability of the technologies;	335-13-4-.27(37)(c)2.
(iii) Need to coordinate with and obtain necessary approvals and permits from other agencies;	335-13-4-.27(37)(c)3.
(iv) Availability of necessary equipment and specialists; and	335-13-4-.27(37)(c)4.
(v) Available capacity and location of needed treatment, storage, and disposal services.	335-13-4-.27(37)(c)5.
(4) Practicable capability of the owner or operator, including a consideration of the technical and economic capability.	335-13-4-.27(37)(d)
(5) The degree to which community concerns are addressed by a potential remedy(s).	335-13-4-.27(37)(e)

PART 258 CRITERIA §258.57 SELECTION OF REMEDY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(d) The owner or operator shall specify as part of the selected remedy a schedule(s) for initiating and completing remedial activities. Such a schedule must require the initiation of remedial activities within a reasonable period of time taking into consideration the factors set forth in paragraphs (d) (1-8). The owner or operator must consider the following factors in determining the schedule of remedial activities:	335-13-4-.27(38)
(1) Extent and nature of contamination;	335-13-4-.27(38)(a)
(2) Practical capabilities of remedial technologies in achieving compliance with groundwater protection standards established under §§258.55(g) or (h) and other objectives of the remedy;	335-13-4-.27(38)(b)
(3) Availability of treatment or disposal capacity for wastes managed during implementation of the remedy;	335-13-4-.27(38)(c)
(4) Desirability of utilizing technologies that are not currently available, but which may offer significant advantages over already available technologies in terms of effectiveness, reliability, safety, or ability to achieve remedial objectives;	335-13-4-.27(38)(d)
(5) Potential risks to human health and the environment from exposure to contamination prior to completion of the remedy;	335-13-4-.27(38)(e)
(6) Resource value of the aquifer including:	335-13-4-.27(38)(f)
(i) Current and future uses;	335-13-4-.27(38)(f)1.
(ii) Proximity and withdrawal rate of users;	335-13-4-.27(38)(f)2.
(iii) Groundwater quantity and quality;	335-13-4-.27(38)(f)3.

PART 258 CRITERIA §258.57 SELECTION OF REMEDY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(iv) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituent;	335-13-4-.27(38)(f)4.
(v) The hydrogeologic characteristic of the facility and surrounding land;	335-13-4-.27(38)(f)5.
(vi) Groundwater removal and treatment costs; and	335-13-4-.27(38)(f)6.
(vii) The cost and availability of alternative water supplies.	335-13-4-.27(38)(f)7.
(7) Practicable capability of the owner or operator.	335-13-4-.27(38)(g)
(8) Other relevant factors.	335-13-4-.27(38)(h)
(e) The Director of an approved State may determine that remediation of a release of an Appendix II constituent from a MSWLF unit is not necessary if the owner or operator demonstrates to the Director of the approved state that:	335-13-4-.27(39)
(1) The groundwater is additionally contaminated by substances that have originated from a source other than a MSWLF unit and those substances are present in concentrations such that cleanup of the release from the MSWLF unit would provide no significant reduction in risk to actual or potential receptors; or	335-13-4-.27(39)(a)
(2) The constituent(s) is present in groundwater that:	335-13-4-.27(39)(b)
(i) Is not currently or reasonably expected to be a source of drinking water; and	335-13-4-.27(39)(b)1.
(ii) Is not hydraulically connected with waters to which the hazardous constituents are migrating or are likely to migrate in a concentration(s) that would exceed the groundwater protection standards established under §258.55(h) or (i); or	335-13-4-.27(39)(b)2.

PART 258 CRITERIA §258.57 SELECTION OF REMEDY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(3) Remediation of the release(s) is technically impracticable; or	335-13-4-.27(39)(c)
(4) Remediation results in unacceptable cross-media impacts.	335-13-4-.27(39)(d)
(f) A determination by the Director of an approved State pursuant to paragraph (e) of this section shall not affect the authority of the State to require the owner or operator to undertake source control measures or other measures that may be necessary to eliminate or minimize further releases to the groundwater, to prevent exposure to the groundwater, or to remediate the groundwater to concentrations that are technically practicable and significantly reduce threats to human health or the environment.	335-13-4-.27(40)

PART 258 CRITERIA §258.58 IMPLEMENTATION OF THE CORRECTIVE ACTION PROGRAM	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Based on the schedule established under §258.57(d) for initiation and completion of remedial activities the owner/operator must:	335-13-4-.27(41)
(1) Establish and implement a corrective action groundwater monitoring program that:	335-13-4-.27(41)(a)
(i) At a minimum, meet the requirements of an assessment monitoring program under §258.55;	335-13-4-.27(41)(a)1.
(ii) Indicate the effectiveness of the corrective action remedy; and	335-13-4-.27(41)(a)2.
(iii) Demonstrate compliance with groundwater protection standard pursuant to paragraph (e) of this section.	335-13-4-.27(41)(a)3.
(2) Implement the corrective action remedy selected under §258.57; and	335-13-4-.27(41)(b)
(3) Take any interim measures necessary to ensure the protection of human health and the environment. Interim measures should, to the greatest extent practicable, be consistent with the objectives of and contribute to the performance of any remedy that may be required pursuant to §258.57. The following factors must be considered by an owner or operator in determining whether interim measures are necessary:	335-13-4-.27(41)(c)
(i) Time required to develop and implement a final remedy;	335-13-4-.27(41)(c)1.
(ii) Actual or potential exposure of nearby populations or environmental receptors to hazardous constituents;	335-13-4-.27(41)(c)2.
(iii) Actual or potential contamination of drinking water supplies or sensitive ecosystems;	335-13-4-.27(41)(c)3.
(iv) Further degradation of the groundwater that may occur if remedial action is not initiated expeditiously;	335-13-4-.27(41)(c)4.

PART 258 CRITERIA §258.58 IMPLEMENTATION OF THE CORRECTIVE ACTION PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(v) Weather conditions that may cause hazardous constituents to migrate or be released;	335-13-4-.27(41)(c)5.
(vi) Risks of fire or explosion, or potential for exposure to hazardous constituents as a result of an accident or failure of a container or handling system; and	335-13-4-.27(41)(c)6.
(vii) Other situations that may pose threats to human health and the environment.	335-13-4-.27(41)(c)7.
(b) An owner or operator may determine, based on information developed after implementation of the remedy has begun or other information, that compliance with requirements of §258.57(b) are not being achieved through the remedy selected. In such cases, the owner or operator must implement other methods or techniques that could practicably achieve compliance with the requirements, unless the owner or operator makes the determination under §258.58(c).	335-13-4-.27(42)
(c) If the owner or operator determines that compliance with requirements under §258.57(b) cannot be practically achieved with any currently available methods, the owner or operator must:	335-13-4-.27(43)
(1) Obtain certification of a qualified groundwater scientist or approval by the Director of an approved State that compliance with requirements under §258.57(b) cannot be practically achieved with any currently available methods;	335-13-4-.27(43)(a)
(2) Implement alternate measures to control exposure of humans or the environment to residual contamination, as necessary to protect human health and the environment; and	335-13-4-.27(43)(b)
(3) Implement alternate measures for control of the sources of contamination, or for removal or decontamination of equipment, units, devices, or structures that are:	335-13-4-.27(43)(c)

PART 258 CRITERIA §258.58 IMPLEMENTATION OF THE CORRECTIVE ACTION PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(i) Technically practicable; and	335-13-4-.27(43)(c)1.
(ii) Consistent with the overall objective of the remedy.	335-13-4-.27(43)(c)2.
(4) Notify the State Director within 14 days that a report justifying the alternative measures prior to implementing the alternative measures has been placed in the operating record.	335-13-4-.27(43)(d)
(d) All solid wastes that are managed pursuant to a remedy required under §258.57, or an interim measure required under §258.58(a)(3), shall be managed in a manner:	335-13-4-.27(44)
(1) That is protective of human health and the environment; and	335-13-4-.27(44)(a)
(2) That complies with applicable RCRA requirements.	335-13-4-.27(44)(b)
(e) Remedies selected pursuant to §258.57 shall be considered complete when:	335-13-4-.27(45)
(1) The owner or operator complies with the groundwater protection standards established under §§258.55(h) or (i) at all points within the plume of contamination that lie beyond the groundwater monitoring well system established under §258.51(a).	335-13-4-.27(45)(a)
(2) Compliance with the groundwater protection standards established under §§258.55(h) or (i) has been achieved by demonstrating that concentrations of Appendix II constituents have not exceeded the groundwater protection standard(s) for a period of three consecutive years using the statistical procedures and performance standards in §258.53(g) and (h). The Director of an approved State may specify an alternative length of time during which the owner or operator must demonstrate that concentrations of Appendix II constituents have not exceeded the groundwater protection standard(s) taking into consideration:	335-13-4-.27(45)(b)

PART 258 CRITERIA §258.58 IMPLEMENTATION OF THE CORRECTIVE ACTION PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(i) Extent and concentration of the release(s);	335-13-4-.27(45)(b)1.
(ii) Behavior characteristics of the hazardous constituents in the groundwater;	335-13-4-.27(45)(b)2.
(iii) Accuracy of monitoring or modeling techniques, including any seasonal, meteorological, or other environmental variabilities that may affect the accuracy; and	335-13-4-.27(45)(b)3.
(iv) Characteristics of the groundwater.	335-13-4-.27(45)(b)4.
(3) All actions required to complete the remedy have been satisfied.	335-13-4-.27(45)(c)
(f) Upon completion of the remedy, the owner or operator must notify the State Director within 14 days that a certification that the remedy has been completed in compliance with the requirements of §258.58(e) has been placed in the operating record. The certification must be signed by the owner or operator and by a qualified groundwater scientist or approved by the Director of an approved State.	335-13-4-.27(46)
(g) When, upon completion of the certification, the owner or operator determines that the corrective action remedy has been completed in accordance with the requirements under paragraph (e) of this section, the owner or operator shall be released from the requirements for financial assurance for corrective action under §258.73.	335-13-4-.27(47)

§258.59 [Reserved]

SUBPART F -- CLOSURE AND POST-CLOSURE CARE §258.60 CLOSURE CRITERIA	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Owners or operators of all MSWLF units must install a final cover system that is designed to minimize infiltration and erosion. The final cover system must be comprised of an erosion layer underlain by an infiltration layer as follows:	335-13-4-.20 335-13-4-.20(2)
(1) The infiltration layer must be comprised of a minimum of 18 inches of earthen material that has a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than 1×10^{-5} cm/sec, whichever is less, and	335-13-4-.20(2)(a)
(2) The erosion layer must consist of a minimum 6 inches of earthen material that is capable of sustaining native plant growth.	335-13-4-.20(2)(b)
(b) The Director of an approved State may approve an alternative final cover design that includes:	335-13-4-.20(2)(c)
(1) An infiltration layer that achieves an equivalent reduction in infiltration as the infiltration layer specified in paragraph (a)(1) of this section, and	335-13-4-.20(2)(c)1.
(2) An erosion layer that provides equivalent protection from wind and water erosion as the erosion layer specified in (a)(2) of this section.	335-13-4-.20(2)(c)2.
(c) The owner or operator must prepare a written closure plan that describes the steps necessary to close all MSWLF units at any point during its active life in accordance with the cover design requirements in §258.60(a) or (b), as applicable. The closure plan, at a minimum, must include the following information:	335-13-4-.20(1)
(1) A description of the final cover, designed in accordance with §258.60(a) and the methods and procedures to be used to install the cover;	335-13-4-.20(1)(a)

PART 258 CRITERIA §258.60 CLOSURE CRITERIA (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(2) An estimate of the largest area of the MSWLF unit ever requiring a final cover as required under §258.60(a) at any time during the active life;	335-13-4-.20(1)(b)
(3) An estimate of the maximum inventory of wastes ever on-site over the active life of the landfill facility; and	335-13-4-.20(1)(c)
(4) A schedule for completing all activities necessary to satisfy the closure criteria in §258.60.	335-13-4-.20(1)(d)
(d) The owner or operator must notify the State Director that a closure plan has been prepared and placed in the operating record no later than the effective date of this part, or by the initial receipt of waste, whichever is later.	335-13-4-.20(1) 335-13-4-.29(1)(b)3. 335-13-4-.29(2)
(e) Prior to beginning closure of each MSWLF unit as specified in §258.60(f), an owner or operator must notify the State Director that a notice of the intent to close the unit has been placed in the operating record.	335-13-4-.20(5)
(f) The owner or operator must begin closure activities of each MSWLF unit no later than 30 days after the date on which the MSWLF unit receives the known final receipt of wastes or, if the MSWLF unit has remaining capacity and there is a reasonable likelihood that the MSWLF unit will receive additional wastes, no later than one year after the most recent receipt of wastes. Extensions beyond the one-year deadline for beginning closure may be granted by the Director of an approved State if the owner or operator demonstrates that the MSWLF unit has the capacity to receive additional wastes and the owner or operator has taken and will continue to take all steps necessary to prevent threats to human health and the environment from the unclosed MSWLF unit.	335-13-4-.20(6)

PART 258 CRITERIA §258.60 CLOSURE CRITERIA (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(g) The owner or operator of all MSWLF units must complete closure activities of each MSWLF unit in accordance with the closure plan within 180 days following the beginning of closure as specified in paragraph (f) of this section. Extensions of the closure period may be granted by the Director of an approved State if the owner or operator demonstrates that closure will, of necessity, take longer than 180 days and he has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed MSWLF unit.	335-13-4-.20(7)
(h) Following closure of each MSWLF unit, the owner or operator must notify the State Director that a certification, signed by an independent registered professional engineer or approved by Director of an approved State, verifying that closure has been completed in accordance with the closure plan, has been placed in the operating record.	335-13-4-.20(8)
(i)(1) Following closure of all MSWLF units, the owner or operator must record a notation on the deed to the landfill facility property, or some other instrument that is normally examined during title search, and notify the State Director that the notation has been recorded and a copy has been placed in the operating record.	335-13-4-.20(14) 335-13-4-.20(15)
(2) The notation on the deed must in perpetuity notify any potential purchaser of the property that:	335-13-4-.20(14)
(i) The land has been used as a landfill facility; and	335-13-4-.20(14)(a)
(ii) Its use is restricted under §258.61(c)(3).	335-13-4-.20(14)(b)
(j) The owner or operator may request permission from the Director of an approved State to remove the notation from the deed if all wastes are removed from the facility.	335-13-4-.20(16)

PART 258 CRITERIA §258.61 POST-CLOSURE CARE REQUIREMENTS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Following closure of each MSWLF unit, the owner or operator must conduct post-closure care. Post-closure care must be conducted for 30 years, except as provided under paragraph (b) of this section, and consist of at least the following:	335-13-4-.20(9)
(1) Maintaining the integrity and effectiveness of any final cover, including making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the final cover;	335-13-4-.20(9)(a) 335-13-4-.20(9)(b) 335-13-4-.20(9)(c) 335-13-4-.20(9)(d)
(2) Maintaining and operating the leachate collection system in accordance with the requirements in §258.40. The Director of an approved State may allow the owner or operator to stop managing leachate if the owner or operator demonstrates that leachate no longer poses a threat to human health and the environment;	335-13-4-.20(9)(g) The State Regulations do not provide for discontinuing the management of leachate and are, therefore, more stringent.
(3) Monitoring the groundwater in accordance with the requirements of subpart E of this part and maintaining the groundwater monitoring system, if applicable; and	335-13-4-.20(9)(g)
(4) Maintaining and operating the gas monitoring system in accordance with the requirements of §258.23.	335-13-4-.20(9)(g)
(b) The length of the post-closure care period may be:	335-13-4-.20(10)
(1) Decreased by the Director of an approved State if the owner or operator demonstrates that the reduced period is sufficient to protect human health and the environment and this demonstration is approved by the Director of an approved State; or	335-13-4-.20(10)(a)

PART 258 CRITERIA §258.61 POST-CLOSURE CARE REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(2) Increased by the Director of an approved State if the Director of an approved State determines that the lengthened period is necessary to protect human health and the environment.	335-13-4-.20(10)(b)
(c) The owner or operator of all MSWLF units must prepare a written post-closure plan that includes, at a minimum, the following information:	335-13-4-.20(11)
(1) A description of the monitoring and maintenance activities required in §258.61(a) for each MSWLF unit, and the frequency at which these activities will be performed;	335-13-4-.20(11)(a)
(2) Name, address, and telephone number of the person or office to contact about the facility during the post-closure period; and	335-13-4-.20(11)(b)
(3) A description of the planned uses of the property during the post-closure period. Post-closure use of the property shall not disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the monitoring systems unless necessary to comply with the requirements in this part 258.	335-13-4-.20(11)(c) 335-13-4-.20(12)
The Director of an approved State may approve any other disturbance if the owner or operator demonstrates that disturbance of the final cover, liner or other component of the containment system, including any removal of waste, will not increase the potential threat to human health or the environment.	335-13-4-.20(12) 335-13-4-.20(12)(a) 335-13-4-.20(12)(b)

PART 258 CRITERIA §258.61 POST-CLOSURE CARE REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(d) The owner or operator must notify the State Director that a post-closure plan has been prepared and placed in the operating record no later than the effective date of this part, October 9, 1993, or by the initial receipt of waste, whichever is later.	335-13-4-.20(11) 335-13-4-.29(1)(b)3. 335-13-4-.29(2)
(e) Following completion of the post-closure care period for each MSWLF unit, the owner or operator must notify the State Director that a certification, signed by an independent registered professional engineer or approved by the Director of an approved State, verifying that post-closure care has been completed in accordance with the post-closure plan, has been placed in the operating record.	335-13-4-.20(13)

§§258.62 - 258.69 [Reserved]

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AREA (205) 242-7300

December 3, 1993

Patrick Tobin, Acting Regional Administrator
Region IV, U.S. Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, GA 30365

Dear Mr. Tobin:

I hereby certify pursuant to my authority as Attorney General that in my opinion, the laws of the State of Alabama cited in its application for a determination of permit program adequacy are contained in statutes or regulations lawfully enacted and fully effective at the time this Statement is signed. The citations to the applicable laws and regulations are provided in the enclosed regulation checklists comprising sixty-nine pages to this letter.

Sincerely,

Jimmy Evans

Jimmy Evans
Attorney General

JE/dv
0356T

AL-011

OFFICE OF THE ATTORNEY GENERAL

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TRANSMITTAL COVER SHEET

DATE 12/6/93

TIME 3:15

PLEASE DELIVER THE FOLLOWING PAGES TO:

Kelly Ewing

NUMBER OF PAGES 2 INCLUDING COVER SHEET.

THIS TRANSMITTAL IS BEING SENT BY:

NAME Craig Trivial

FAX NO. ATTORNEY GENERAL'S OFFICE 242-4891

OFFICE OF THE ATTORNEY GENERAL

JIMMY EVANS
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Sincerely,

Jimmy Evans

Jimmy Evans
Attorney General

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0356T

PART 258 CRITERIA §258.1 PURPOSE, SCOPE, AND APPLICABILITY	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) The purpose of this Part is to establish minimum national criteria under the Resource Conservation and Recovery Act (RCRA or the Act), as amended, for all municipal solid waste landfill (MSWLF) units and under the Clean Water Act, as amended, for municipal solid waste landfills that are used to dispose of sewage sludge. These minimum national criteria ensure the protection of human health and the environment.	335-13-1-.01
(b) These Criteria apply to owners and operators of new MSWLF units, existing MSWLF units, and lateral expansions, except as otherwise specifically provided in this part; all other solid waste disposal facilities and practices that are not regulated under Subtitle C of RCRA are subject to the criteria contained in part 257.	335-13-1-.01 The State Regulations became effective on October 2, 1990.
(c) These Criteria do not apply to municipal solid waste landfill units that do not receive waste after October 9, 1991.	335-13-1-.01 -- The revised State Regulations became effective on November 2, 1993 and the previous regulations were effective since October 2, 1990.
(d) MSWLF units that receive waste after October 9, 1991 but stop receiving waste before October 9, 1993 are exempt from all the requirements of this part 258, except the final cover requirement specified in section 258.60(a). The final cover must be installed within six months of the last receipt of wastes. Owners or operators of MSWLF units described in this paragraph that fail to complete cover installation within this six month period will be subject to all the requirements of this part 258, unless otherwise specified.	The State Regulations do not include provisions for exemptions of existing landfills. Previous requirements for cover have been effective since October 2, 1990.
(e) All MSWLF units that receive waste on or after October 9, 1993 must comply with all requirements of this part 258 unless otherwise specified.	The State Regulations for these provisions became effective on November 2, 1993.

PART 258 CRITERIA §258.1 PURPOSE, SCOPE, AND APPLICABILITY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(f)(1) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions that dispose of less than twenty [20] tons of municipal solid waste daily, based on an annual average are exempt from subparts D and E of this part, so long as there is no evidence of existing groundwater contamination from the MSWLF unit, and the MSWLF unit serves:	The State Regulations do not include provisions for exemptions from subparts D & E for owners/ operators of new, existing, or lateral expansions of MSWLF units.
(i) a community that experiences an annual interruption of at least three consecutive months of surface transportation that prevents access to a regional waste management facility, or	The State Regulations do not include provisions for exemptions from subparts D & E for owners/ operators of new, existing, or lateral expansions of MSWLF units.
(ii) a community that has no practicable waste management alternative and is located in an area that annually receives less than or equal to 25 inches of precipitation.	The State Regulations do not include provisions for exemptions from subparts D & E for owners/ operators of new, existing, or lateral expansions of MSWLF units.
(2) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions that meet the criteria in paragraph (f)(1)(i) or (f)(1)(ii) of this section must place in the operating record information demonstrating this.	The State Regulations do not include provisions for exemptions from subparts D & E for owners/ operators of new, existing, or lateral expansions of MSWLF units.
(3) If the owner or operator of a new MSWLF unit, existing MSWLF unit, or lateral expansion has knowledge of groundwater contamination resulting from the unit that has asserted the exemption in paragraph (f)(1)(i) or (f)(1)(ii) of this section, the owner or operator must notify the State Director of such contamination and, thereafter, comply with subparts D and E of this part.	The State Regulations do not include provisions for exemptions from subparts D & E for owners/ operators of new, existing, or lateral expansions of MSWLF units.

PART 258 CRITERIA §258.1 PURPOSE, SCOPE, AND APPLICABILITY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(g) Municipal solid waste landfill units failing to satisfy these criteria are considered open dumps for purposes of State solid waste management planning under RCRA.	335-13-1-.13 335-13-1-.03
(h) Municipal solid waste landfill units failing to satisfy these criteria constitute open dumps, which are prohibited under Section 4005 of RCRA.	335-13-1-.13 335-13-1-.03
(i) Municipal solid waste landfill units containing sewage sludge and failing to satisfy these Criteria violate Sections 309 and 405(e) of the Clean Water Act.	335-13-4-.22(22)
(j) The effective date of this part is October 9, 1993, except subpart G of this part 258 is effective April 9, 1994.	The effective date of the State Solid Waste Regulations is October 2, 1990. Revisions to 335-13-1 and 335-13-4 became effective on November 2, 1993.

PART 258 CRITERIA §258.2 DEFINITIONS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
Unless otherwise noted, all terms contained in this part are defined by their plain meaning. This section contains definitions for terms that appear throughout this part; additional definitions appear in the specific sections to which they apply.	335-13-1-.03
"Active life" means the period of operation beginning with the initial receipt of solid waste and ending at completion of closure activities in accordance with §258.60 of this part.	335-13-1-.03
"Active portion" means that part of a facility or unit that has received or is receiving wastes and that has not been closed in accordance with §258.60 of this part.	335-13-1-.03
"Aquifer" means a geological formation, group of formations, or portion of a formation capable of yielding significant quantities of groundwater to wells or springs.	335-13-1-.03
"Commercial solid waste" means all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial wastes.	335-13-1-.03
"Director of an approved State" means the chief administrative officer of a State agency responsible for implementing the State municipal solid waste permit program or other system of prior approval that is deemed to be adequate by EPA under regulations published pursuant to Section 4005 of RCRA.	335-13-1-.03
"Existing MSWLF unit" means any municipal solid waste landfill unit that is receiving solid waste as of the effective date of this part (October 9, 1993). Waste placement in existing units must be consistent with past operating practices or modified practices to ensure good management.	335-13-1-.03

PART 258 CRITERIA §258.2 DEFINITIONS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
"Facility" means all contiguous land and structures, other appurtenances, and improvements on the land used for the disposal of solid waste.	335-13-1-.03
"Groundwater" means water below the land surface in a zone of saturation.	335-13-1-.03
"Household waste" means any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).	335-13-1-.03
"Industrial solid waste" means solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under Subtitle C of RCRA. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: Electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.	335-13-1-.03
"Lateral expansion" means a horizontal expansion of the waste boundaries of an existing MSWLF unit.	335-13-1-.03
"Leachate" means a liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.	335-13-1-.03

PART 258 CRITERIA §258.2 DEFINITIONS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
"Municipal solid waste landfill unit" means a discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under §257.2. A MSWLF unit also may receive other types of RCRA Subtitle D wastes, such as commercial solid waste, nonhazardous sludge, small quantity generator waste and industrial solid waste. Such a landfill may be publicly or privately owned. A MSWLF unit may be a new MSWLF unit, an existing MSWLF unit or a lateral expansion.	335-13-1-.03
"New MSWLF unit" means any municipal solid waste landfill unit that has not received waste prior to the effective date of this part (October 9, 1993).	335-13-1-.03
"Open burning" means the combustion of solid waste without:	335-13-1-.03
(1) Control of combustion air to maintain adequate temperature for efficient combustion,	335-13-1-.03
(2) Containment of the combustion reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion, and	335-13-1-.03
(3) Control of the emission of the combustion products.	335-13-1-.03
"Operator" means the person(s) responsible for the overall operation of a facility or part of a facility.	335-13-1-.03
"Owner" means the person(s) who owns a facility or part of a facility.	335-13-1-.03
"Run-off" means any rainwater, leachate, or other liquid that drains over land from any part of a facility.	335-13-1-.03
"Run-on" means any rainwater, leachate, or other liquid that drains over land onto any part of a facility.	335-13-1-.03

PART 258 CRITERIA §258.2 DEFINITIONS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
"Saturated zone" means that part of the earth's crust in which all voids are filled with water.	335-13-1-.03
"Sludge" means any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.	335-13-1-.03
"Solid waste" means any garbage, or refuse, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved materials in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permit under 33 U.S.C. 1342, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).	335-13-1-.03
"State" means any of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Marianas Islands.	335-13-1-.03 of the State Regulations defines "State" as the State of Alabama.
"State Director" means the chief administrative officer of the State agency responsible for implementing the State municipal solid waste permit program or other system of prior approval.	The State Regulations do not include a definition for "State Director"; however, 335-13-1-.03 defines "Director" as the Director of the Alabama Department of Environmental Management.
"Uppermost aquifer" means the geologic formation nearest the natural ground surface	335-13-1-.03

PART 258 CRITERIA §258.2 DEFINITIONS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
that is an aquifer, as well as, lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.	
"Waste management unit boundary" means a vertical surface located at the hydraulically downgradient limit of the unit. This vertical surface extends down into the uppermost aquifer.	335-13-1-.03

PART 258 CRITERIA §258.3 CONSIDERATION OF OTHER FEDERAL LAWS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
The owner or operator of a municipal solid waste landfill unit must comply with any other applicable Federal rules, laws, regulations, or other requirements.	335-13-4-.01(8)

§§258.4 - 258.9 [Reserved]

SUBPART B -- LOCATION RESTRICTIONS
§258.10 AIRPORT SAFETY

(a) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions that are located within 10,000 feet (3,048 meters) of any airport runway end used by turbojet aircraft or within 5,000 feet (1,524 meters) of any airport runway end used by only piston-type aircraft must demonstrate that the units are designed and operated so that the MSWLF unit does not pose a bird hazard to aircraft.	335-13-4-.01(5) 335-13-4-.01(5)(a)
(b) Owners or operators proposing to site new MSWLF units and lateral expansions located within a five-mile radius of any airport runway end used by turbojet or piston-type aircraft must notify the affected airport and the Federal Aviation Administration (FAA).	335-13-4-.01(5)(a)
(c) The owner or operator must place the demonstration in paragraph (a) of this section in the operating record and notify the State Director that it has been placed in the operating record.	335-13-4-.01 335-13-4-.29(1)(b)1.
(d) For purposes of this section:	335-13-1-.03
(1) "Airport" means public-use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.	335-13-1-.03

PART 258 CRITERIA §258.11 FLOODPLAINS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(2) "Bird hazard" means an increase in the likelihood of bird/aircraft collisions that may cause damage to the aircraft or injury to its occupants.	335-13-1-.03
(a) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions located in 100-year floodplains must demonstrate that the unit will not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a hazard to human health and the environment. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record.	335-13-4-.01(1)
(b) For purposes of this section:	335-13-1-.03
(1) "Floodplain" means the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, that are inundated by the 100-year flood.	335-13-1-.03
(2) "100-year flood" means a flood that has a 1-percent or greater chance of recurring in any given year or a flood of a magnitude equalled or exceeded once in 100 years on the average over a significantly long period.	335-13-1-.03
(3) "Washout" means the carrying away of solid waste by waters of the base flood.	335-13-1-.03

PART 258 CRITERIA §258.12 WETLANDS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) New MSWLF units and lateral expansions shall not be located in wetlands, unless the owner or operator can make the following demonstrations to the Director of an approved State:	335-13-4-.01(3)(e) 335-13-4-.01(3)(f) The State Regulations are more stringent in omitting this wetlands demonstration provision.
(1) Where applicable under Section 404 of the Clean Water Act or applicable State wetlands laws, the presumption that a practicable alternative to the proposed landfill is available which does not involved wetlands is clearly rebutted:	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(2) The construction and operation of the MSWLF unit will not:	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(i) Cause or contribute to violations of any applicable State water quality standard,	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(ii) Violate any applicable toxic effluent standard or prohibition under Section 307 of the Clean Water Act,	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(iii) Jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat, protected under the Endangered Species Act of 1973, and	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(iv) Violate any requirement under the Marine Protection, Research, and Sanctuaries Act of 1972 for the protection of a marine sanctuary;	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(3) The MSWLF unit will not cause or contribute to significant degradation of wetlands. The owner/operator must demonstrate the integrity of the MSWLF unit and its ability to protect ecological resources by addressing the following factors:	The State Regulations are more stringent in omitting this wetlands demonstration provision.

PART 258 CRITERIA §258.12 WETLANDS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(i) Erosion, stability, and migration potential of native wetland soils, muds and deposits used to support the MSWLF unit;	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(ii) Erosion, stability, and migration potential of dredged and fill materials used to support the MSWLF unit;	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(iii) The volume and chemical nature of the waste managed in the MSWLF unit;	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(iv) Impacts on fish, wildlife, and other aquatic resources and their habitat from release of the solid waste;	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(v) The potential effects of catastrophic release of waste to the wetland and the resulting impacts on the environment; and	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(vi) Any additional factors, as necessary, to demonstrate that ecological resources in the wetland are sufficiently protected.	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(4) To the extent required under Section 404 of the Clean Water Act or applicable State wetlands laws, steps have been taken to attempt to achieve no net loss of wetlands (as defined by acreage and function) by first avoiding impacts to wetlands to the maximum extent practicable as required by paragraph (a)(1) of this section, then minimizing unavoidable impacts to the maximum extent practicable, and finally offsetting remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions (e.g., restoration of existing degraded wetlands or creation of man-made wetlands); and	The State Regulations are more stringent in omitting this wetlands demonstration provision.

PART 258 CRITERIA §258.12 WETLANDS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(5) Sufficient information is available to make a reasonable determination with respect to these demonstrations.	The State Regulations are more stringent in omitting this wetlands demonstration provision.
(b) For purposes of this section, wetlands means those areas that are defined in 40 CFR 232.2(r).	335-13-1-.03

PART 258 CRITERIA
§258.13 FAULT AREAS

(a) New MSWLF units and lateral expansions shall not be located within 200 feet (60 meters) of a fault that has had displacement in Holocene time unless the owner or operator demonstrates to the Director of an approved State that an alternative setback distance of less than 200 feet (60 meters) will prevent damage to the structural integrity of the MSWLF unit and will be protective of human health and the environment. — 335-13-4-.01(6)(c)

(b) For the purposes of this section: — 335-13-1-.03

(1) "Fault" means a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side. — 335-13-1-.03

(2) "Displacement" means the relative movement of any two sides of a fault measured in any direction. — 335-13-1-.03

(3) "Holocene" means the most recent epoch of the Quaternary period, extending from the end of the Pleistocene Epoch to the present. — 335-13-1-.03

PART 258 CRITERIA §258.14 SEISMIC IMPACT ZONES	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) New MSWLF units and lateral expansions shall not be located in seismic impact zones, unless the owner or operator demonstrates to the Director of an approved State/Tribe that all containment structures, including liners, leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record.	335-13-4-.01(6)(d)
(b) For the purposes of this section:	335-13-1-.03
(1) "Seismic impact zone" means an area with a ten percent or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth's gravitational pull paragraph (g) of this section, will exceed 0.10g in 250 years.	335-13-1-.03
(2) "Maximum horizontal acceleration in lithified earth material" means the maximum expected horizontal acceleration depicted on a seismic hazard map, with a 90 percent or greater probability that the acceleration will not be exceeded in 250 years, or the maximum expected horizontal acceleration based on a site-specific seismic risk assessment.	335-13-1-.03
(3) "Lithified earth material" means all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock that formed by crystallization of magma or by induration of loose sediments. This term does not include man-made materials, such as fill, concrete, and asphalt, or unconsolidated earth materials, soil, or regolith lying at or near the earth surface.	335-13-1-.03

PART 258 CRITERIA §258.15 UNSTABLE AREAS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions located in an unstable area must demonstrate that engineering measures have been incorporated into the MSWLF unit's design to ensure that the integrity of the structural components of the MSWLF unit will not be disrupted. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record. The owner or operator must consider the following factors, at a minimum, when determining whether an area is unstable:	335-13-4-.01(6)(e)
(1) On-site or local soil conditions that may result in significant differential settling;	335-13-4-.01(6)(e)1.
(2) On-site or local geologic or geomorphologic features; and	335-13-4-.01(6)(e)2.
(3) On-site or local human-made features or events (both surface and subsurface).	335-13-4-.01(6)(e)3.
(b) For purposes of this section:	335-13-1-.03
(1) "Unstable area" means a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components responsible for preventing releases from a landfill. Unstable areas can include poor foundation conditions, areas susceptible to mass movements, and karst terrains.	335-13-1-.03
(2) "Structural components" means liners, leachate collection systems, final covers, run-on/run-off systems, and any other component used in the construction and operation of the MSWLF that is necessary for protection of human health and the environment.	335-13-1-.03
(3) "Poor foundation conditions" means those areas where features exist which	335-13-1-.03

PART 258 CRITERIA §258.15 UNSTABLE AREAS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
indicate that a natural or man-induced event may result in inadequate foundation support for the structural components of an MSWLF unit.	
(4) "Areas susceptible to mass movement" means those areas of influence (i.e., areas characterized as having an active or substantial possibility of mass movement) where the movement of earth material at, beneath, or adjacent to the MSWLF unit, because of natural or man-induced events, results in the downslope transport of soil and rock material by means of gravitational influence. Areas of mass movement include, but are not limited to, landslides, avalanches, debris slides and flows, soil fluctuation, block sliding, and rock fall.	335-13-1-.03
(5) "Karst terrains" means areas where karst topography, with its characteristic surface and subterranean features, is developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in karst terrains include, but are not limited to, sinkholes, sinking streams, caves, large springs, and blind valleys.	335-13-1-.03

PART 258 CRITERIA §258.16 CLOSURE OF EXISTING MSWLFS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Existing MSWLF units that cannot make the demonstration specified in §§285.10(a) pertaining to airports, 258.11(a) pertaining to floodplains, or 258.15(a) pertaining to unstable areas, must close by October 9, 1996, in accordance with §258.60 of this part and conduct post-closure activities in accordance with §258.61 of this part.	The State Regulations are more stringent in not allowing the provisions of §258.16 (a) and (b).
(b) The deadline for closure required by paragraph (a) of this section may be extended up to two years if the owner or operator demonstrates to the Director of an approved State that:	
(1) There is no available alternative disposal capacity;	
(2) There is no immediate threat to human health and the environment.	
Note to Subpart B: MSWLF siting requirements shall take into consideration wellhead protection areas and wellhead protection requirements established pursuant to an EPA-approved state Wellhead Protection Program in accordance with Section 1428 of the Safe Drinking Water Act.	
§§258.17 - 258.19 [Reserved]	

SUBPART C -- OPERATING CRITERIA §258.20 PROCEDURES FOR EXCLUDING THE RECEIPT OF HAZARDOUS WASTE	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Owners or operators of all MSWLF units must implement a program at the facility for detecting and preventing the disposal of regulated hazardous wastes as defined in part 261 of this chapter and polychlorinated biphenyls (PCB) wastes as defined in part 761 of this chapter. This program must include, at a minimum:	335-13-4-.21 335-13-4-.21(3)(a)
(1) Random inspections of incoming loads unless the owner or operator takes other steps to ensure that incoming loads do not contain regulated hazardous wastes or PCB wastes;	335-13-4-.21(3)(a)1.
(2) Records of any inspections;	335-13-4-.21(3)(a)3.
(3) Training of facility personnel to recognize regulated hazardous waste and PCB wastes; and	335-13-4-.21(3)(a)4.
(4) Notification of State Director of authorized States under Subtitle C of RCRA or the EPA Regional Administrator if in an unauthorized State if a regulated hazardous waste or PCB waste is discovered at the facility.	335-13-4-.21(3)(a)5.
(b) For purposes of this section, "regulated hazardous waste" means a solid waste that is a hazardous waste, as defined in 40 CFR 261.3, that is not excluded from regulation as a hazardous waste under 40 CFR 261.4(b) or was not generated by a conditionally exempt small quantity generator as defined in §261.5 of this chapter.	335-13-1-.03

PART 258 CRITERIA §258.21 COVER MATERIAL REQUIREMENTS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Except as provided in paragraph (b) of this section, the owners or operators of all MSWLF units must cover disposed solid waste with six inches of earthen material at the end of each operating day, or at more frequent intervals if necessary, to control disease vectors, fires, odors, blowing litter, and scavenging.	335-13-4-.22(1) 335-13-4-.22(1)(a)
(b) Alternative materials of an alternative thickness (other than at least six inches of earthen material) may be approved by the Director of an approved State if the owner or operator demonstrates that the alternative material and thickness control disease vectors, fires, odors, blowing litter, and scavenging without presenting a threat to human health and the environment.	335-13-4-.22(1)(a)
(c) The Director of an approved State may grant a temporary waiver from the requirement of paragraph (a) and (b) of this section if the owner or operator demonstrates that there are extreme seasonal climatic conditions that make meeting such requirements impractical.	The State Regulations do not contain a waiver provision and are therefore more stringent. 335-13-4-.22(13) requires that the facility provide for disposal activities in adverse weather.

PART 258 CRITERIA §258.22 DISEASE VECTOR CONTROL	
(a) Owners or operators of all MSWLF units must prevent or control on-site populations of disease vectors using techniques appropriate for the protection of human health and the environment.	335-13-4-.22(12)
(b) For purposes of this section, "disease vectors" means any rodents, flies, mosquitoes, or other animals, including insects, capable of transmitting disease to humans.	335-13-1-.03

PART 258 CRITERIA §258.23 EXPLOSIVE GASES CONTROL	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Owners or operators of all MSWLF units must ensure that:	335-13-4-.16
(1) The concentration of methane gas generated by the facility does not exceed 25 percent of the lower explosive limit for methane in facility structures (excluding gas control or recovery system components); and	335-13-4-.16(2)
(2) The concentration of methane gas does not exceed the lower explosive limit for methane at the facility property boundary.	335-13-4-.16(1)
(b) Owners or operators of all MSWLF units must implement a routine methane monitoring program to ensure that the standards of paragraph (a) of this section are met.	335-13-4-.16(6)
(1) The type and frequency of monitoring must be determined based on the following factors:	335-13-4-.16(6)(a)
(i) Soil conditions;	335-13-4-.16(6)(a)1.
(ii) The hydrogeologic conditions surrounding the facility;	335-13-4-.16(6)(a)2.
(iii) The hydraulic conditions surrounding the facility; and	335-13-4-.16(6)(a)3.
(iv) The location of facility structures and property boundaries.	335-13-4-.16(6)(a)4.
(2) The minimum frequency of monitoring shall be quarterly.	335-13-4-.16(6)(b)
(c) If methane gas levels exceeding the limits specified in paragraph (a) of this section are detected, the owner or operator must:	335-13-4-.16(6)(c)
(1) Immediately take all necessary steps to ensure protection of human health and notify the State Director;	335-13-4-.16(6)(c)1.

PART 258 CRITERIA §258.23 EXPLOSIVE GASES CONTROL (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(2) Within seven days of detection, place in the operating record the methane gas levels detected and a description of the steps taken to protect human health; and	335-13-4-.16(6)(c)2.
(3) Within 60 days of detection, implement a remediation plan for the methane gas releases, place a copy of the plan in the operating record, and notify the State Director that the plan has been implemented. The plan shall describe the nature and extent of the problem and the proposed remedy.	335-13-4-.16(6)(c)3.
(4) The Director of an Approved State may establish alternative schedules for demonstrating compliance with paragraphs (c)(2) and (3) of this section.	The State Regulations are more stringent in omitting the alternative schedule provision.
(d) For purposes of this section, "lower explosive limit" means the lowest percent by volume of a mixture of explosive gases in air that will propagate a flame at 25 C and atmospheric pressure.	335-13-1-.03 335-13-4-.16(6)(c)3.

PART 258 CRITERIA §258.24 AIR CRITERIA	
(a) Owners or operators of all MSWLFs must ensure that the units do not violate any applicable requirements developed under a State Implementation Plan (SIP) approved or promulgated by the Administrator pursuant to Section 110 of the Clean Air Act, as amended.	335-13-4-.22(23)
(b) Open burning of solid waste, except for the infrequent burning of agricultural wastes, silvicultural wastes, landclearing debris, diseased trees, or debris from emergency clean-up operations, is prohibited at all MSWLF units.	335-13-4-.21(1) 335-13-4-.21(1)(a) 335-13-4-.21(1)(b) 335-13-4-.21(1)(c) 335-13-4-.21(1)(d)

PART 258 CRITERIA §258.25 ACCESS REQUIREMENTS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
Owners or operators of all MSWLF units must control public access and prevent unauthorized vehicular traffic and illegal dumping of wastes by using artificial barriers, natural barriers, or both, as appropriate to protect human health and the environment.	335-13-4-.19

PART 258 CRITERIA §258.26 RUN-ON/RUN-OFF CONTROL SYSTEMS	
(a) Owners or operators of all MSWLF units must design, construct, and maintain:	335-13-4-.17
(1) A run-on control system to prevent flow onto the active portion of the landfill during the peak discharge from a 25-year storm;	335-13-4-.17(1)
(2) A run-off control system from the active portion of the landfill to collect and control at least the water volume resulting from a 24-hour, 25-year storm.	335-13-4-.17(2)
(b) Run-off from the active portion of the landfill unit must be handled in accordance with §258.27(a) of this part.	335-13-4-.17(3)

PART 258 CRITERIA §258.27 SURFACE WATER REQUIREMENTS	
MSWLF units shall not:	335-13-4-.01
(a) Cause a discharge of pollutants into waters of the United States, including wetlands, that violates any requirements of the Clean Water Act, including, but not limited to, the National Pollutant Discharge Elimination System (NPDES) requirements, pursuant to Section 402.	335-13-4-.01(3)(b)

PART 258 CRITERIA §258.27 SURFACE WATER REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(b) Cause the discharge of a nonpoint source of pollution to waters of the United States, including wetlands, that violates any requirement of an area-wide or State-wide water quality management plan that has been approved under Section 208 or 319 of the Clean Water Act, as amended.	335-13-4-.01(3)(d)

PART 258 CRITERIA §258.28 LIQUIDS RESTRICTIONS	
(a) Bulk or noncontainerized liquid waste may not be placed in MSWLF units unless:	335-13-4-.22(20)
(1) The waste is household waste other than septic waste; or	335-13-4-.22(20)(a)
(2) The waste is leachate or gas condensate derived from the MSWLF unit and the MSWLF unit, whether it is a new or existing MSWLF or lateral expansion, is designed with a composite liner and leachate collection system as described in §258.40 (a)(2) of this part. The owner or operator must place the demonstration in the operating record and notify the State Director that it has been placed in the operating record.	335-13-4-.22(20)(b)
(b) Containers holding liquid waste may not be placed in a MSWLF unit unless:	335-13-4-.22(20)(c)
(1) The container is a small container similar in size to that normally found in household waste;	335-13-4-.22(20)(c)1.
(2) The container is designed to hold liquids for use other than storage; or	335-13-4-.22(20)(c)2.
(3) The waste is household waste.	335-13-4-.22(20)(c)3.

PART 258 CRITERIA §258.28 LIQUIDS RESTRICTIONS(Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(c) For purposes of this section:	335-13-1-.03
(1) "Liquid waste" means any waste material that is determined to contain "free liquids" as defined by Method 9095 (Paint Filter Liquids Test), as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Pub. No. SW-846).	335-13-1-.03
(2) "Gas condensate" means the liquid generated as a result of gas recovery process(es) at the MSWLF unit.	335-13-1-.03

PART 258 CRITERIA §258.29 RECORDKEEPING REQUIREMENTS	
(a) The owner or operator of a MSWLF unit must record and retain near the facility in an operating record or in an alternative location approved by the Director of an approved State the following information as it becomes available:	335-13-4-.29(1)
(1) Any location restriction demonstration required under subpart B of this part;	335-13-4-.29(1)(b)1.
(2) Inspection records, training procedures, and notification procedures required in §258.20 of this part;	335-13-4-.29(1)(c)2.
(3) Gas monitoring results from monitoring and any remediation plans required by §258.23 of this part;	335-13-4-.29(1)(c)1.
(4) Any MSWLF unit design documentation for placement of leachate or gas condensate in a MSWLF unit as required under §258.28(a)(2) of this part;	335-13-4-.29(1)(b)2.
(5) Any demonstration, certification, finding monitoring, testing, or analytical data required by subpart E of this part;	335-13-4-.29(1)(c)4.
(6) Closure and post-closure care plans and any monitoring, testing, or analytical data as required by §§258.60 and 258.61 of this part; and	335-13-4-.29(1)(b)3. 335-13-4-.29(1)(c)3.

PART 258 CRITERIA §258.29 RECORDKEEPING REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(7) Any cost estimates and financial assurance documentation required by subpart G of this part.	335-13-4-.29(1)(d)
(8) Any information demonstrating compliance with small community exemption as required by §258.1(f)(2).	The State has omitted the small community exemption provisions since they are not applicable in this region.
(b) The owner/operator must notify the State Director when the documents from paragraph (a) of this section have been placed or added to the operating record, and all information contained in the operating record must be furnished upon request to the State Director or be made available at all reasonable times for inspection by the State Director.	335-13-4-.29(2)
(c) The Director of an approved State can set alternative schedules for recordkeeping and notification requirements as specified in paragraphs (a) and (b) of this section, except for the notification requirements in §258.10(b) and §258.55(g)(1)(iii).	335-13-4-.29(3)

§§258.30 - 258.39 [Reserved]

SUBPART D -- DESIGN CRITERIA §258.40 DESIGN CRITERIA	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) New MSWLF units and lateral expansions shall be constructed:	335-13-4-.18
(1) In accordance with a design approved by the Director of an approved State or as specified in §258.40(e) for unapproved States. The design must ensure that the concentration values listed in Table 1 of this section will not be exceeded in the uppermost aquifer at the relevant point of compliance, as specified by the Director of an approved State under paragraph (d) of this section, or	335-13-4-.18 335-13-4-.18(8)a. 335-13-1-.03
(2) With a composite liner, as defined in paragraph (b) of this section and a leachate collection system that is designed and constructed to maintain less than a 30-cm depth of leachate over the liner.	335-13-4-.18 335-13-1-.03
(b) For purposes of this section, "composite liner" means a system consisting of two components; the upper component must consist of a minimum 30-mil flexible membrane liner (FML), and the lower component must consist of at least a two-foot layer of compacted soil with a hydraulic conductivity of no more than 1 x 10^{-7} cm/sec. FML components consisting of High Density Polyethylene (HDPE) shall be at least 60-mil thick. The FML component must be installed in direct and uniform contact with the compacted soil component.	335-13-1-.03
(c) When approving a design that complies with paragraph (a)(1) of this section, the Director of an approved State shall consider at least the following factors:	335-13-4-.18(8) 335-13-4-.18(8)(b)
(1) The hydrogeologic characteristics of the facility and surrounding land;	335-13-4-.18(8)(b)1.
(2) The climatic factors of the area; and	335-13-4-.18(8)(b)2.

PART 258 CRITERIA §258.40 DESIGN CRITERIA (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(3) The volume and physical and chemical characteristics of the leachate.	335-13-4-.18(8)(b)3.
(d) The relevant point of compliance specified by the Director of an approved State shall be no more than 150 meters from the waste management unit boundary and shall be located on land owned by the owner of the MSWLF unit. In determining the relevant point of compliance, State Director shall consider at least the following factors:	335-13-4-.12(14)
(1) The hydrogeologic characteristics of the facility and surrounding land;	335-13-4-.12(14)(a)
(2) The volume and physical and chemical characteristics of the leachate;	335-13-4-.12(14)(b)
(3) The quantity, quality, and detection, of flow of groundwater;	335-13-4-.12(14)(c)
(4) The proximity and withdrawal rate of the groundwater users;	335-13-4-.12(14)(d)
(5) The availability of alternative drinking water supplies;	335-13-4-.12(14)(e)
(6) The existing quality of the groundwater, including other sources of contamination and their cumulative impacts on the groundwater and whether groundwater is currently used or reasonably expected to be used for drinking water;	335-13-4-.12(14)(f)
(7) Public health, safety, and welfare effects; and	335-13-4-.12(14)(g)
(8) Practicable capability of the owner or operator.	335-13-4-.12(14)(h)
(e) If EPA does not promulgate a rule establishing the procedures and requirements for State compliance with RCRA Section 4005(c)(1)(B) by October 9, 1993, owners and operators in unapproved States may utilize a design meeting the performance standard in § 258.40(a)(1) if the following conditions are met:	Alabama intends to become an authorized State and therefore, does not need the provisions of this reference.

PART 258 CRITERIA §258.40 DESIGN CRITERIA (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(1) The State determines the design meets the performance standard in § 258.40(a)(1);	Alabama intends to become an authorized State and therefore, does not need the provisions of this reference.
(2) The State petitions EPA to review its determination; and	Alabama intends to become an authorized State and therefore, does not need the provisions of this reference.
(3) EPA approves the State determination or does not disapprove the determination within 30 days.	Alabama intends to become an authorized State and therefore, does not need the provisions of this reference.

TABLE 1

Chemical	MCL (mg/l)
Arsenic	0.05
Barium	1.0
Benzene	0.005
Cadmium	0.01
Carbon tetrachloride	0.005
Chromium (hexavalent)	0.05
2,4-Dichlorophenoxy acetic acid	0.1
1,4-Dichlorobenzene	0.075
1,2-Dichloroethane	0.005
1,1-Dichloroethylene	0.007
Endrin	0.0002
Fluoride	4
Lindane	0.004
Lead	0.015
Mercury	0.002
Methoxychlor	0.1
Nitrate	10
Selenium	0.01
Silver	0.05
Toxaphene	0.005
1,1,1-Trichloromethane	0.2
Trichloroethylene	0.005
2,4,5-Trichlorophenoxy acetic acid	0.01
Vinyl Chloride	0.002

See 335-13-4-.18 for Table 1.

SUBPART E -- GROUNDWATER MONITORING AND CORRECTIVE ACTION §258.50 APPLICABILITY	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) The requirements in this part apply to MSWLF units, except as provided in paragraph (b) of this section.	335-13-4-.27(1)
(b) Groundwater monitoring requirements under §258.51 through §258.55 of this part may be suspended by the Director of an approved State for a MSWLF unit if the owner or operator can demonstrate that there is no potential for migration of hazardous constituents from that MSWLF unit to the uppermost aquifer (as defined in §258.2) during the active life of the unit and the post-closure care period. This demonstration must be certified by a qualified groundwater scientist and approved by the Director of an approved State, and must be based upon:	335-13-4-.27(2)
(1) Site-specific field collected measurements, sampling, and analysis of physical, chemical, and biological processes affecting contaminant fate and transport, and	335-13-4-.27(2)(a)
(2) Contaminant fate and transport predictions that maximize contaminant migration and consider impacts on human health and environment.	335-13-4-.27(2)(b)
(c) Owners and operators of MSWLF units must comply with the groundwater monitoring requirements of this part according to the following schedule unless an alternative schedule is specified under paragraph (d) of this section:	335-13-4-.27(3)
(1) Existing MSWLF units and lateral expansions less than one mile from a drinking water intake (surface or subsurface) must be in compliance with the groundwater monitoring requirements specified in §§258.51 - 258.55 by October 9, 1994;	335-13-4-.27(3)(a)
(2) Existing MSWLF units and lateral expansions greater than one mile but less than two miles from a drinking water intake (surface or subsurface) must be in	335-13-4-.27(3)(a)

PART 258 CRITERIA §258.50 APPLICABILITY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
compliance with the groundwater monitoring requirements specified in §§258.51 - 258.55 by October 9, 1995;	
(3) Existing MSWLF units and lateral expansions greater than two miles from a drinking water intake (surface or subsurface) must be in compliance with the groundwater monitoring requirements specified in §§258.51 - 258.55 by October 9, 1996.	335-13-4-.27(3)(a)
(4) New MSWLF units must be in compliance with the groundwater monitoring requirements specified in §§258.51 - 258.55 before waste can be placed in the unit.	335-13-4-.27(3)(b)
(d) The Director of an approved State may specify an alternative schedule for the owners or operators of existing MSWLF units and lateral expansions to comply with the groundwater monitoring requirements specified in §§258.51 - 258.55. This schedule must ensure that 50 percent of all existing MSWLF units are in compliance by October 9, 1994 and all existing MSWLF units are in compliance by October 9, 1996. In setting the compliance schedule, the Director of an approved State must consider potential risks posed by the unit to human health and the environment. The following factors should be considered in determining potential risk:	335-13-4-.27(3) No alternative schedule is allowed for MSWLFs under State regulations. MSWLFs must adhere to 335-13-4-.27(3)(a) and (3)(b).
(1) Proximity of human and environmental receptors;	335-13-4-.27(3)
(2) Design of the MSWLF unit;	335-13-4-.27(3)
(3) Age of the MSWLF unit;	335-13-4-.27(3)
(4) The size of the MSWLF unit;	335-13-4-.27(3)
(5) Types and quantities of wastes disposed including sewage sludge; and	335-13-4-.27(3)
(6) Resource value of the underlying aquifer, including:	335-13-4-.27(3)

PART 258 CRITERIA §258.50 APPLICABILITY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(i) Current and future uses;	335-13-4-.27(3)
(ii) Proximity and withdrawal rate of users; and	335-13-4-.27(3)
(iii) Groundwater quality and quantity.	335-13-4-.27(3)
(e) Once established at a MSWLF unit, groundwater monitoring shall be conducted throughout the active life and post-closure care period of that MSWLF unit as specified in §258.61.	335-13-4-.27(4)
(f) For the purposes of this subpart, a qualified groundwater scientist is a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields as may be demonstrated by State registration, professional certifications, or completion of accredited university programs that enable that individual to make sound professional judgements regarding groundwater monitoring, contaminant fate and transport, and corrective-action.	335-13-1-.03
(g) The Director of an approved State may establish alternative schedules for demonstrating compliance with §258.51(d)(2), pertaining to notification of placement of certification in operating record; §258.54(c)(1), pertaining to notification that statistically significant increase (SSI) notice is in operating record; §258.54(c)(2) and (3), pertaining to an assessment monitoring program; §258.55(b), pertaining to sampling and analyzing Appendix II constituents; §258.55(d)(1), pertaining to placement of notice (Appendix II constituents detected) in record and notification of notice in record; §258.55(d)(2), pertaining to sampling for Appendix I and II to this part; §258.55(g),	335-13-4-.27(5)

PART 258 CRITERIA §258.50 APPLICABILITY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
pertaining to notification (and placement of notice in record) of SSI above groundwater protection standard; §§258.55(g)(1)(iv) and 258.56(a), pertaining to assessment of corrective measures; §258.57(a), pertaining to selection of remedy and notification of placement in record; §258.58(c)(4), pertaining to notification of placement in record (alternative corrective action measures); and §258.58(f), pertaining to notification of placement in record (certification of remedy completed).	

PART 258 CRITERIA
§258.51 GROUNDWATER MONITORING SYSTEMS

(a) A groundwater monitoring system must be installed that consists of a sufficient number of wells, installed at appropriate locations and depths, to yield groundwater samples from the uppermost aquifer (as defined in §258.2) that:	335-13-4-.27(6)
(1) Represent the quality of background groundwater that has not been affected by leakage from a unit. A determination of background quality may include sampling of wells that are not hydraulically upgradient of the waste management area where:	335-13-4-.27(6)(a)
(i) Hydrogeologic conditions do not allow the owner or operator to determine what wells are hydraulically upgradient; or	335-13-4-.27(6)(a)1.
(ii) Sampling at other wells will provide an indication of background groundwater quality that is as representative or more representative than that provided by the upgradient wells; and	335-13-4-.27(6)(a)2.
(2) Represent the quality of groundwater passing the relevant point of compliance specified by Director of an approved State under §258.40(d) or at the waste management unit boundary in unapproved States. The downgradient monitoring system must be installed at the relevant point of compliance specified by the Director of an approved State under §258.40(d) or at the waste management unit boundary in unapproved States that ensures detection of groundwater contamination in the uppermost aquifer. When physical obstacles preclude installation of groundwater monitoring wells at the relevant point of compliance at existing units, the down-gradient monitoring system may be installed at the closest practicable distance hydraulically down-gradient from the relevant point of compliance specified by the Director of an approved State under §258.40 that ensure detection of groundwater contamination in the uppermost aquifer.	335-13-4-.27(6)(b) 335-13-4-.12(14)

PART 258 CRITERIA §258.51 GROUNDWATER MONITORING SYSTEMS(Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(b) The Director of an approved State may approve a multi-unit groundwater monitoring system instead of separate groundwater monitoring systems for each MSWLF unit when the facility has several units, provided the multi-unit groundwater monitoring system meets the requirement of §258.51(a) and will be as protective of human health and the environment as individual monitoring systems for each MSWLF unit, based on the following factors:	335-13-4-.27(7)
(1) Number, spacing, and orientation of the MSWLF units;	335-13-4-.27(7)(a)
(2) Hydrogeologic setting;	335-13-4-.27(7)(b)
(3) Site history;	335-13-4-.27(7)(c)
(4) Engineering design of the MSWLF units, and	335-13-4-.27(7)(d)
(5) Type of waste accepted at the MSWLF units.	335-13-4-.27(7)(e)
(c) Monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole. This casing must be screened or perforated and packed with gravel or sand, where necessary, to enable collection of groundwater samples. The annular space (i.e., the space between the bore hole and well casing) above the sampling depth must be sealed to prevent contamination of samples and the groundwater.	335-13-4-.27(8)
(1) The owner or operator must notify the State Director that the design, installation, development, and decommission of any monitoring wells, piezometers and other measurement, sampling, and analytical devices documentation has been placed in the operating record; and	335-13-4-.27(8)(a)

PART 258 CRITERIA §258.51 GROUNDWATER MONITORING SYSTEMS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(2) The monitoring wells, piezometers, and other measurement, sampling, and analytical devices must be operated and maintained so that they perform to design specifications throughout the life of the monitoring program.	335-13-4-.27(8)(b)
(d) The number, spacing, and depths of monitoring systems shall be:	335-13-4-.27(9)
(1) Determined based upon site-specific technical information that must include thorough characterization of:	335-13-4-.27(9)(a)
(i) Aquifer thickness, groundwater flow rate, groundwater flow direction including seasonal and temporal fluctuations in groundwater flow; and	335-13-4-.27(9)(a)1.
(ii) Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer; including, but not limited to: thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.	335-13-4-.27(9)(a)2.
(2) Certified by a qualified groundwater scientist or approved by the Director of an approved State. Within 14 days of this certification, the owner or operator must notify the State Director that the certification has been placed in the operating record.	335-13-4-.27(9)(b)

§258.52 [Reserved]

PART 258 CRITERIA §258.53 GROUNDWATER SAMPLING AND ANALYSIS REQUIREMENTS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) The groundwater monitoring program must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide an accurate representation of groundwater quality at the background and downgradient wells installed in compliance with §258.51(a) of this part. The owner or operator must notify the State Director that the sampling and analysis program documentation has been placed in the operating record and the program must include procedures and techniques for:	335-13-4-.27(10)
(1) Sample collection;	335-13-4-.27(10)(a)
(2) Sample preservation and shipment;	335-13-4-.27(10)(b)
(3) Analytical procedures;	335-13-4-.27(10)(c)
(4) Chain of custody control; and	335-13-4-.27(10)(d)
(5) Quality assurance and quality control.	335-13-4-.27(10)(e)
(b) The groundwater monitoring program must include sampling and analytical methods that are appropriate for groundwater sampling and that accurately measure hazardous constituents and other monitoring parameters in groundwater samples. Groundwater samples shall not be field-filtered prior to laboratory analysis.	335-13-4-.27(11)
(c) The sampling procedures and frequency must be protective of human health and the environment.	335-13-4-.27(12)
(d) Groundwater elevations must be measured in each well immediately prior to purging, each time groundwater is sampled. The owner or operator must determine the rate and direction of groundwater flow each time groundwater is sampled. Groundwater elevations in wells which monitor the same waste management area must be measured within a period of time short enough to avoid temporal variations in groundwater	335-13-4-.27(13)

PART 258 CRITERIA §258.53 GROUNDWATER SAMPLING AND ANALYSIS REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
flow which could preclude accurate determination of groundwater flow rate and direction.	
(e) The owner or operator must establish background groundwater quality in a hydraulically upgradient or background well(s) for each of the monitoring parameters or constituents required in the particular groundwater monitoring program that applies to the MSWLF unit, as determined under §258.54(a), or §258.55(a) of this part. Background groundwater quality may be established at wells that are not located hydraulically upgradient from the MSWLF unit if it meets the requirements of §258.51(a)(1).	335-13-4-.27(14)
(f) The number of samples collected to establish groundwater quality data must be consistent with the appropriate statistical procedures determined pursuant to paragraph (g) of this section. The sampling procedures shall be those specified under §258.54(b) for detection monitoring, §258.55(b) and (d) for assessment monitoring, and §258.56(b) of corrective action.	335-13-4-.27(15)
(g) The owner or operator must specify in the operating record one of the following statistical methods to be used in evaluating groundwater monitoring data for each hazardous constituent. The statistical test chosen shall be conducted separately for each hazardous constituent in each well.	335-13-4-.27(16)
(1) A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.	335-13-4-.27(16)(a)
(2) An analysis of variance (ANOVA) based on ranks followed by multiple comparisons procedures to identify	335-13-4-.27(16)(b)

PART 258 CRITERIA §258.53 GROUNDWATER SAMPLING AND ANALYSIS REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.	
(3) A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.	335-13-4-.27(16)(c)
(4) A control chart approach that gives control limits for each constituent.	335-13-4-.27(16)(d)
(5) Another statistical test method that meets the performance standards of §258.53(h). The owner or operator must place a justification for this alternative in the operating record and notify the State Director of the use of this alternative test. The justification must demonstrate that the alternative method meets the performance standards of §258.53(h).	335-13-4-.27(16)(e)
(h) Any statistical method chosen under §258.53(g) shall comply with the following performance standards, as appropriate:	335-13-4-.27(17)
(1) The statistical method used to evaluate groundwater monitoring data shall be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used. If the distributions for the constituents differ, more than one statistical method may be needed.	335-13-4-.27(17)(a)

PART 258 CRITERIA §258.53 GROUNDWATER SAMPLING AND ANALYSIS REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(2) If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a groundwater protection standard, the test shall be done at a Type I error level no less than 0.01 for each testing period. If a multiple comparisons procedure is used, the Type I experiment wise error rate for each testing period shall be no less than 0.05; however, the Type I error of no less than 0.01 for individual well comparisons must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.	335-13-4-.27(17)(b)
(3) If a control chart approach is used to evaluate groundwater monitoring data, the specific type of control chart and its associated parameter values shall be protective of human health and the environment. The parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.	335-13-4-.27(17)(c)
(4) If a tolerance interval or a predictional interval is used to evaluate groundwater monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, shall be protective of human health and the environment. These parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.	335-13-4-.27(17)(d)
(5) The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment. Any practical	335-13-4-.27(17)(e)

PART 258 CRITERIA §258.53 GROUNDWATER SAMPLING AND ANALYSIS REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
quantitation limit (pql) that is used in the statistical method shall be the lowest concentration level that can be reliablyachieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.	
(6) If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.	335-13-4-.27(17)(f)
(i) The owner or operator must determine whether or not there is a statistically significant increase over background values for each parameter or constituent required in the particular groundwater monitoring program that applies to the MSWLF unit, as determined under §§258.54(a) or 258.55(a) of this part.	335-13-4-.27(18)
(1) In determining whether a statistically significant increase has occurred, the owner or operator must compare the groundwater quality of each parameter or constituent at each monitoring well designated pursuant to §258.51(a)(2) to the background value of that constituent, according to the statistical procedures and performance standards specified under paragraphs (g) and (h) of this section.	335-13-4-.27(18)(a)
(2) Within a reasonable period of time after completing sampling and analysis, the owner or operator must determine whether there has been a statistically significant increase over background at each monitoring well.	335-13-4-.27(18)(b)

PART 258 CRITERIA §258.54 DETECTION MONITORING PROGRAM	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Detection monitoring is required at MSWLF units at all groundwater monitoring wells defined under §§258.51(a)(1) and (a)(2) of this part. At a minimum, a detection monitoring program must include the monitoring for the constituents listed in Appendix I of this part.	335-13-4-.27(19)
(1) The Director of an approved State may delete any of the Appendix I monitoring parameters for a MSWLF unit if it can be shown that the removed constituents are not reasonably expected to be contained in or derived from the waste contained in the unit.	335-13-4-.27(19)(a)
(2) The Director of an approved State may establish an alternative list of inorganic indicator parameters for a MSWLF unit, in lieu of some or all of the heavy metals (constituents 1-15 in Appendix I to this part), if the alternative parameters provide a reliable indication of inorganic releases from the MSWLF unit to the groundwater. In determining alternative parameters, the Director shall consider the following factors:	335-13-4-.27(19)(b)
(i) The types, quantities, and concentrations of constituents in waste managed at the MSWLF unit;	335-13-4-.27(19)(b)1.
(ii) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the MSWLF unit;	335-13-4-.27(19)(b)2.
(iii) The detectability of indicator parameters, waste constituents, and reaction products in the groundwater; and	335-13-4-.27(19)(b)3.
(iv) The concentration or values and coefficients of variation of monitoring parameters or constituents in the groundwater background.	335-13-4-.27(19)(b)4.

PART 258 CRITERIA §258.54 DETECTION MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(b) The monitoring frequency for all constituents listed in Appendix I to this part, or in the alternative list approved in accordance with paragraph (a)(2) of this section, shall be at least semiannual during the active life of the facility (including closure) and the post-closure period. A minimum of four independent samples from each well (background and downgradient) must be collected and analyzed for the Appendix I constituents, or the alternative list approved in accordance with paragraph (a)(2) of this section, during the first semiannual sampling event. At least one sample from each well (background and downgradient) must be collected and analyzed during subsequent semiannual sampling events.	335-13-4-.27(20)
The Director of an approved State may specify an appropriate alternative frequency for repeated sampling and analysis for Appendix I constituents, or the alternative list approved in accordance with paragraph (a)(2) of this section, during the active life (including closure) and the post-closure care period. The alternative frequency during the active life (including closure) shall be no less than annual. The alternative frequency shall be based on consideration of the following factors:	335-13-4-.27(20)
(1) Lithology of the aquifer and unsaturated zone;	335-13-4-.27(20)(a)
(2) Hydraulic conductivity of the aquifer and unsaturated zone;	335-13-4-.27(20)(b)
(3) Groundwater flow rates;	335-13-4-.27(20)(c)
(4) Minimum distance between upgradient edge of the MSWLF unit and downgradient monitoring well screen (minimum distance of travel); and	335-13-4-.27(20)(d)
(5) Resource value of the aquifer.	335-13-4-.27(20)(e)

PART 258 CRITERIA §258.54 DETECTION MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(c) If the owner or operator determines, pursuant to §258.53(g) of this part, that there is a statistically significant increase over background for one or more of the constituents listed in Appendix I to this part, or in the alternative list approved in accordance with paragraph (a)(2) of this section, at any monitoring well at the boundary specified under §258.51(a)(2), the owner or operator:	335-13-4-.27(21)
(1) Must, within 14 days of this finding, place a notice in the operating record indicating which constituents have shown statistically significant changes from background levels, and notify the State director that this notice was placed in the operating record; and	335-13-4-.27(21)(a)
(2) Must establish an assessment monitoring program meeting the requirements of §258.55 of this part within 90 days except as provided for in paragraph (c)(3) of this section.	335-13-4-.27(21)(b)
(3) The owner/operator may demonstrate that a source other than a MSWLF unit caused the contamination or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. A report documenting this demonstration must be certified by a qualified groundwater scientist or approved by the Director of an approved State and be placed in the operating record. If a successful demonstration is made and documented, the owner or operator may continue detection monitoring as specified in this section. If, after 90 days, a successful demonstration is not made, the owner or operator must initiate an assessment monitoring program as required in §258.55.	335-13-4-.27(21)(c)

PART 258 CRITERIA §258.55 ASSESSMENT MONITORING PROGRAM	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Assessment monitoring is required whenever a statistically significant increase over background has been detected for one or more of the constituents listed in Appendix I or in the alternative list approved in accordance with §258.54(a)(2).	335-13-4-.27(22)
(b) Within 90 days of triggering an assessment monitoring program, and annually thereafter, the owner or operator must sample and analyze the groundwater for all constituents identified in Appendix II of this part. A minimum of one sample from each downgradient well must be collected and analyzed during each sampling event. For any constituent detected in the downgradient wells as the result of the complete Appendix II analysis, a minimum of four independent samples from each well (background and downgradient) must be collected and analyzed to establish background for the new constituents.	335-13-4-.27(23)
The Director of an approved State may specify an appropriate subset of wells to be sampled and analyzed for Appendix II constituents during assessment monitoring. The Director of an approved State may delete any of the Appendix II monitoring parameters for a MSWLF unit if it can be shown that the removed constituents are not reasonably expected to be in or derived from the waste contained in the unit.	335-13-4-.27(23)
(c) The Director of an approved State may specify an appropriate alternate frequency for repeated sampling and analysis for the full set of Appendix II constituents required by §258.55(b) of this part, during the active life (including closure) and post-closure care of the unit considering the following factors:	335-13-4-.27(24)
(1) Lithology of the aquifer and unsaturated zone;	335-13-4-.27(24)(a)
(2) Hydraulic conductivity of the aquifer and unsaturated zone;	335-13-4-.27(24)(b)

PART 258 CRITERIA §258.55 ASSESSMENT MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(3) Groundwater flow rates;	335-13-4-.27(24)(c)
(4) Minimum distance between upgradient edge of the MSWLF unit and downgradient monitoring well screen (minimum distance of travel);	335-13-4-.27(24)(d)
(5) Resource value of the aquifer; and	335-13-4-.27(24)(e)
(6) Nature (fate and transport) of any constituents detected in response to this section.	335-13-4-.27(24)(f)
(d) After obtaining the results from the initial or subsequent sampling events required in paragraph (b) of this section, the owner or operator must:	335-13-4-.27(25)
(1) Within 14 days, place a notice in the operating record identifying the Appendix II constituents that have been detected and notify the State Director that this notice has been placed in the operating record;	335-13-4-.27(25)(a)
(2) Within 90 days, and on at least a semiannual basis thereafter, resample all wells specified by §258.51(a) to this part, conduct analyses for all constituents in Appendix I to this part or in the alternative list approved in accordance with §258.54(a)(2), and for those constituents in Appendix II to this part that are detected in response to paragraph (b) of this section, and record their concentrations in the facility operating record. At least one sample from each well (background and downgradient) must be collected and analyzed during these sampling events.	335-13-4-.27(25)(b)
The Director of an approved State may specify an alternative monitoring frequency during the active life (including closure) and the post closure period for the constituents referred to in this paragraph. The alternative frequency for Appendix I constituents, or the alternative list approved in accordance with §258.54(a)(2), during the active life (including closure)	335-13-4-.27(25)(b)

PART 258 CRITERIA §258.55 ASSESSMENT MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
shall be no less than annual. The alternative frequency shall be based on consideration of the factors specified in paragraph (c) of this section;	
(3) Establish background concentrations for any constituents detected pursuant to paragraphs (b) or (d)(2) of this section; and	335-13-4-.27(25)(c)
(4) Establish groundwater protection standards for all constituents detected pursuant to paragraph (b) or (d) of this section. The groundwater protection standards shall be established in accordance with paragraphs (h) or (i) of this section.	335-13-4-.27(25)(d)
(e) If the concentrations of all Appendix II constituents are shown to be at or below background values, using the statistical procedures in §258.53(g), for two consecutive sampling events, the owner or operator must notify the State Director of this finding and may return to detection monitoring.	335-13-4-.27(26)
(f) If the concentrations of any Appendix II constituents are above background values, but all concentrations are below the groundwater protection standard established under paragraphs (h) or (i) of this section, using the statistical procedures in §258.53(g), the owner or operator must continue assessment monitoring in accordance with this section.	335-13-4-.27(27)
(g) If one or more Appendix II constituents are detected at statistically significant levels above the groundwater protection standard established under paragraphs (h) or (i) of this section in any sampling event, the owner or operator must, within 14 days of this finding, place a notice in the operating record identifying the Appendix II constituents that have exceeded the groundwater protection standard and notify the State Director and all appropriate local government officials that the notice has been placed in the operating record.	335-13-4-.27(28)

PART 258 CRITERIA §258.55 ASSESSMENT MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
The owner or operator also:	335-13-4-.27(28)(a)
(1)(i) Must characterize the nature and extent of the release by installing additional monitoring wells as necessary;	335-13-4-.27(28)(a)1.
(ii) Must install at least one additional monitoring well at the facility boundary in the direction of contaminant migration and sample this well in accordance with §258.55(d)(2);	335-13-4-.27(28)(a)2.
(iii) Must notify all persons who own the land or reside on the land that directly overlies any part of the plume of contamination if contaminants have migrated off-site if indicated by sampling of wells in accordance with §258.55(g)(1); and	335-13-4-.27(28)(a)3.
(iv) Must initiate an assessment of corrective measures as required by §255.56 of this part within 90 days; or	335-13-4-.27(28)(a)4.
(2) May demonstrate that a source other than a MSWLF unit caused the contamination, or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. A report documenting this demonstration must be certified by a qualified groundwater scientist or approved by the Director of an approved State and placed in the operating record. If a successful demonstration is made the owner or operator must continue monitoring in accordance with the assessment monitoring program pursuant to §258.55, and may return to detection monitoring if the Appendix II constituents are at or below background as specified in §258.55(e). Until a successful demonstration is made, the owner or operator must comply with §258.55(g) including initiating an assessment of corrective measures.	335-13-4-.27(28)(b)

PART 258 CRITERIA §258.55 ASSESSMENT MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(h) The owner or operator must establish a groundwater protection standard for each Appendix II constituent detected in the groundwater. The groundwater protection standard shall be:	335-13-4-.27(29)
(1) For constituents for which a maximum contaminant level (MCL) has been promulgated under Section 1412 of the Safe Drinking Water Act (codified) under 40 CFR part 141, the MCL for that constituent;	335-13-4-.27(29)(a)
(2) For constituents for which MCLs have not been promulgated, the background concentration for the constituent established from wells in accordance with §258.51(a)(1); or	335-13-4-.27(29)(b)
(3) For constituents for which the background level is higher than the MCL identified under subparagraph (h)(1) of this section or health based levels identified under §258.55(i)(1), the background concentration.	335-13-4-.27(29)(c)
(i) The Director of an approved State may establish an alternative groundwater protection standard for constituents for which MCLs have not been established. These groundwater protection standards shall be appropriate health based levels that satisfy the following criteria:	335-13-4-.27(30)
(1) The level is derived in a manner consistent with Agency guidelines for assessing the health risks of environmental pollutants (51 FR 33992, 34006, 34014, 34028, September 24, 1986);	335-13-4-.27(30)(a)
(2) The level is based on scientifically valid studies conducted in accordance with the Toxic Substances Control Act Good Laboratory Practice Standards (40 CFR part 792) or equivalent;	335-13-4-.27(30)(b)

PART 258 CRITERIA §258.55 ASSESSMENT MONITORING PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(3) For carcinogens, the level represents a concentration associated with an excess lifetime cancer risk level (due to continuous lifetime exposure) with the 1 x 10^{-4} to 1 x 10^{-6} range; and	335-13-4-.27(30)(c)
(4) For systemic toxicants, the level represents a concentration to which the human population (including sensitive subgroups) could be exposed to on a daily basis that is likely to be without appreciable risk of deleterious effects during a lifetime. For purposes of this subpart, systemic toxicants include toxic chemicals that cause effects other than cancer or mutation.	(c)335-13-4-.27(30)(d)
(j) In establishing groundwater protection standards under paragraph (i) of this section, the Director of an approved State may consider the following:	335-13-4-.27(31)
(1) Multiple contaminants in the groundwater;	335-13-4-.27(31)(a)
(2) Exposure threats to sensitive environmental receptors; and	335-13-4-.27(31)(b)
(3) Other site-specific exposure or potential exposure to groundwater.	335-13-4-.27(31)(c)

PART 258 CRITERIA §258.56 ASSESSMENT OF CORRECTIVE MEASURES	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Within 90 days of finding that any of the constituents listed in Appendix II have been detected at a statistically significant level exceeding the groundwater protection standards defined under §258.55(h) or (i) of this part, the owner or operator must initiate an assessment of corrective measures. Such an assessment must be completed within a reasonable period of time.	335-13-4-.27(32)
(b) The owner or operator must continue to monitor in accordance with the assessment monitoring program as specified in §258.55.	335-13-4-.27(33)
(c) The assessment shall include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy as described under §258.57, addressing at least the following:	335-13-4-.27(34)
(1) The performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts, and control of exposure to any residual contamination;	335-13-4-.27(34)(a)
(2) The time required to begin and complete the remedy;	335-13-4-.27(34)(b)
(3) The costs of remedy implementation; and	335-13-4-.27(34)(c)
(4) The institutional requirements such as State or local permit requirements or other environmental or public health requirements that may substantially affect implementation of the remedy(s).	335-13-4-.27(34)(d)
(d) The owner or operator must discuss the results of the corrective measures assessment, prior to the selection of remedy, in a public meeting with interested and affected parties.	335-13-4-.27(35)

PART 258 CRITERIA §258.57 SELECTION OF REMEDY	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Based on the results of the corrective measures assessment conducted under §258.56, the owner or operator must select a remedy that, at a minimum, meets the standards listed in paragraph (b) of this section. The owner or operator must notify the State Director, within 14 days of selecting a remedy, a report describing the selected remedy has been placed in the operating record and how it meets the standards in paragraph (b) of this section.	335-13-4-.27(36)
(b) Remedies must:	335-13-4-.27(36)
(1) Be protective of human health and the environment;	335-13-4-.27(36)(a)
(2) Attain the groundwater protection standard as specified pursuant to §§258.55(h) or (i);	335-13-4-.27(36)(b)
(3) Control the source(s) of releases so as to reduce or eliminate, to the maximum extent practicable, further releases of Appendix II constituents into the environment that may pose a threat to human health or the environment; and	335-13-4-.27(36)(c)
(4) Comply with standards for management of wastes as specified in §258.58(d).	335-13-4-.27(36)(d)
(c) In selecting a remedy that meets the standards of §258.57(b), the owner or operator shall consider the following evaluation factors:	335-13-4-.27(37)
(1) The long- and short-term effectiveness and protectiveness of the potential remedy(s), along with the degree of certainty that the remedy will prove successful based on consideration of the following:	335-13-4-.27(37)(a)
(i) Magnitude of reduction of existing risks;	335-13-4-.27(37)(a)1.

PART 258 CRITERIA §258.57 SELECTION OF REMEDY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(ii) Magnitude of residual risks in terms of likelihood of further releases due to waste remaining following implementation of a remedy;	335-13-4-.27(37)(a)2.
(iii) The type and degree of long-term management required, including monitoring, operation, and maintenance;	335-13-4-.27(37)(a)3.
(iv) Short-term risks that might be posed to the community, workers, or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and redisposal or containment;	335-13-4-.27(37)(a)4.
(v) Time until full protection is achieved;	335-13-4-.27(37)(a)5.
(vi) Potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to human health and the environment associated with excavation, transportation, redisposal, or containment;	335-13-4-.27(37)(a)6.

PART 258 CRITERIA §258.57 SELECTION OF REMEDY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(vii) Long-term reliability of the engineering and institutional controls; and	335-13-4-.27(37)(a)7.
(viii) Potential need for replacement of the remedy.	335-13-4-.27(37)(a)8.
(2) The effectiveness of the remedy in controlling the source to reduce further releases based on consideration of the following factors:	335-13-4-.27(37)(b)
(i) The extent to which containment practices will reduce further releases;	335-13-4-.27(37)(b)1.
(ii) The extent to which treatment technologies may be used.	335-13-4-.27(37)(b)2.
(3) The ease or difficulty of implementing a potential remedy(s) based on consideration of the following types of factors:	335-13-4-.27(37)(c)
(i) Degree of difficulty associated with constructing the technology;	335-13-4-.27(37)(c)1.
(ii) Expected operational reliability of the technologies;	335-13-4-.27(37)(c)2.
(iii) Need to coordinate with and obtain necessary approvals and permits from other agencies;	335-13-4-.27(37)(c)3.
(iv) Availability of necessary equipment and specialists; and	335-13-4-.27(37)(c)4.
(v) Available capacity and location of needed treatment, storage, and disposal services.	335-13-4-.27(37)(c)5.
(4) Practicable capability of the owner or operator, including a consideration of the technical and economic capability.	335-13-4-.27(37)(d)
(5) The degree to which community concerns are addressed by a potential remedy(s).	335-13-4-.27(37)(e)

PART 258 CRITERIA §258.57 SELECTION OF REMEDY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(d) The owner or operator shall specify as part of the selected remedy a schedule(s) for initiating and completing remedial activities. Such a schedule must require the initiation of remedial activities within a reasonable period of time taking into consideration the factors set forth in paragraphs (d) (1-8). The owner or operator must consider the following factors in determining the schedule of remedial activities:	335-13-4-.27(38)
(1) Extent and nature of contamination;	335-13-4-.27(38)(a)
(2) Practical capabilities of remedial technologies in achieving compliance with groundwater protection standards established under §§258.55(g) or (h) and other objectives of the remedy;	335-13-4-.27(38)(b)
(3) Availability of treatment or disposal capacity for wastes managed during implementation of the remedy;	335-13-4-.27(38)(c)
(4) Desirability of utilizing technologies that are not currently available, but which may offer significant advantages over already available technologies in terms of effectiveness, reliability, safety, or ability to achieve remedial objectives;	335-13-4-.27(38)(d)
(5) Potential risks to human health and the environment from exposure to contamination prior to completion of the remedy;	335-13-4-.27(38)(e)
(6) Resource value of the aquifer including:	335-13-4-.27(38)(f)
(i) Current and future uses;	335-13-4-.27(38)(f)1.
(ii) Proximity and withdrawal rate of users;	335-13-4-.27(38)(f)2.
(iii) Groundwater quantity and quality;	335-13-4-.27(38)(f)3.

PART 258 CRITERIA §258.57 SELECTION OF REMEDY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(iv) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituent;	335-13-4-.27(38)(f)4.
(v) The hydrogeologic characteristic of the facility and surrounding land;	335-13-4-.27(38)(f)5.
(vi) Groundwater removal and treatment costs; and	335-13-4-.27(38)(f)6.
(vii) The cost and availability of alternative water supplies.	335-13-4-.27(38)(f)7.
(7) Practicable capability of the owner or operator.	335-13-4-.27(38)(g)
(8) Other relevant factors.	335-13-4-.27(38)(h)
(e) The Director of an approved State may determine that remediation of a release of an Appendix II constituent from a MSWLF unit is not necessary if the owner or operator demonstrates to the Director of the approved state that:	335-13-4-.27(39)
(1) The groundwater is additionally contaminated by substances that have originated from a source other than a MSWLF unit and those substances are present in concentrations such that cleanup of the release from the MSWLF unit would provide no significant reduction in risk to actual or potential receptors; or	335-13-4-.27(39)(a)
(2) The constituent(s) is present in groundwater that:	335-13-4-.27(39)(b)
(i) Is not currently or reasonably expected to be a source of drinking water; and	335-13-4-.27(39)(b)1.
(ii) Is not hydraulically connected with waters to which the hazardous constituents are migrating or are likely to migrate in a concentration(s) that would exceed the groundwater protection standards established under §258.55(h) or (i); or	335-13-4-.27(39)(b)2.

PART 258 CRITERIA §258.57 SELECTION OF REMEDY (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(3) Remediation of the release(s) is technically impracticable; or	335-13-4-.27(39)(c)
(4) Remediation results in unacceptable cross-media impacts.	335-13-4-.27(39)(d)
(f) A determination by the Director of an approved State pursuant to paragraph (e) of this section shall not affect the authority of the State to require the owner or operator to undertake source control measures or other measures that may be necessary to eliminate or minimize further releases to the groundwater, to prevent exposure to the groundwater, or to remediate the groundwater to concentrations that are technically practicable and significantly reduce threats to human health or the environment.	335-13-4-.27(40)

PART 258 CRITERIA §258.58 IMPLEMENTATION OF THE CORRECTIVE ACTION PROGRAM	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Based on the schedule established under §258.57(d) for initiation and completion of remedial activities the owner/operator must:	335-13-4-.27(41)
(1) Establish and implement a corrective action groundwater monitoring program that:	335-13-4-.27(41)(a)
(i) At a minimum, meet the requirements of an assessment monitoring program under §258.55;	335-13-4-.27(41)(a)1.
(ii) Indicate the effectiveness of the corrective action remedy; and	335-13-4-.27(41)(a)2.
(iii) Demonstrate compliance with groundwater protection standard pursuant to paragraph (e) of this section.	335-13-4-.27(41)(a)3.
(2) Implement the corrective action remedy selected under §258.57; and	335-13-4-.27(41)(b)
(3) Take any interim measures necessary to ensure the protection of human health and the environment. Interim measures should, to the greatest extent practicable, be consistent with the objectives of and contribute to the performance of any remedy that may be required pursuant to §258.57. The following factors must be considered by an owner or operator in determining whether interim measures are necessary:	335-13-4-.27(41)(c)
(i) Time required to develop and implement a final remedy;	335-13-4-.27(41)(c)1.
(ii) Actual or potential exposure of nearby populations or environmental receptors to hazardous constituents;	335-13-4-.27(41)(c)2.
(iii) Actual or potential contamination of drinking water supplies or sensitive ecosystems;	335-13-4-.27(41)(c)3.
(iv) Further degradation of the groundwater that may occur if remedial action is not initiated expeditiously;	335-13-4-.27(41)(c)4.

PART 258 CRITERIA §258.58 IMPLEMENTATION OF THE CORRECTIVE ACTION PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(v) Weather conditions that may cause hazardous constituents to migrate or be released;	335-13-4-.27(41)(c)5.
(vi) Risks of fire or explosion, or potential for exposure to hazardous constituents as a result of an accident or failure of a container or handling system; and	335-13-4-.27(41)(c)6.
(vii) Other situations that may pose threats to human health and the environment.	335-13-4-.27(41)(c)7.
(b) An owner or operator may determine, based on information developed after implementation of the remedy has begun or other information, that compliance with requirements of §258.57(b) are not being achieved through the remedy selected. In such cases, the owner or operator must implement other methods or techniques that could practicably achieve compliance with the requirements, unless the owner or operator makes the determination under §258.58(c).	335-13-4-.27(42)
(c) If the owner or operator determines that compliance with requirements under §258.57(b) cannot be practically achieved with any currently available methods, the owner or operator must:	335-13-4-.27(43)
(1) Obtain certification of a qualified groundwater scientist or approval by the Director of an approved State that compliance with requirements under §258.57(b) cannot be practically achieved with any currently available methods;	335-13-4-.27(43)(a)
(2) Implement alternate measures to control exposure of humans or the environment to residual contamination, as necessary to protect human health and the environment; and	335-13-4-.27(43)(b)
(3) Implement alternate measures for control of the sources of contamination, or for removal or decontamination of equipment, units, devices, or structures that are:	335-13-4-.27(43)(c)

PART 258 CRITERIA §258.58 IMPLEMENTATION OF THE CORRECTIVE ACTION PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(i) Technically practicable; and	335-13-4-.27(43)(c)1.
(ii) Consistent with the overall objective of the remedy.	335-13-4-.27(43)(c)2.
(4) Notify the State Director within 14 days that a report justifying the alternative measures prior to implementing the alternative measures has been placed in the operating record.	335-13-4-.27(43)(d)
(d) All solid wastes that are managed pursuant to a remedy required under §258.57, or an interim measure required under §258.58(a)(3), shall be managed in a manner:	335-13-4-.27(44)
(1) That is protective of human health and the environment; and	335-13-4-.27(44)(a)
(2) That complies with applicable RCRA requirements.	335-13-4-.27(44)(b)
(e) Remedies selected pursuant to §258.57 shall be considered complete when:	335-13-4-.27(45)
(1) The owner or operator complies with the groundwater protection standards established under §§258.55(h) or (i) at all points within the plume of contamination that lie beyond the groundwater monitoring well system established under §258.51(a).	335-13-4-.27(45)(a)
(2) Compliance with the groundwater protection standards established under §§258.55(h) or (i) has been achieved by demonstrating that concentrations of Appendix II constituents have not exceeded the groundwater protection standard(s) for a period of three consecutive years using the statistical procedures and performance standards in §258.53(g) and (h). The Director of an approved State may specify an alternative length of time during which the owner or operator must demonstrate that concentrations of Appendix II constituents have not exceeded the groundwater protection standard(s) taking into consideration:	335-13-4-.27(45)(b)

PART 258 CRITERIA §258.58 IMPLEMENTATION OF THE CORRECTIVE ACTION PROGRAM (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(i) Extent and concentration of the release(s);	335-13-4-.27(45)(b)1.
(ii) Behavior characteristics of the hazardous constituents in the groundwater;	335-13-4-.27(45)(b)2.
(iii) Accuracy of monitoring or modeling techniques, including any seasonal, meteorological, or other environmental variabilities that may affect the accuracy; and	335-13-4-.27(45)(b)3.
(iv) Characteristics of the groundwater.	335-13-4-.27(45)(b)4.
(3) All actions required to complete the remedy have been satisfied.	335-13-4-.27(45)(c)
(f) Upon completion of the remedy, the owner or operator must notify the State Director within 14 days that a certification that the remedy has been completed in compliance with the requirements of §258.58(e) has been placed in the operating record. The certification must be signed by the owner or operator and by a qualified groundwater scientist or approved by the Director of an approved State.	335-13-4-.27(46)
(g) When, upon completion of the certification, the owner or operator determines that the corrective action remedy has been completed in accordance with the requirements under paragraph (e) of this section, the owner or operator shall be released from the requirements for financial assurance for corrective action under §258.73.	335-13-4-.27(47)

§258.59 [Reserved]

SUBPART F -- CLOSURE AND POST-CLOSURE CARE §258.60 CLOSURE CRITERIA	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Owners or operators of all MSWLF units must install a final cover system that is designed to minimize infiltration and erosion. The final cover system must be comprised of an erosion layer underlain by an infiltration layer as follows:	335-13-4-.20 335-13-4-.20(2)
(1) The infiltration layer must be comprised of a minimum of 18 inches of earthen material that has a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than 1×10^{-5} cm/sec, whichever is less, and	335-13-4-.20(2)(a)
(2) The erosion layer must consist of a minimum 6 inches of earthen material that is capable of sustaining native plant growth.	335-13-4-.20(2)(b)
(b) The Director of an approved State may approve an alternative final cover design that includes:	335-13-4-.20(2)(c)
(1) An infiltration layer that achieves an equivalent reduction in infiltration as the infiltration layer specified in paragraph (a)(1) of this section, and	335-13-4-.20(2)(c)1.
(2) An erosion layer that provides equivalent protection from wind and water erosion as the erosion layer specified in (a)(2) of this section.	335-13-4-.20(2)(c)2.
(c) The owner or operator must prepare a written closure plan that describes the steps necessary to close all MSWLF units at any point during its active life in accordance with the cover design requirements in §258.60(a) or (b), as applicable. The closure plan, at a minimum, must include the following information:	335-13-4-.20(1)
(1) A description of the final cover, designed in accordance with §258.60(a) and the methods and procedures to be used to install the cover;	335-13-4-.20(1)(a)

PART 258 CRITERIA §258.60 CLOSURE CRITERIA (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(2) An estimate of the largest area of the MSWLF unit ever requiring a final cover as required under §258.60(a) at any time during the active life;	335-13-4-.20(1)(b)
(3) An estimate of the maximum inventory of wastes ever on-site over the active life of the landfill facility; and	335-13-4-.20(1)(c)
(4) A schedule for completing all activities necessary to satisfy the closure criteria in §258.60.	335-13-4-.20(1)(d)
(d) The owner or operator must notify the State Director that a closure plan has been prepared and placed in the operating record no later than the effective date of this part, or by the initial receipt of waste, whichever is later.	335-13-4-.20(1) 335-13-4-.29(1)(b)3. 335-13-4-.29(2)
(e) Prior to beginning closure of each MSWLF unit as specified in §258.60(f), an owner or operator must notify the State Director that a notice of the intent to close the unit has been placed in the operating record.	335-13-4-.20(5)
(f) The owner or operator must begin closure activities of each MSWLF unit no later than 30 days after the date on which the MSWLF unit receives the known final receipt of wastes or, if the MSWLF unit has remaining capacity and there is a reasonable likelihood that the MSWLF unit will receive additional wastes, no later than one year after the most recent receipt of wastes. Extensions beyond the one-year deadline for beginning closure may be granted by the Director of an approved State if the owner or operator demonstrates that the MSWLF unit has the capacity to receive additional wastes and the owner or operator has taken and will continue to take all steps necessary to prevent threats to human health and the environment from the unclosed MSWLF unit.	335-13-4-.20(6)

PART 258 CRITERIA §258.60 CLOSURE CRITERIA (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(g) The owner or operator of all MSWLF units must complete closure activities of each MSWLF unit in accordance with the closure plan within 180 days following the beginning of closure as specified in paragraph (f) of this section. Extensions of the closure period may be granted by the Director of an approved State if the owner or operator demonstrates that closure will, of necessity, take longer than 180 days and he has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed MSWLF unit.	335-13-4-.20(7)
(h) Following closure of each MSWLF unit, the owner or operator must notify the State Director that a certification, signed by an independent registered professional engineer or approved by Director of an approved State, verifying that closure has been completed in accordance with the closure plan, has been placed in the operating record.	335-13-4-.20(8)
(i)(1) Following closure of all MSWLF units, the owner or operator must record a notation on the deed to the landfill facility property, or some other instrument that is normally examined during title search, and notify the State Director that the notation has been recorded and a copy has been placed in the operating record.	335-13-4-.20(14) 335-13-4-.20(15)
(2) The notation on the deed must in perpetuity notify any potential purchaser of the property that:	335-13-4-.20(14)
(i) The land has been used as a landfill facility; and	335-13-4-.20(14)(a)
(ii) Its use is restricted under §258.61(c)(3).	335-13-4-.20(14)(b)
(j) The owner or operator may request permission from the Director of an approved State to remove the notation from the deed if all wastes are removed from the facility.	335-13-4-.20(16)

PART 258 CRITERIA §258.61 POST-CLOSURE CARE REQUIREMENTS	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(a) Following closure of each MSWLF unit, the owner or operator must conduct post-closure care. Post-closure care must be conducted for 30 years, except as provided under paragraph (b) of this section, and consist of at least the following:	335-13-4-.20(9)
(1) Maintaining the integrity and effectiveness of any final cover, including making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the final cover;	335-13-4-.20(9)(a) 335-13-4-.20(9)(b) 335-13-4-.20(9)(c) 335-13-4-.20(9)(d)
(2) Maintaining and operating the leachate collection system in accordance with the requirements in §258.40. The Director of an approved State may allow the owner or operator to stop managing leachate if the owner or operator demonstrates that leachate no longer poses a threat to human health and the environment;	335-13-4-.20(9)(g) The State Regulations do not provide for discontinuing the management of leachate and are, therefore, more stringent.
(3) Monitoring the groundwater in accordance with the requirements of subpart E of this part and maintaining the groundwater monitoring system, if applicable; and	335-13-4-.20(9)(g)
(4) Maintaining and operating the gas monitoring system in accordance with the requirements of §258.23.	335-13-4-.20(9)(g)
(b) The length of the post-closure care period may be:	335-13-4-.20(10)
(1) Decreased by the Director of an approved State if the owner or operator demonstrates that the reduced period is sufficient to protect human health and the environment and this demonstration is approved by the Director of an approved State; or	335-13-4-.20(10)(a)

PART 258 CRITERIA §258.61 POST-CLOSURE CARE REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(2) Increased by the Director of an approved State if the Director of an approved State determines that the lengthened period is necessary to protect human health and the environment.	335-13-4-.20(10)(b)
(c) The owner or operator of all MSWLF units must prepare a written post-closure plan that includes, at a minimum, the following information:	335-13-4-.20(11)
(1) A description of the monitoring and maintenance activities required in §258.61(a) for each MSWLF unit, and the frequency at which these activities will be performed;	335-13-4-.20(11)(a)
(2) Name, address, and telephone number of the person or office to contact about the facility during the post-closure period; and	335-13-4-.20(11)(b)
(3) A description of the planned uses of the property during the post-closure period. Post-closure use of the property shall not disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the monitoring systems unless necessary to comply with the requirements in this part 258.	335-13-4-.20(11)(c) 335-13-4-.20(12)
The Director of an approved State may approve any other disturbance if the owner or operator demonstrates that disturbance of the final cover, liner or other component of the containment system, including any removal of waste, will not increase the potential threat to human health or the environment.	335-13-4-.20(12) 335-13-4-.20(12)(a) 335-13-4-.20(12)(b)

PART 258 CRITERIA §258.61 POST-CLOSURE CARE REQUIREMENTS (Continued)	CITE STATE STATUTE, REGULATION, AND/OR GUIDANCE
(d) The owner or operator must notify the State Director that a post-closure plan has been prepared and placed in the operating record no later than the effective date of this part, October 9, 1993, or by the initial receipt of waste, whichever is later.	335-13-4-.20(11) 335-13-4-.29(1)(b)3. 335-13-4-.29(2)
(e) Following completion of the post-closure care period for each MSWLF unit, the owner or operator must notify the State Director that a certification, signed by an independent registered professional engineer or approved by the Director of an approved State, verifying that post-closure care has been completed in accordance with the post-closure plan, has been placed in the operating record.	335-13-4-.20(13)

§§258.62 - 258.69 [Reserved]

OFFICE OF THE ATTORNEY GENERAL

JIMMY EVANS
ATTORNEY GENERAL
STATE OF ALABAMA

ALABAMA STATE HOUSE
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AREA (205) 242-7300

TRANSMITTAL COVER SHEET

DATE 12/6/93

TIME 3:15

PLEASE DELIVER THE FOLLOWING PAGES TO:

Kelly Ewing

NUMBER OF PAGES 2 INCLUDING COVER SHEET.

THIS TRANSMITTAL IS BEING SENT BY:

NAME Craig Kneisel

FAX NO. ATTORNEY GENERAL'S OFFICE 242-4891

OFFICE OF THE ATTORNEY GENERAL

JIMMY EVANS
ATTORNEY GENERAL
STATE OF ALABAMA

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AREA (205) 242-7300

December 3, 1993

Patrick Tobin, Acting Regional Administrator
Region IV, U.S. Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, GA 30365

Dear Mr. Tobin:

I hereby certify pursuant to my authority as Attorney General that in my opinion, the laws of the State of Alabama cited in its application for a determination of permit program adequacy are contained in statutes or regulations lawfully enacted and fully effective at the time this Statement is signed. The citations to the applicable laws and regulations are provided in the enclosed regulation checklists comprising sixty-nine pages to this letter.

Sincerely,

Jimmy Evans

Jimmy Evans
Attorney General

JE/dv
0356T

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ADEM

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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FACSIMILE TRANSMITTAL

DATE: 8/3/93

TO:

NAME: Kelly Ewing

ORGANIZATION: EPA Region IV - OSW

FACSIMILE PHONE: 404-347-5205

OFFICE PHONE:

FROM:

NAME: Lynn Garthright

OFFICE PHONE: 205-271-7740

NUMBER OF PAGES TO FOLLOW: 2

ADEM FORM 223 5/93

AL-002

APPENDIX II

LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUGGESTED METHODS[5]	PQL (µg/L)[6]
Acenaphthene	83-32-9	Acenaphthylene, 1,2-dihydro-	8100	200
			8270	10
Acenaphthylene	208-96-8	Acenaphthylene	8100	200
			8270	10
Acetone	67-64-1	2-Propanone	8260	100
Acetonitrile; Methyl cyanide	75-05-8	Acetonitrile	8015	100
Acetophenone	98-86-2	Ethanone, 1-phenyl-	8270	10
2-Acetylaminofluorene; 2-AAF	53-96-3	Acetamide, N-9H-fluoren-2-yl-	8270	20
Acrolein	107-02-8	2-Propenal	8030	5
			8260	100
Acrylonitrile	107-13-1	2-Propenenitrile	8030	5
			8260	200
Aldrin	309-00-2	1,4,5,8,-Dimethanonaphthalene 1,2,3,4,10,10-hexachloro- 1,4,4a,5,8,8a-hexahydro-(1α,4α,4aβ,5α,8α,8aβ)-	8080	0.05
			8270	10
Allyl chloride	107-05-1	1-Propene, 3-chloro-	8010	5
			8260	10
4-Aminobiphenyl	92-67-1	[1,1'-Biphenyl]-4-amine	8270	20
Anthracene	120-12-7	Anthracene	8100	200
			8270	10
Antimony	(Total)	Antimony	6010	300
			7040	2000
			7041	30
Arsenic	(Total)	Arsenic	6010	500
			7060	10
			7061	20
Barium	(Total)	Barium	6010	20
			7080	1000

APPENDIX II

LIST OF HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS[1]

Common Name[2]	CAS Number[3]	CHEMICAL ABSTRACTS SERVICE INDEX NAME[4]	SUGGESTED METHODS[5]	PQL (ug/L)[6]
Benzene	71-43-2	Benzene	8020	2
			8021	0.1
			8260	5
Benzo(a)anthracene; Benzanthracene	56-55-3	Benz(a)anthracene	8100	200
			8270	10
Benzo(b)fluoranthene	205-99-2	Benz(e)acephenanthrylene	8100	200
			8270	10
Benzo(k)fluoranthene	207-08-9	Benzo(k)fluoranthene	8100	200
			8270	10
Benzo(ghi)perylene	191-24-2	Benzo(ghi)perylene	8100	200
			8270	10
Benzo(a)pyrene	50-32-8	Benzo(a)pyrene	8100	200
			8270	10
Benzyl alcohol	100-51-6	Benzenemethanol	8270	20
Beryllium	(Total)	Beryllium	6010	3
			7090	50
			7091	2
alpha-BHC	319-84-6	Cyclohexane, 1,2,3,4,5,6-hexachloro-(1α,2α,3β,4α,5β,6β)-	8080	0.05
			8270	10
beta-BHC	319-85-7	Cyclohexane, 1,2,3,4,5,6-hexachloro-(1α,2β,3α,4β,5α,6β)-	8080	0.05
			8270	20
delta-BHC	319-86-8	Cyclohexane, 1,2,3,4,5,6-hexachloro-(1α,2α,3α,4β,5α,6β)-	8080	0.1
			8270	20
gamma-BHC; Lindane	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-(1α,2α,3β,4α,5α,6β)-	8080	0.05
			8270	20
Bis(2-chloroethoxy)methane	111-91-1	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-	8110	5
			8270	10
Bis(2-chloroethyl) ether; Dichloroethyl ether	111-44-4	Ethane, 1,1'-oxybis[2-chloro-	8110	3
			8270	10
Bis(2-chloro-1-methylethyl) ether 2,2'-Dichlorodisopropyl ether; DCIP. See note 7	108-60-1	Propane, 2,2'-oxybis[1-chloro-	8110	10
			8270	10

MEMO TO THE RECORD

FROM: PAT ZWEIG, OSW

DATE: AUGUST 6, 1993

SUBJECT: ALABAMA MSWLF PERMIT PROGRAM

On August 5 Jim Kutzman talked to Sue Robertson in Alabama regarding the status of their MSWLF permit program approval. EPA has completed the review of the application and is ready to make a tentative decision to grant partial approval to Alabama. However, the state has not yet submitted the AG's certification letter. EPA could make a tentative decision based upon AL's proposed regulations if we had the AG's letter.

Jim talked with Sue to let her know that EPA probably could not give the state final "partial" approval by the effective date of the federal regs (10/0/93) unless we get the AG's letter within the next few days.

Sue understands the situation. She said that the AL Attorney General has the letter in hand but has not signed it. Sue will make sure that everyone in the state is aware of the implications of not receiving approval by 10/9. However, AL's program, once approved, will be essentially a mirror of the federal program. This means that the impact to owners/operators during the period between the effective date of the federal reg and the date the state receives approval, would be minimal.

AL-004

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

AUG 20 1993

Mr. Leigh Pegues, Director
Alabama Department of Environmental Management
1751 Congressman W. L. Dickinson Drive
Montgomery, Alabama 36130

Dear Mr. Pegues:

Thank you for your letter of July 2, 1993 transmitting Alabama's municipal solid waste landfill permit program final application. We are pleased that Alabama intends to obtain program approval.

The review process includes an initial evaluation of the final application to determine if it is administratively complete. We have performed this segment of our review, and with the exception of the Attorney General's letter of certification, all necessary components have been provided. Once the Attorney General's letter is received, the application will be determined to be administratively complete. The agency is proceeding with a more in-depth technical review of Alabama's application, and transmitted comments to the Solid Waste Section of the Land Division on August 3, 1993.

It is our understanding that Alabama does not currently have statutory authority to promulgate and enforce the financial assurance requirements contained in the federal criteria. For this reason, Alabama should request partial approval and provide a schedule that indicates when the financial assurance requirements will be included in the regulations and program.

We should be able to publish a tentative determination in the Federal Register within thirty days of receipt of the Attorney General's certification and adequate responses to the above referenced comments. Since a thirty day public comment period and possibly a public hearing are required, it takes about sixty days after the tentative decision is published for the final determination to be published in the Federal Register.

We appreciate your cooperation and look forward to working with you and your staff during this review and approval process. Please contact me if you have any questions or need assistance.

Sincerely yours,

Patrick M. Tobin

Patrick M. Tobin
Acting Regional Administrator

AL-005

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EWING:8/17/93 DOC:PEGUES DISK: C:\AL

EWING:	ZWEIG:	NEWTON:	KUTZMAN:	FRANZMATHES:	TOBIN:
J. Kelly 8-17-93	PZ 8-17-93	MTN 8/17/93	JH	JH for 8/18/93	

ADEM

ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Leigh Pegues, Director

Jim Folsom
Governor

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September 14, 1993

Kelly Ewing
Office of Solid Waste
Waste Management Division
U.S. EPA Region IV
345 Courtland St., N.E.
Atlanta, GA 30365

Dear Mr. Ewing:

RE: Your Letter Dated August 3, 1993

Enclosed is a copy of the proposed reconciled regulations and a reconciliation statement of your comments that will be on the agenda for the Environmental Management Commission's adoption on September 22, 1993. Also enclosed is a copy of the revised Program Description that addresses your comments. Please review this and let us know if the changes are satisfactory.

Upon final approval and certification of these regulations, the revised final checklists will be forwarded to the Attorney General for a final signed Statement. Upon receipt of the signed Statement, we will forward: (1) the Statement, (2) the final effective regulations and (3), an agenda for obtaining legislative authority to adopt Subtitle D's financial assurance requirements, including the minor change to the definition of solid waste. A cover letter requesting partial final approval of Alabama's solid waste permit program will accompany these documents. If you have any questions, please contact Lynn Garthright at 205/271-7740.

Sincerely,

Sue R Robertson for

Russell A. Kelly, Chief
Solid Waste Branch
Land Division

RAK/LG/clg: SSU #3723

cc: Sue R. Robertson

RECEIVED
1993
OFFICE OF SOLID WASTE

AL-006

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ALABAMA'S PROGRAM DESCRIPTION

I. INTRODUCTION

Prior to the Solid Waste Disposal Act of 1969, the Alabama Department of Public Health (ADPH) responded to open dumps on a complaint basis. Normally these complaints involved vector problems or public nuisances. For many years, this task was accomplished by two, or at times, less employees of the ADPH. On September 12, 1969, the Solid Waste Disposal Act was passed with an effective date of September 12, 1971. A statewide survey performed by ADPH personnel revealed approximately 412 open burning dumps handling all types of wastes. By September 1971, 30-40% of these burning dumps had been abolished. The remaining were issued Notices of Violations (NOV) and required to obtain a letter of approval to operate from the ADPH. The remaining approved dumps were required to operate in compliance with the 1969 Solid Waste Disposal Act. In 1980, formal permits to operate were issued to landfills by the ADPH. The Solid Waste staff at that time included approximately six employees. In 1982, a comprehensive program of environmental management for the State was established with the enactment by the Alabama Legislature of the Alabama Environmental Management Act. The law created the Alabama Environmental Management Commission and established the Alabama Department of Environmental Management (ADEM), which absorbed several commissions, agencies and programs that had been responsible for implementing environmental laws. Disposal of solid waste was transferred from the ADPH to ADEM. Collection, storage and transportation remained with the ADPH. ADEM regulations were adopted and the Solid Waste Disposal Act has been amended on several occasions. ADEM has permitted sanitary, inert, and industrial landfills from 1982 until present. The Division 13 Solid Waste Regulations have also been revised on numerous occasions. ADEM currently has authority over disposal and incineration of solid waste only. However, current pending legislation, if passed, would expand ADEM's authority to management of solid waste and include disposal, treatment, composting, recycling, transfer stations, etc. Collection and transportation would remain with the ADPH. Regulation and statutes are currently being revised to meet the minimum Subtitle D requirements which become effective October 9, 1993. Copies of the statutes, proposed regulations, and checklists are found in Attachments F. and G.

Act 89-824 (passed in May 1989) required each county and/or municipality to submit to ADEM a plan for the management of solid waste generated within its boundaries. The plans at a minimum were required to include the following:

(1) Describe and explain the general origin, and weight or volume of solid waste currently generated within the jurisdiction's boundaries.

(2) Identify current methods of collection and haulage of solid waste within the jurisdiction.

(3) Identify and describe the facilities where solid waste is currently being disposed or processed and the remaining available permitted capacity of such facilities and the capacity of such facilities and the capacity which could be made available through the reasonable expansion of such facilities.

(4) Provide a description of current or planned recycling programs and an analysis of their impact on waste generated within the jurisdiction.

(5) Address the requirements proposed under Subtitle D of the Federal Resource Conservation and Recovery Act, 42 U.S.C. Section 6941 as amended and identify and explain those actions the jurisdictions should take to assure proper management of its wastes under these requirements; thus, counties are required to address and take into consideration Subtitle D while developing their 10 year solid waste management plans.

(6) Propose procedures for the identification and elimination of unauthorized dumps in the jurisdiction.

(7) Describe and explain the general origin and weight or volume of solid waste reasonably expected to be generated within the jurisdiction annually during the next ten years.

(8) Provide for the development or expansion of solid waste management systems in a manner that is consistent with the needs of the area; taking into account planning, zoning, population and development estimates, and economics of the jurisdiction and the protection of air, water, landfill and other natural resources.

(9) Identify any current agreements between the jurisdiction and other units of local government or public authorities for the joint use of solid waste processing or disposal facilities and evaluate the need for and feasibility of entering into such agreements in the future.

(10) Identify any current contractual agreements with private entities for the collection, processing or disposal of solid waste and evaluate the need for and feasibility of entering into such agreements in the future.

(11) Identify the general location within a county where solid waste processing or disposal facilities and recycling programs may be located, and identify the site of each facility if a site has already been chosen.

(12) For any facility expected to serve the jurisdiction's future needs that is located or is proposed to be located outside the jurisdiction, the plan shall explain in detail the reasons for selecting such a facility.

(13) The plan shall include such other information as ADEM may require by regulation.

II. JURISDICTION AND RESPONSIBILITIES

The Alabama Department of Environmental Management as established by §§22-22A-1, et. seq., Code of Alabama 1975, is the sole agency responsible for the disposal of solid waste, except within the boundaries of the designated tribal land of the Poarch Band of Creek Indians in Escambia County. The Alabama Department of Public Health has sole authority over the collection, storage, and transportation of solid waste; however, ADPH and ADEM share a role in regulating and abating illegal or unauthorized disposal areas.

ADEM is centrally located in Montgomery with field offices strategically stationed in Decatur, Birmingham, and Mobile. Thus, the core functions of Alabama's solid waste program lie within the central office, with support functions available from the field offices.

The Land Division of ADEM is responsible for the Solid Waste program which is placed within the Solid Waste Branch. The Solid Waste Branch's functions include the regulation of medical wastes and promotion of recycling activities as well as the compliance and enforcement activities for landfills. The Engineering Services Branch provides support for the permitting of landfills. The Hydrogeology support is provided by the Groundwater Branch of the Water Division. Legal support is provided by the Office of General Counsel. Organization charts illustrating ADEM's and the Land Division's organization are provided in Attachment A.

Responsibilities for the Solid Waste Program are defined below:

(a) **Land Division Chief** - responsible for all permitting and compliance activities/decisions. Makes final recommendations to the Director concerning permits and compliance issues. Further responsible for new legislation and regulation revisions. Directly supervises Branch Chiefs.

(b) **Solid Waste Branch Chief** - responsible for coordination between the Solid Waste Branch, Engineering Services Branch, Field Operations and Groundwater Branch. Oversees compliance inspections, Special Waste Unit and advises Land Division Chief concerning compliance issues, new legislation and regulations revisions. Supervises Compliance Section Chief and Solid Waste Branch Staff.

(c) **Compliance Section Chief** - Mostly responsible for supervising field inspectors. Also supervises Special Waste Unit Chief. Advises Solid Waste Branch Chief concerning compliance issues and trains compliance staff.

(d) **Special Waste Unit Chief** - Coordinates and supervises the Special Waste Unit. Responsible for approving non-hazardous industrial waste for disposal and implementing the Medical Waste Program. Medical Waste Program includes both compliance and permitting issues. Inspectors in this unit are trained to perform landfill inspections.

(e) **Field Operations Division** - Provides field support for sampling monitoring wells, sedimentation ponds, leachate ponds, etc. at existing and proposed landfills.

(f) **Office of General Counsel** - Provides legal interpretations of existing statutes, serves as hearing officers during ADEM public hearings and defends the Solid Waste Branch in case of legal suits. Also advises on legal issues concerning new legislation and regulations.

(g) **Engineering Services Branch** - Implements the permitting programs for landfills. Gives technical guidance concerning compliance matters, performs on-site reviews to observe construction and operation of landfills, and coordinates with Solid Waste personnel. Also advises Land Division Chief concerning permitting decisions.

(h) **Hydrogeology Unit** - Provide reports and recommendations to the Solid Waste Branch and Engineering Services Branch concerning the geology and hydrogeology of existing and proposed landfills.

III. NUMBER OF MSWLFS

There are currently 95 MSWLFs (sanitary) permitted to receive household solid waste. Projections show that 75-85 of these MSWLFs will close or cease accepting household municipal solid waste by October 9, 1993. Three existing MSWLF's may meet the Subtitle D design criteria at this time. Three new regional MSWLFs have been permitted and should also meet Subtitle D. In 1969, 412 open burning dumps were inventoried. It is not clear if they all were accepting municipal solid waste.

IV. STAFF RESOURCES FOR MSWLF PERMIT PROGRAM IMPLEMENTATION

There is a total of 26 solid waste work years devoted to the entire solid waste program. This includes legal, clerical and field support. The following illustrates the core personnel that support the permitting, compliance, and enforcement aspects of Alabama's solid waste program.

LAND DIVISION CHIEF
SUE R. ROBERTSON, B.S.ChE., M.S.ChE., P.E.

	Work Years
Solid Waste Branch Chief, Russell A. Kelly, B.S.C.E., P.E.	1.0
Solid Waste Compliance Section Chief, John Narramore, M.P.A. Walter Nichols, M.P.A. (Recycling and Compliance Field Inspector) Allen Shehane, B.S. (Compliance Field Inspector) Archie Pennington, B.S. (Compliance Field Inspector) Andy Baker, B.S. (Compliance Field Inspector) Jeannie Birks, B.S. (Compliance Field Inspector)	6.0
Special Waste Unit Chief, Lindsay Mothershed, B.S. Ben Norman, B.S. (Petroleum Contaminated Waste) Yvette Williamson, B.S. (Special Handling Waste) Bruce Garrett, B.S. (Medical Waste)	3.5
Engineering Services Branch Chief, Wm. Gerald Hardy, B.S.ChE., P.E. Glen Smith, B.S.C.E., P.E. Rao Malladi, B.S.C.E., M.S.C.E. Bill Wood, B.S.E. Gary Hawkins, B.S.A.E. Scott Hutchinson, B.S.C.E., E.I.T.	5.3
Hydrogeology Unit (Water Division's Groundwater Branch) Chief, Fred C. Mason, B.S., Geology Enid Bittner, Ph.D., Geology Joel Payton, B.S., Geology Dale Case, B.S., Geology Ron Hicks, B.S., Geology David Lavoy, B.S., Geology Dennis Hallman, B.S., Geology Kathy Keller, B.S., Geology	2.25

Additionally, the following two persons perform solid waste inspections but work from the Birmingham Field Office:

	Work Years
Brian Laney, B.S. Mike Griffin, B.S.	2.0

V. PERMITTING PROCEDURES

ADEM's solid waste disposal facility (landfill) permitting program was initiated with ADEM's formation in 1982. Prior to that date, solid waste disposal facilities had been regulated by the Alabama Department of Public Health. The landfill permitting program established that the effective life of a permit was not to exceed five years. Thus, most existing landfill permits were reissued in 1987 that would be effective until 1992.

In 1988, ADEM revised its solid waste regulations to incorporate many of the provisions of the proposed Subtitle D regulations at that time. These revisions included siting standards, the requirement for a single liner and leachate collection system, groundwater monitoring provisions, closure/post-closure, etc. Therefore, new landfills for MSW after 1988, were required to comply with these requirements.

As previously discussed, in May of 1989, the Alabama Legislature passed a law erecting a two year moratorium on the siting of any new solid waste management facilities. During this two year moratorium, ADEM was required to develop a comprehensive statewide solid waste management plan that was to address the solid waste management needs of all counties for a ten year period.

Upon promulgation of the Subtitle D regulations on October 9, 1991, ADEM Land Division was faced with the necessity of educating the regulated community on the new requirements. To educate the regulated community, ADEM held two one-day seminars beginning in November 1991 on the requirements of "Subtitle D". This included permitting procedures for new, expired and expiring landfill permits (see Attachment B.). Also, a form letter was developed (see Attachment C.) to be sent to all existing permitted MSW landfills requesting a permit renewal. This letter outlined the basic requirements and time frames for submitting revised permit applications and/or closure plans.

In August 1992, after learning that EPA would allow vertical expansions of existing MSW landfills, ADEM mailed a form letter (see Attachment C.) to all existing permitted MSW landfills. This letter outlined the procedures for requesting a vertical expansion. The letter also stated the requirements to be met in order to be a candidate for vertical expansion and explained the liabilities to be incurred by disposing of MSW on an existing landfill after October 8, 1993.

The statewide elections held in November 1992 resulted in many new officials being elected to office at the local, city, and county level. In an effort to educate these "new" officials and others, ADEM again held a series of seminars on solid waste management issues (see Attachment B.). These one-day seminars included a discussion of the status of Subtitle D as well as a discussion of the solid waste permitting procedures.

The solid waste permitting procedures developed by ADEM's Land Division in 1991 are included in Attachment D. These procedures include each step in the process and a conservative time estimate for the completion of each step.

VI. COMPLIANCE MONITORING REQUIREMENTS

Overall statutory authority for the regulations is shown in Rule 335-13-1-.02, pursuant to the Code of Alabama 1975, §§ 22-27-7, 22-22A-5, and 22-22A-8. Compliance monitoring is conducted in accordance with standards set forth in Division 13 regulations pursuant to the Solid Waste Disposal Act of 1969. Rule 335-13-6-.01 of the ADEM Administrative Code, Division 13, provides for the unannounced periodic inspections of all solid waste facilities as well as right-of-entry. Additionally, Rule 335-13-4-.12 requires that design plans, operational reports for construction, maintenance, operation, and closure be prepared in accordance with Rule 335-13-5-.02. This information is part of a permit application and is on record with the permit file. Other records required are groundwater monitoring reports, 335-13-4(4); explosive gas monitoring reports, 335-13-4-.16(6)(b); and records of average daily volume, 335-13-4-.22(18). Additionally, industrial wastes disposed of at permitted landfills must be certified non-hazardous. These records are kept on file; renewal is annually. Rule 335-13-4-.26 describes procedures for the management and disposal of special wastes, including industrial wastes.

An inspection will include checking for compliance with the operational and management requirements under Rules 335-13-4-.14, 335-13-4-.16, 335-13-4-.19, 335-13-4-.21, 335-13-4-.22, 335-13-5-.02, and 335-13-5-.05. A copy of the checklist is shown in Attachment E. The filed inspection, combined with file reviews, insures that compliance monitoring is adequate in determining obedience with program requirements. Under current regulations, monitoring for explosive gas is done annually unless otherwise required. Results must be submitted to the ADEM for evaluation. Under current regulations, groundwater monitoring is performed bi-annually; however, the regulations will be modified to be consistent with Subtitle "D". Monitoring parameters are specified in the permit, and proposed Rules 335-13-4-.14 and 335-13-4-.27. Also, additional testing and sampling may be done if review of submitted data or field conditions reveal the need. These activities are usually coordinated with the ADEM Field Operations Division in order to insure that proper techniques are used and the chain of custody is maintained.

Enforcement Authority

Proposed Federal Section 239.8(a) & (b)

Section 22-22A-5(10), Code of Alabama 1975 authorizes the Alabama Department of Environmental Management (ADEM) to "issue, modify, suspend or revoke orders, citations, notices of violation, licenses,

certifications or permits". Orders issued under authority of this subpart (i.e., orders without civil penalities) may be issued immediately without a prior hearing. Section 22-22A-5(12) authorizes ADEM "to enforce all provisions of law identified in subdivision (1) of this section [which include Article 1 of the Solid Wastes Disposal Act], and to file legal actions in the name of the department. . . ." (Bracketed material added).

Section 22-27-2(6), Code of Alabama 1975 defines an unauthorized dump as "any solid waste disposal site which does not meet the regulatory provisions of the [Solid Wastes Disposal Act]". Section 22-27-4(b) declares unauthorized dumps to be a public nuisance per se and a menace to public health that may be enjoined through an action by ADEM in circuit court. Section 22-22A-5(19) also authorizes ADEM to commence a civil action to enjoin the violation or threatened violation of any provision of law, any rule, regulation or standard promulgated by ADEM, any provision of any order, or any condition of any permit, license, certification or variance issued by ADEM.

Next, section 22-27-7 grants ADEM such regulatory control over the management of solid wastes as may be necessary to enforce the requirements of ADEM, and it authorizes ADEM to adopt such rules regulations as may be needed to meet the requirements of the article.

Proposed Federal Section 239.8(c)

Section 22-22A-5(18)(a) authorizes ADEM to issue an administrative order assessing civil penalties (up to $25,000.00 per violation) for a violation of any provision of law, any rule, regulation or standard promulgated by ADEM, any provision of any order, or any condition of any permit, license, certification or variance issued by ADEM. Additionally, section 22-22A-5(18)(b) authorizes ADEM to commence a civil action to recover a civil penalty for the violation of any provision of law, any rule, regulation or standard promulgated by ADEM, any provision of any order, or any condition of any permit, license, certification or variance issued by ADEM. Finally, section 22-22A-5(20) authorizes ADEM to take any action necessary for the implementation and enforcement of this Chapter.

Intervention in Civil Enforcement Proceedings

Section 22-22A-5(18)(b), which authorizes ADEM to commence a civil action to recover civil penalties for any statutory or regulatory violation or the violation of any permit, order, license, certificate, standard or variance, allows any person having an interest which is or may be adversely affected to intervene in the civil action as a matter or right. Section 22-22A-5(17), which authorizes ADEM to commence a civil action to enjoin any of the aforesaid violations, allows any person having an interest which is or may be adversely affected to intervene as a matter of right.

Section 22-22A-7(c) entitles any person aggrieved by an administrative action (i.e., the issuance, denial, modification, or revocation of a Notice of Violation, order, permit citation, licenses, certification, or variance) to an administrative hearing before the Environmental Management Commission.

Finally, Rule 24(a) of the Alabama Rules of Civil Procedure is virtually identical to Rule 24(a), F.R.C.P.

VII. DEMONSTRATION OF COMPLIANCE WITH PART 258

Subpart A - General

Section 258.1 Purpose, Scope, and Applicability

The purpose of this subpart is to establish minimum national criteria under the Resource Conservation and Recovery Act (RCRA or the Act), as amended, for all municipal solid waste landfill (MSWLF) units and under the Clear Water Act, as amended, for municipal solid waste landfills that are used to dispose of sewage sludge. These minimum national criteria ensure the protection of human health and the environment.

ADEM Administrative Code Rule, 335-13-1-.01 Purpose. states "The purpose of this Division is to establish minimum criteria for use under the Act, as amended, for the processing, recycling and disposal of solid waste and the design, location and operation of solid waste disposal facilities". ADEM Administrative Code, Rule 335-13-1-.02 Statutory Authority. states "The Department is authorized to promulgate these rules and regulations under and by virtue of authority granted in the Code of Alabama 1975, §§22-27-7, 22-22A-5 and 22-22A-8".

ADEM current regulations apply to all landfills including municipal solid waste, construction/demolition debris and non-hazardous industrial waste landfills. Subtitle D applies to MSWLF's only. Design criteria, operational criteria, monitoring criteria, etc. are different for the three types of landfills under ADEM regulations; however, they do apply to some degree. Subtitle D allows for some exemptions (i.e., small quantity, annual interruptions, 25 inches or less annual rainfall). These exemptions are not allowed under ADEM regulations. Closure for landfills receiving waste after October 9, 1991, but stop receiving waste before October 9, 1993 are similar under Subtitle D and ADEM regulations. This includes post-closure care and monitoring.

Section 258.2 - Definitions

Definitions under Subtitle D §258.2 are similar to definitions found in current ADEM Administrative Code R. 335-13-1-.03. Any definitions in §258.2 not found under Rule 335-13-1-.03 are currently being added. Major language differences are also being corrected in ADEM's proposed revised regulations in an effort to be consistent with Subtitle D §258.2.

A comparison of the definitions can be found with the attached checklists to the legal certification letter found in Attachment F., and proposed revised regulations located in Attachment G.

Section 258.3 Consideration of Other Laws

Both the Clear Water Act and Clean Air Act must be considered during the permitting and operation of solid waste disposal facilities. Under the Clean Water Act, a facility or practice shall be located so as to protect water quality. The ADEM Administrative Code R. states:

> Rule 335-13-4-.01(3)(b). A facility or practice shall not cause a discharge of pollutants into waters of the State, including wetlands, that is in violation of the requirements of the National Pollutant Discharge Elimination System (NPDES), Alabama Water Pollution Control Act, Code of Alabama 1975, §§22-22-1 to 22-22-14.
>
> Rule 335-13-4-.01(3)(c). A facility or practice shall not cause a discharge of dredged materials or fill material into waters of the State that is in violation of the requirements under Section 404 of the Clean Water Act, as amended.
>
> Rule 335-13-4-.01 (3)(d). A facility or practice shall not cause non-point source pollution of waters of the State, including wetlands, that violates any requirements of an areawide and Statewide water quality management plan that has been approved under the Alabama Water Pollution Control Act.
>
> Rule 335-13-4-.01(4). A facility or practice shall not allow an unpermitted discharge to the waters of the State as defined by the Alabama Water Pollution Control Act.
>
> Also, new stormwater regulations require additional stormwater runoff permits for landfills accepting industrial waste and general permits for construction of sites larger than five acres. A wellhead protection program for the State of Alabama has been approved by EPA. This program encourages and will eventually require that all water systems develop a wellhead protection plan.

Rule 335-13-4-.21(1). Open burning of solid waste at any landfill, sanitary landfill or other disposal facility shall not occur unless approved by ADEM.

The Air Division of ADEM regulates/permits emissions from municipal solid waste incinerators, solid waste air curtain destructions, etc.

Subpart B - Locational Criteria

(1) **§258.10 - Airport Safety**

Rule 335-13-4-.01(5) - prohibits siting any MSWLF unit within 10,000 feet of any airport runway end. The 5000 foot buffer for piston-type aircraft is not allowed under ADEM regulations. The 10,000 foot buffer is required for both turbo-jet and piston-type aircraft.

(2) **§258.10 - Floodplains**

Rule 335-13-4-.01(1) is consistent with §258.10.

(3) **§258.12 - Wetlands**

Existing Rules 335-13-4-.01(3)(e) and (3)(f) prohibit disposal facilities in wetlands. Subtitle D allows for mitigation of wetlands under certain conditions.

(4) **§258.13 - Fault Areas**

Rule 335-13-4-.01(6) - This rule is proposed to be modified to reflect Subtitle D language.

(5) **§258.14 - Seismic Impact Zones**

Rule 335-13-4-.01(6) - This rule is proposed to be modified to reflect Subtitle D language.

(6) **§258.15 - Unstable Areas**

Rule 335-13-4-.01(6) - This rule is proposed to be modified to reflect Subtitle D language.

(7) **§258.16 Closure of Existing Units**

Rule 335-13-4-.20 - Closure is very similar under ADEM and Subtitle D. There are some language differences and ADEM regulations are proposed to be modified to reflect the minimum Subtitle D requirements.

All of the location restrictions under ADEM apply to construction/demolition debris landfills and industrial landfills in addition to municipal solid waste landfills. Subtitle D applies only to MSWLF's. ADEM regulations, where deficient, are being revised to reflect minimum Subtitle D criteria. ADEM regulations are also more stringent in some areas concerning location restrictions (i.e. Rule 335-13-4-.01(4)(a)). The bottom elevation of solid waste liner systems shall be a minimum of five feet above the seasonal high groundwater table or bedrock or as determined by ADEM under Rule 335-13-4-.01(7). Facilities shall not be located in archaeologically or historically sensitive areas as determined by the Alabama Historical Commission.

Rule 335-13-4-.01 applies to both new and existing MSWLF units. New units must demonstrate compliance with the siting standards (locational restrictions) in the permit application. Existing units should presently be in compliance with these standards since State siting standards were equivalent with Federal standards since 1988. However, existing units must continue to demonstrate compliance with these standards during the permit renewal process.

Subpart C - Operating Criteria

(1) **§258.20 Procedures for Excluding Hazardous Waste**

These requirements are essentially the same as current ADEM regulations; however, they are proposed to be modified to include PCBs. Current ADEM regulations also set forth additional reporting information for permittees receiving waste from outside the State.

(2) **§258.21 Cover Material Requirements**

Rule 335-13-4-.22(1)(a) is consistent with §258.21; however, ADEM is more stringent in not allowing the granting of waivers from the regulations due to seasonal weather conditions since the climate of this State does not exhibit extreme seasonal climatic changes.

(3) **§258.22 Disease Vector Control**

Rule 335-13-4-.22(12)is being modified to be consistent with §258.22.

(4) **§258.23 Explosive Gas Control**

Rule 335-13-4-.16 is being modified to be consistent with §258.23. This Rule is more stringent than Subtitle D in that explosive gas monitoring is extended to C/DLFs and ILFs.

(5) **§258.24 Air Criteria**

Existing Rule 335-13-4-.21(1) is consistent with §258.24(b). Rule 335-13-4-.22(23) is proposed to be added to be consistent with §258.24(a).

(6) **§258.25 Access Requirements**

Existing Rule 335-13-4-.19 is proposed to be modified to be consistent with §258.25.

(7) **§258.26 Run-on/Run-off Control**

Rule 335-13-4-.17 is proposed to be modified to be consistent with §258.26; however, ADEM is more stringent in adding language to include closed portions of the landfill, as well as the active portions.

(8) **§258.27 Surface Water Requirements**

Existing Rule 335-13-4-.01 is consistent with §258.27.

(9) **§258.28 Liquids Restrictions**

Rule 335-13-4-.22(20) is proposed to be added to be consistent with §258.28.

(10) **§258.29 Recordkeeping Requirements**

Rule 335-13-4-.29 is proposed to be added to be consistent with §258.29.

Subpart D - Design Criteria; §258.40

The design criteria for MSWLF's in Alabama will be the same as Subtitle D in the proposed revised regulations. The major areas where Alabama will be more stringent will be in specifying a minimum 5 foot separation between the bottom of the liner system and the top of bedrock and/or the seasonal high groundwater elevation. The other more stringent area is in the requirement for liners. The proposed revised regulations will state that multiple liners, including composite liners, may be required if determined necessary by ADEM.

Subpart E - Groundwater Monitoring

ADEM is being more stringent by establishing the applicability date for groundwater monitoring compliance to be October 9, 1993. Existing regulations have required groundwater monitoring at sanitary (MSWLF) landfills since 1988.

The following Rules are proposed to be added to be consistent with §§258.50-258.58 as follows:

§258.50 Applicability	Rule 335-13-4-.27(1) through (6)
§258.51 Groundwater Monitoring System	Rule 335-13-4-.27(7) through (10)
§258.53 Groundwater Sampling and Analysis	Rule 335-13-4-.27(11) through (19)
§258.54 Detection Monitoring Program	Rule 335-13-4-.27(20) through (22)
§258.55 Assessment Monitoring Program	Rule 335-13-4-.27(23) through (32)
§258.56 Assessment of Corrective Measures	Rule 335-13-4-.27(33) through (36)
§258.57 Selection of Remedy Rule	Rule 335-13-4-.27(37) through (41)
§258.58 Implementation of the Corrective Action Program	Rule 335-13-4-.27(42) through (48)

Subpart F - Closure and Post-Closure Care

ADEM is proposing to modify the existing regulations to be consistent with §258.60 and §258.61 under Rules 335-13-4-.20 and 335-13-4-.29. ADEM is more stringent than Subtitle D in applying closure and post-closure care requirements to all landfills, not just MSWLFs.

ADEM's existing regulations are more explicit and/or stringent than Subtitle D in the following ways:

(1) Rule 335-13-4-.20(3) describes final soil cover grading fully to include slope requirements.

(2) Rule 335-13-4-.20(4) disallows deep rooted vegetation as a form of vegetative cover.

(3) In the proposed regulations, ADEM will not allow an owner or operator to stop managing leachate as set forth under §258.61(a)(2).

(4) In the proposed regulations, ADEM will require detail design drawings for closure of existing and proposed landfill units.

Subpart G - Financial Assurance Criteria

The effective date of the federal regulations under §258.70 is April 9, 1994 (except state and federal sites which are exempt). There are no State sites in Alabama and there are four federal sites presently operating (Anniston Army Depot, Ft. McClellan, Redstone Arsenal and Ft. Rucker). Ft. McClellan is the only federal facility that will remain open after October 9, 1993. All other facilities in Alabama will be subject to Subpart G on April 9, 1994.

At this time, ADEM is reserving Rule 335-13-4-.28 for financial assurance until statutory authority is obtained. All references to financial assurance in ADEM's proposed regulations defer to the federal regulations.

LR#242

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
LAND DIVISION - SOLID WASTE PROGRAM

CHAPTER 8
PROCEDURES FOR VARIANCES AND APPEALS

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335-13-8-.01 **Variances.** The Department may grant individual variances from the specific provisions of Division 13 based upon the procedures of 335-13-8-.02 through 335-13-8-.05 whenever it is found by the Department, upon presentation of adequate proof, that non-compliance with Division 13 will not threaten the public health or unreasonably create environmental pollution.
Author:
Statutory Authority: Code of Alabama 1975, §22-27-7.
History: Effective: November 18, 1981; Amended: July 21, 1988.

335-13-8-.02 **Petition for Variance.** Any person may request a variance from specific provisions of Division 13 by filing a Petition for Variance with the Department. Specific requests concerning solid waste landfills for inert waste such as building debris, stumps, limbs and similar type waste shall be in accordance with 13-5-.02(8). To enable the Department to rule on the Petition for Variance, the following information, where determined applicable by the Department, shall be included in the petition:

(1) A clear and complete statement of the precise extent of the relief sought including specific identification of the particular provisions of the regulations from which the variance is sought;

(2) The status of the solid waste facility to include location and type of construction.

(3) A description of the business or activity of the petitioner to include a remedial flow chart showing how the waste is generated.

(4) A chemical analysis of the waste involved and the quantity and types of materials used in the process or activity for which the variance is requested.

(5) An assessment, with supporting factual information, of the impact that the variance will impose on the public health and the environment in the affected area.

(6) A statement of the measures to be undertaken during the period of the variance to minimize the impact of the discharge of contaminants and an alternate plan for the safe disposal of the waste in the event that the measures for which the variance is granted are not achieved.

(7) A concise factual statement of the reasons the petitioner believes that non-compliance with the particular provisions of Division 13 will not threaten the public health or unreasonably create environmental pollution.

(8) The failure to satisfy the requirements of this rule, to the extent that the Department is not reasonably informed of the petitioner's circumstance, will render the Petition for Variance subject to dismissal for inadequacy.
Author:
Statutory Authority: Code of Alabama 1975, §22-27-7.
History: Effective: November 18, 1981; Amended: July 21, 1988.

335-13-8-.03 Extension of Prior or Existing Variance. A petition to extend a prior or existing variance granted by the Department shall be commenced by filing a Petition for Variance with the Department in accordance with the requirements of 335-13-8-.02.

(1) To the extent that the information required by 335-13-8-.02 has been included in the prior Petition for Variance for which extension is sought, a submission of that information shall not be required provided that the petition shall request the incorporation of the record, opinion and order in the prior proceeding into the new petition.

(2) A petition to extend a prior or existing variance shall be a new petition for Variance before the Department and shall be subject to all of the requirements of this Division except as provided in 335-13-8-.03(1).
Author:
Statutory Authority: Code of Alabama 1975, §22-27-7.
History: Effective: November 18, 1981; Amended: July 21, 1988.

335-13-8-.04 **Department Action on Petitions for Variance.** On receipt of a Variance Petition the Department will authorize one of the following actions, as they shall determine:

(1) The petition may be dismissed if the Department determines that it is not adequate under 335-13-8-.02.

(2) The Department may enter an order for additional information in support of the variance petition.

(3) The Department may publish notice of the variance petition in accordance with 13-5-.03

(4) The Department may authorize a public hearing on the petition in accordance with 13-5-.04.

(5) The Department may grant the variance as petitioned or by imposing such conditions as this Division may require, including the establishment of schedules of compliance and monitoring requirements.

(6) The Department may deny the petition. If such a denial is made, the Department shall notify the petitioner in writing the reasons for denial and outline procedures for appeal.
Author:
Statutory Authority: Code of Alabama 1975, §22-27-7.
History: Effective: November 18, 1981; Amended: July 21, 1988

335-13-8-.05 **Termination of Variance.** Any variance granted by the Department may be terminated by the Department whenever the Department finds, after notice and opportunity for hearing, that the petitioner is in violation of any requirement, condition, schedule, limitation or any other provision of the variance or that operation under the variance does not meet the minimum requirements established by state and federal laws and regulations or is unreasonably threatening the public health.
Author:
Statutory Authority: Code of Alabama 1975, §22-27-7.
History: Effective: November 18, 1981; Amended: July 21, 1988.

335-13-8-.06 **Communications.** All official communications, reports, and correspondence concerning this Division shall be addressed to the ADEM, Land Division, 1751 Congressman W. L. Dickinson Drive, Montgomery, Alabama 36130.
Author:
Statutory Authority: Code of Alabama 1975, §22-27-7.
History: Effective: November 18, 1981; Amended: July 21, 1988.

335-13-8-.07 **Penalty of Violations.** No agency or person shall violate any of the provisions of these rules and regulations. Violation of these rules and regulations shall be deemed to be a violation of the Act, Code of Ala. 1975, § 22-27-7, and shall be punishable as provided therein or by other applicable penalties which may be more stringent.
Author:
Statutory Authority: Code of Alabama 1975, §§ 22-22A-5, 22-27- .
History: Effective: November 18, 1981; Amended: July 21, 1988.

335-13-8-.08 **Appeals.** Any person aggrieved by any ruling of the Department has the right of appeal in accordance with procedures promulgated by the Department.
Author:
Statutory Authority: Code of Alabama 1975, §22-22A-7.
History: Effective: November 18, 1981; Amended: July 21, 1988.

335-13-8-.09 **Severability.** The Chapters, rules, paragraphs and provisions of this Division are severable. Should any portion thereof be ruled unconstitutional or

unenforceable by any court, the said ruling shall not affect any other provisions of this Division not ruled upon.
Author:
Statutory Authority: Code of Alabama 1975
History:

335-13-8-.10 Repealer. All rules and regulations promulgated and adopted by the Department which are in conflict with this Division or any provision thereof are hereby expressly repealed. This Division is intended to be comprehensive and include all the regulations of the Department dealing with solid waste management as enforced by the Solid Waste Branch of the Land Division.
Author:
Statutory Authority: Code of Alabama 1975, §22-27-7.
History: Effective: November 18, 1981; Amended: July 21, 1988.

335-13-8-.11 Effective Date. This Division shall be in full force and effected on October 2, 1990.
Author:
Statutory Authority: Code of Alabama 1975.
History: Effective: November 18, 1981; Amended: July 21, 1988; October 2, 1990.

EPA COMMENTS/RESPONSES

COMMENT
THE DEFINITION OF "SOLID WASTE" FOUND IN THE STATE REGULATIONS AT 355-13-1-.03 INCLUDES ADDITIONAL EXCLUSIONS AS INDICATED IN THE FOLLOWING QUOTATION FROM THE STATE DEFINITION. "ALSO EXCLUDED FROM THIS DEFINITION ARE WASTES FROM SILVICULTURAL OPERATIONS, LAND APPLICATIONS OF CROP RESIDUES, ANIMAL MANURE AND ASH RESULTING EXCLUSIVELY FROM THE COMBUSTION OF FOSSIL FUELS OR WOOD DURING NORMAL AGRICULTURAL OPERATIONS OR MINING REFUSE AS DEFINED AND REGULATED PURSUANT TO THE ALABAMA MINING ACT." WHILE THESE EXCLUSIONS MAY NOT BE AFFECTED BY THE FEDERAL MSWLF CRITERIA, IT IS IMPORTANT THAT THE STATE DEFINITION OF SOLID WASTE IS CONSISTENT WITH THE FEDERAL DEFINITION FOUND IN RCRA TO AVOID CONFUSION IN THE IDENTIFICATION OF SOLID WASTE FOR THE PURPOSES OF BOTH SUBTITLE C AND SUBTITLE D.

RESPONSE
Some of the exclusions are currently required by Alabama law and must be included until statutes are changed. Other exclusions are intended to tailor the definition to state needs. Should the Federal criteria expand to include the state exclusions, the state statutes and regulations would be revised at that time. The definition of solid waste under Alabama's hazardous waste law has been determined by the EPA to be adequate to determine when waste is subject to Subtitle C criteria.

COMMENT
PARAGRAPH 335-13-4-.01(1) SHOULD BE CHANGED TO ENSURE PROTECTION OF "HUMAN HEALTH AND THE ENVIRONMENT."

RESPONSE
Rule revised to reflect change.

COMMENT
THE CITATION, 335-13-4-.21(8), APPEARS TO HAVE BEEN ACCIDENTALLY DELETED IN THE PROPOSED REGULATIONS.

RESPONSE
This Regulation was not deleted; it was moved to Rule 335-13-4-.22(23).

COMMENT
PARAGRAPH 335-13-4-.22(20) (b) SHOULD BE CHANGED TO CLARIFY THAT A FLEXIBLE MEMBRANE LINER IS REQUIRED FOR LEACHATE OR GAS CONDENSATE TO BE PLACED IN THE LANDFILL.

RESPONSE
The Department has determined that if an owner/operator has demonstrated the equivalency of an alternative liner design for protecting groundwater, it may be considered for leachate or gas condensate recirculation.

EPA COMMENTS/RESPONSES

COMMENT
IN TABLE 1 OF 335-13-4-.18, 1, 1, 1- TRICHLOROETHANE SHOULD BE CHANGED TO 1,1,1-TRICHLOROMETHANE.

RESPONSE
Correction noted and made.

COMMENT
IN PARAGRAPH 335-13-4-.27(2), THE WORD "WAIVED" SHOULD BE CHANGED TO "SUSPENDED" TO AVOID THE IMPRESSION OF A PERMANENT OR IRREVOCABLE EXEMPTION THAT MAY BE GIVEN BY THE WORD "WAIVED".

RESPONSE
Rule revised to reflect change.

COMMENT
THE STATE SHOULD PROVIDE AN EXPLANATION IN THE NARRATIVE PORTION OF THE APPLICATION OF WHEN FACILITIES, INCLUDING EXISTING FACILITIES, MUST NOTIFY THE STATE THAT A CLOSURE PLAN HAS BEEN PREPARED, OR SPECIFY A DATE THAT IS CONSISTENT WITH THE FEDERAL CRITERIA IN THE PROPOSED REGULATIONS.

RESPONSE
Rule 335-13-4-.20 is revised to reflect 258.60(d) and 258.61(d).

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
LAND DIVISION - SOLID WASTE PROGRAM

CHAPTER 335-13-1
GENERAL PROVISIONS

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335-13-1-.13 Open Dump or Unauthorized Dump Closing

335-13-1-.01 Purpose. The purpose of this Division is to establish minimum criteria for use under the Act, as amended, for the processing, recycling and disposal of solid waste and the design, location and operation of ~~solid-waste-disposal-facilities~~ landfill units.
Author:
Statutory Authority: Code of Alabama 1975, §22-27-7.
History: November 18, 1981; Amended: July 21, 1988.

335-13-1-.02 Statutory Authority. The Department is authorized to promulgate these rules and regulations under and by virtue of authority granted in the Code of Alabama 1975, §§22-27-7, 22-22A-5 and 22-22A-8.
Author:
Statutory Authority: Code of Alabama 1975, §§22-27-7, 22-22A-5 and 22-22A-8.
History: November 18, 1981; Amended: July 21, 1988.

335-13-1-.03 Definitions. For the purpose of these rules and regulations, the following words and phrases shall have the meanings ascribed to them in this Rule and as ascribed by law unless the context of the regulations indicate differently.

Act - the "Solid Waste Disposal Act", Act No. 771 (Regular Session, 1969), as amended by Act No. 2247 (Regular Session, 1971) Code of Alabama 1975, §22-27-1 et. seq.

Active life - the period of operation beginning with the initial receipt of solid waste and ending at completion of closure activities in accordance with the applicable requirements of Rule 335-13-4-.20.

Active portion (or Active footprint) - that part of a facility or unit that has received or is receiving wastes and that has not been closed in accordance with the applicable requirements of Rule 335-13-4-.20.

Agency - any controlling agency, public or private, elected, appointed or volunteer utilizing methods approved by the State Health Department, for the purpose of regulating ~~controlling and supervising the collection and/or disposal of solid waste~~ the collection of solid wastes, and approved by the Department, for regulating the disposal of solid wastes. (Act 1969, No. 771, p. 1373, §1.)

Ambient - normal atmospheric conditions.

Animal Carcasses - see Medical Waste.

Annular Space of a Well - the space between the bore hole and the casing.

Aquifer - a geologic formation, group of formations or part of a formation capable of yielding a significant amount of groundwater to wells, springs or waters of the State.

Airport - public-use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.

Areas Susceptible To Mass Movement - those areas of influence (i.e., areas characterized as having an active or substantial possibility of mass movement) where the movement of earth material at, beneath, or adjacent to the landfill unit, because of natural or man-induced events, results in the downslope transport of soil and rock material by means of gravitational influence. Areas of mass movement include, but are not limited to, landslides, avalanches, debris slides and flows, soil fluctuation, block sliding, and rock fall.

Ashes - the solid residue from burning of wood, coal, coke or other combustible material used for heating or the burning or ~~from~~ incineration of solid wastes. The terms "solid waste","garbage", and "ash", as defined in this Chapter, do not include fly ash waste, bottom ash waste, boiler slag waste, or flue gas emission control waste which result from the combustion of coal or other fossil fuels at electric or steam generating plants~~,~~ ~~but excepting solid residue, the storage or disposition of which is controlled by other agencies~~.

ASTM - American Society for Testing and Materials. A technical society with headquarters located at 1916 Race Street, Philadelphia, Pennsylvania, 19103, which publishes national standards for the testing and quality assurance of materials.

~~Base Flood --- a flood that has a one percent or greater chance of recurring in any year or a flood of a magnitude equalled or exceeded once in 100 years on the average over a significantly long period.~~

Beach - a sandy shoreline area characterized by low relief, generally of gentle slope, and some vegetation. The beach extends from the waterline to a change in physiographic form such as a dune or bluff, a change in sediment type, such as clay from sand, and/or a change in vegetation type. Gulf Beaches are those sand beaches of the mainland and islands in Alabama which are subjected to the direct wave action of the Gulf of Mexico. The upper limit of Gulf beaches is usually a transition from halophytic, succulent, prostrate plant forms such as *Hydrocotyl bonariensis* (pennywort), *Cakile epentula* (sea rocket), *Iva imbricata* (~~no common name~~ sump weed or marsh elder), and *Ipomoea stolonifera* (seaside morning glory) to a zone occupied by grasses, shrubs, and the same prostrate forms mentioned above. Some grasses indicative of this transition are *Uniola paniculata* (sea oats), *Spartina patens* (saltmeadow cordgrass), *Panicum amarulum* (dune panicgrass), and *Distichlis spicata* (saltgrass). Shrubs found at this transition are *Solidago pauciflosculosa* (seaside goldenrod), *Ceratiola ericoides* (seaside rosemary), *Ilex vomitaria* (yaupon), *Quercus virginica var. maritima* (live oak), and *Myrica cerifera* (waxmyrtle). Estuarine beaches are narrow, low energy beaches occurring along the protected margins of Mobile Bay, Perdido Bay, Mississippi Sound, and their various tributaries. The upper limit of estuarine beaches in Alabama can be distinguished easily by any or all of the three boundaries mentioned previously, that is a change in physiographic form, a change in sediment type, or a change in vegetation type.

Biological Waste - see Medical Waste.

Bird Hazard - an increase in the likelihood of bird/ ~~and~~ aircraft collisions that may cause damage to the aircraft or injury to its occupants.

Bladeable - the physical condition of a sludge or similar waste. Physical conditions include, but are not limited to, the absence of free liquids and of a consistency that can be easily managed by heavy equipment normally utilized at a ~~disposal facility~~ landfill unit.

Bore Hole - a man-made hole in a geological formation which has been drilled, jetted, driven or made by other similar techniques.

Cell - a ~~unit~~ volume of compacted solid waste that is ~~enclosed~~ covered by means of compacted earth or some other approved alternative cover usually on a daily or weekly basis in a ~~disposal facility~~ landfill unit.

Certification - a statement of professional opinion based upon knowledge and belief.

CFR - Code of Federal Regulations.

Chemotherapy Waste - see Medical Waste.

Closure - the process by which a ~~disposal facility~~ landfill unit permanently ceases to accept waste, to include those actions taken by the permittee or owner of the facility to prepare the site for post-closure monitoring and maintenance or to make it suitable for other uses.

Coastal Area - coastal waters (including the lands therein and thereunder) and the adjacent shorelands (including the waters therein and thereunder) strongly influenced by each and in proximity to the shorelines of Alabama, and includes transitional and intertidal areas, salt marshes, wetlands, and beaches. The area extends seaward to the outer limit of the United States territorial sea and extends inland from the shorelines only to the extent necessary to control shorelands, the uses of which have a direct and significant impact on the coastal waters. The inland boundaries of the coastal area are described as follows: begin at the southernmost point on the Mississippi-Alabama state line where the land surface elevation reaches 10 feet above mean sea level and continue in a general easterly direction along the 10-foot contour to the proximity of Mobile Bay; continue in a northerly direction on the 10-foot contour along the

western shore of Mobile Bay and the Mobile River delta to the north line of Mobile County; thence southeastward along the north line of Mobile County to the intersection with the Baldwin County lines in the Mobile River; thence along the west and north lines of Baldwin County in the Mobile and Alabama Rivers to the intersection of the southwest corner of Monroe County; thence eastward along the Baldwin County line to the intersection of the westernmost point of Baldwin County where the land surface altitude reaches 10 feet above mean sea level; thence along the 10-foot contour in a southwesterly and southern direction along the Alabama River, the Mobile River delta and the east shore of Mobile Bay to the proximity of Bon Secour; thence continue along the 10-foot contour in an easterly and northeasterly direction to the Alabama-Florida state line.

Coastal Waters - those waters adjacent to the shoreline, which contain a measurable quantity or percentage of seawater, including but not limited to, sounds, bays, lagoons, bayous, ponds and estuaries.

Commercial Medical Waste Treatment Facility - a facility, other than an incinerator, used to treat more than 220 pounds of medical waste per month.

Commercial Solid Waste - all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial wastes.

Composite Liner - a system consisting of two components; the upper component must consist of a minimum 40 mil flexible membrane liner (FML), and the lower component must consist of at least a two-foot layer of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} cm/sec. FML components consisting of High Density Polyethylene (HDPE) shall be at least 60 mil thick. The FML component must be installed in direct and uniform contact with the compacted soil component.

Composting or Compost Plant - an officially controlled method or operation whereby putrescible solid wastes are broken down through microbic action to a material offering no hazard or nuisance factors to public health or well-being.

Construction/Demolition Landfill Unit (C/DLF) - a discrete area of land or an excavation that receives construction/demolition waste, and/or rubbish and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined in this Rule.

Construction/Demolition Waste - waste building materials, packaging, and rubble resulting from construction, remodeling, repair, or demolition operations on pavements, houses, commercial buildings, and other structures. Such wastes include, but are not limited to, ~~bricks, concrete, other~~ masonry materials, sheet rock, roofing waste, insulation (not including asbestos) ~~soil, rocks,~~ rebar, scrap metal, paving materials, and wood products~~,~~. ~~all being materials which constitutes rubbish.~~ Uncontaminated concrete, soil, brick, rock, and similar materials are excluded from this definition.

Container - any portable device in which a material is stored, transported, treated, disposed of or otherwise handled. The term container, when describing the packaging requirements, does not include items that are classified as medical waste.

Contingency Plan - a document setting out an organized, planned and coordinated course of action to be followed in case of a fire, explosion or release of solid waste or medical waste which could threaten human health or the environment.

Decontamination - a process of reducing or eliminating the presence of harmful substances, such as infectious agents, so as to reduce the likelihood of disease transmission from those substances.

Department - the Alabama Department of Environmental Management as established by Code of Alabama 1975, §22-22A-4.

Destruction or Adverse Modification - a direct or indirect alteration of critical habitat which appreciably diminishes the likelihood of the survival and recovery of threatened or endangered species using that habitat.

Director - the Director of the Alabama Department of Environmental Management, appointed pursuant to Code of Alabama 1975, §22-22A-4, or his designee.

Discarded Material - material thrown away, abandoned, disposed of, or otherwise given up without intent to reuse or reclaim.

Disease Vector - an organism that is capable of transmitting a disease from one host to another.

Displacement - the relative movement of any two sides of a fault measured in any direction.

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

~~Disposal Facility---the location of a disposal site where any ultimate disposal of solid waste occurs.~~

Drill Cuttings - solid materials generated by subsurface drilling operations.

Drilling Fluids - any fluid used in drilling operations that is sent down the well bore, including drilling muds and any specialty products, from the time a well is begun until final cessation of drilling in that well.

Dune - (see definition of primary dune system)

Endangered or Threatened Species - any species listed as such pursuant to Section 4 of the Endangered Species Act.

Engineer - a person currently registered as a professional engineer with the State of Alabama Board of Registration for Professional Engineers and Land Surveyors.

Existing MSWLF Unit - any municipal solid waste landfill (MSWLF) unit that is receiving solid waste as of October 9, 1993, or the effective date of §258.1 of 40 CFR 258, Solid Waste Disposal Criteria, whichever is later. Waste placement in existing units must be consistent with past operating practices or modified practices to ensure good management.

Explosive Gas - a gas that is explosive under ordinary conditions as used herein generally refers to methane (CH_4).

Facility - all contiguous land, structures and other appurtenances thereto used for the processing, treatment or disposal of solid waste, including waste disposal areas and waste disposed therein.

Facility Structures - any buildings and sheds or utility or drainage lines on the facility.

Fault - a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side.

Floodplain - the lowland and relatively flat areas adjoining inland and coastal waters, including floodprone areas of offshore islands, which are inundated by the ~~base~~ 100-year flood.

Foundry Sand - granular particles composed of grains of mineral matter ranging from 2 mm to 0.5 mm in diameter used for molding in a metal casting process.

Free Liquids - liquids which readily separate from the solid portion of a waste under ambient temperature and pressure as determined by the Paint Filter Test referenced in USEPA publication SW-846, Method 9095.

Garbage - putrescible animal and vegetable waste resulting from the handling, preparation, cooking and consumption of food, including, but not limited to, waste from markets, storage facilities, handling and sale of produce and other food products and excepting such materials that may be serviced by garbage grinders and handled as household sewage.

Gas Condensate - the liquid generated as a result of the gas collection and recovery process at the ~~disposal facility~~ landfill unit.

Generator - any person who utilizes any process which results in the production of solid waste.

Groundwater - water below the land surface in the zone of saturation.

Hazardous Waste - defined in the same manner as that term is defined in the Alabama Hazardous Wastes Management and Minimization Act, Code of Alabama 1975, §22-30-3(5) and the regulations promulgated thereunder. See definition of regulated hazardous waste.

Holocene - the most recent epoch of the Quaternary period, extending from the end of the Pleistocene Epoch to the present.

Household Waste - any solid waste including garbage and trash derived from households including, but not limited to, single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, parks, campgrounds, picnic grounds, and day-use recreation areas.

Incinerator or Combustion Unit - any equipment, device, or contrivance and all appurtenances thereof used for the destruction by burning of solid, semi-solid, liquid, or gaseous combustible waste.

Industrial Landfill (ILF) Unit - a discrete area of land or an excavation that receives industrial solid waste and may in addition receive construction/demolition waste and/or rubbish and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined in this Rule.

Industrial Solid Waste - solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under Subtitle C of RCRA. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: Electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include fly ash waste, bottom ash waste, boiler slag waste, or flue gas emission control waste which result from the combustion of coal or other fossil fuels at electric or steam generating plants. Additionally, this term does not include mining waste or oil and gas wastes, or small quantity generator waste as defined in Rule 335-14-2-.01(5). Uncontaminated concrete, soil, brick, rock, and similar materials are excluded from this definition.

~~Industrial-Waste---solid-waste-generated-by manufacturing-or-industrial-processes.--Such-waste-may include,-but-is-not-limited-to-the-following-manufacturing processes:--electric-power-generation;-organic-and inorganic-chemicals;-iron-and-steel;-leather-products; non-ferrous-metals-manufacturing/foundries;-plastics-and-~~

~~resins;-pulp-and-paper-industry;-stone,-glass,-clay-and concrete-products;-textiles,-and-water-treatment.~~

Infectious Agent - any organism (such as a virus or a bacterium) that is capable of causing disease or adverse health impacts in humans by invasion and multiplication in body tissues, fluids or secretions.

Infectious Waste - see Medical Waste.

Injection Well - a bored, drilled, or driven shaft or dug hole which is used for the injection of pollutants.

Isolation Waste - see Medical Waste.

International Biological Hazard Symbol - A symbol used to identify Infectious or Medical Waste as depicted below.

Karst Terrains - areas where karst topography, with its characteristic surface and subterranean features, is developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in karst terrains include, but are not limited to, sinkholes, sinking streams, caves, large springs, and blind valleys.

Laboratory Waste - see Medical Waste.

Land Application Unit - an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for agricultural purposes or for treatment and disposal.

Landfill (LF) - ~~a-method-of-compaction-and-earth cover-of-solid-wastes-other-than-those-containing-garbage or-other-putrescible-wastes,-including,-but-not-limited to,-tree-limbs-and-stumps,-demolition-material, incinerator-residues-and-like-materials-not-constituting-a health-or-nuisance-hazard,-where-cover-need-not-be-applied on-a-per-day-used-basis.~~an area of land or an excavation in which wastes are placed for disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined in this Rule.

Landfill (LF) Unit - this term shall include MSWLF, C/DLF, ILF units.

Land Surveyor - a person currently registered as a land surveyor with the State of Alabama Board of Registration for Professional Engineers and Land Surveyors.

Lateral Expansion - a horizontal expansion of the waste boundaries of an existing LF unit.

Leachate - any liquid, including any soluble, suspended or miscible components in the liquid, that has percolated through or emerged from solid waste.

Leachate Recirculation - the recycling or reintroduction of leachate into or on a ~~disposal facility~~ landfill unit constructed with liners and leachate collection systems.

Lift - the compacted vertical thickness of a horizontal series of cells which have been accumulated and covered with earth or some other approved alternative cover. The cover may be either daily, weekly, intermediate, or final as required.

Liquid Waste - any waste material that is determined to contain "free liquids" as defined by Method 9095 (Paint Filter Liquids Test), as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Pub. No. SW-846), and is not considered bladeable.

Lithified Earth Material - all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock that formed by crystallization of magma or by induration of loose sediments. This term does not include man-made materials, such as fill, concrete, and asphalt, or unconsolidated earth materials, soil, or regolith lying at or near the earth surface.

Local Health Officer - the County, District or Regional Health Officer of a Local Health Department elected in accordance with §22-3-2(5)-(16), Code of Alabama 1975, or his designee provided by law.

Lower Explosive Limit - the lowest percent by volume of a mixture of explosive gases which will propagate a flame in air at 25°C and atmospheric pressure. For Methane (CH_4) the LEL is considered to be 5 percent.

Maximum Horizontal Acceleration in Lithified Earth Material - the maximum expected horizontal acceleration depicted on a seismic hazard map, with a 90 percent or greater probability that the acceleration will not be exceeded in 250 years, or the maximum expected horizontal acceleration based on a site-specific seismic risk assessment.

Maximum Contaminant Level (MCL) - maximum permissible levels of contaminants allowed in the saturated zone unless occurring naturally or found to already exist during background sampling.

Medical Waste - medical waste shall mean the following:

(a) Animal Waste - carcasses and body parts of animals exposed to human infectious agents as a result of the animal being used for the production and/or testing of biologicals and pharmaceuticals or in research. Bulk blood, blood components and potentially infectious body fluids from these animals shall be handled as specified in (b) for human blood and body fluids. All materials discarded from surgical procedures involving these animals which are grossly contaminated with bulk blood, blood components, or body fluids shall be treated as specified in (g) surgical waste.

(b) Blood and Body Fluids - all human bulk blood, bulk blood components (serum and plasma, for example), and bulk laboratory specimens of blood, tissue, semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, and amniotic fluid. Precautions do not apply to feces, nasal secretions, sputum, sweat, tears, urine or vomitus unless they contain visible blood. Free-flowing material or items saturated to the point of dripping liquids containing visible blood or blood components would be treated/handled as bulk blood and bulk blood components.

(c) Microbiological Waste - discarded cultures and stocks of human infectious agents and associated microbiologicals; human and animal cell cultures from medical and pathological laboratories; cultures and stocks of infectious agents from research and industrial laboratories; waste from the production of biologicals; discarded live and attenuated vaccines; culture dishes and devices used to transfer, inoculate and mix cultures. Only those animal vaccines which are potentially

infectious to humans (Strain 19 Brucellosis Vaccine, Feline Pneumonitis Vaccine, contagious Eczema Vaccine for Sheep, Newcastle Disease Vaccine, Anthrax Spore Vaccine, and Venezuelan Equine Encephalitis Vaccine) shall be considered microbiological waste.

(d) Pathological Waste - all discarded human tissues, organs, and body parts which are removed during surgery, obstetrical procedures, autopsy, laboratory, embalming, or other medical procedures, or traumatic amputation. Extracted teeth are not included in this definition.

(e) Renal Dialysis Waste - all liquid waste from renal dialysis contaminated with peritoneal fluid or with human blood visible to the human eye. Solid renal dialysis waste is considered medical waste if it is saturated, having the potential to drip or splash regulated blood or body fluids contained in (b) above.

(f) Sharps - any used or unused discarded article that may cause punctures or cuts and which has been or is intended for use in animal or human medical care, medical research, or in laboratories utilizing microorganisms. Such waste includes, but is not limited to, hypodermic needles, IV tubing with needles attached, scalpel blades, and syringes (with or without a needle attached). Items listed above that have been removed from their original sterile containers are included in this definition. Glassware, blood vials, pipettes, and similar items are to be handled as sharps if they are contaminated with blood or body fluids.

(g) Surgical Waste - all materials discarded from surgical procedures which are contaminated with human bulk blood, blood components, or body fluids, including but not limited to, disposable gowns, dressings, sponges, lavage tubes, drainage sets, underpads, and surgical gloves. Discarded surgical material is considered medical waste if it is saturated, having the potential to drip or splash regulated blood or body fluids contained in (b) above. Extracted teeth are not included in this definition.

Medical Waste Facility - all contiguous land and structures, other appurtenances, and improvements on the land used for treating, destroying, <u>or</u> storing ~~or disposing~~ of medical waste. A facility may consist of several treatment, destruction, <u>or</u> storage ~~or disposal~~ units.

Medical Waste Generator - a medical facility or person who produces or generates medical waste. The term includes, but is not limited to hospitals, nursing or convalescent facilities, intermediate care facilities, clinics, dialysis clinics, blood banks, dental offices, surgical clinics, medical buildings, health maintenance organizations, home health agencies, physicians offices, laboratories, emergency medical services, veterinary clinics, research and manufacturing facilities, and funeral homes. In the case where more than one person (e.g., doctors with separate medical practices) is located in the same building, each individual business entity is a separate generator. In no case shall a person be classified as a medical waste generator if those wastes are generated from a single-family residential dwelling by someone other than a health care professional.

Medical Waste Storage - the containment of medical waste at the generating facility or some alternative place for a temporary or extended period of time at the end of which the waste is treated or stored elsewhere. Placing waste in a container at the point of generation such as a patient's room, operating room, or laboratory would not be considered as storage.

Medical Waste Storage Facility - a facility or part thereof at which medical waste is placed in storage. The storage facility includes loading docks and parking areas where shipments of medical waste are held during the normal course of transportation.

Medical Waste Transportation - the movement of medical waste after leaving the generator's building to any intermediate transfer points, and finally to the ~~disposal facility~~ landfill unit. The mode of transport may be by air, highway, rail, or water.

Medical Waste Transporter - a person engaged in the off-site transportation of medical waste. A medical waste generator who generates less than 220 pounds (100 kilograms) of medical waste per month and transports his/her own waste is exempt from the transporter requirements.

Medical Waste Transport Vehicle - a motor vehicle, barge, airplane or rail car used for the transportation of medical waste by any mode. Each cargo-carrying body (trailer, railroad car, etc.) is a separate transport vehicle. A vehicle used to transport less than 220 pounds of medical waste per month is exempt.

Medical Waste Treatment - any process, including incineration or steam sterilization, which changes the character or composition of medical waste in order for decontamination to take place. Additional treatment measures may include melting, shredding, grinding, tearing, or breaking, so that it is no longer generally recognizable as medical waste.

Medical Waste Treatment Facility - a location at which medical waste is subjected to treatment.

Municipal Solid Waste Landfill (MSWLF) Unit - a discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined in this Rule. A MSWLF unit also may receive other types of solid wastes, such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, industrial solid waste, construction/demolition waste and/or rubbish. Such a landfill may be publicly or privately owned. A MSWLF unit may be a new MSWLF unit, an existing MSWLF unit or a lateral expansion. A municipal solid waste landfill unit is a sanitary landfill.

New MSWLF Unit - any municipal solid waste landfill unit that has not received waste prior to October 9, 1993, or the effective date of §258.1 of 40 CFR 258, Solid Waste Disposal Criteria, whichever is later.

Off-site - not a part of what is defined as on-site.

On-site - the same or geographically contiguous property which may be divided by public or private right-of-way. Non-contiguous properties owned by the same person connected by a right-of-way which he controls and to which the public does not have access, is also considered on-site property.

100-year flood - a flood that has a one percent or greater chance of recurring in any given year or a flood of a magnitude equalled or exceeded once in 100 years on the average over a significantly long period.

Open Burning - the combustion of any material without the following characteristics:

(a) Control of combustion air to maintain adequate temperature for efficient combustion.

(b) Containment of the combustion-reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion, and

(c) Control of emission of the gaseous combustion products.

Open Dump - any officially recognized place, land or building which serves as a final depository for solid wastes, whether or not burned or buried, which does not meet the minimum requirements for a ~~sanitary~~ landfill unit except approved incinerators, compost plants and salvage yards.

Operating Record - a collection of documents relating to the permitting or operation of any landfill unit as listed in 335-13-4-.29.

Operator - the person(s) responsible for the overall operation of a facility or part of a facility.

Owner - the person(s) who owns ~~in fee simple the property on which~~ a facility or part ~~of~~ of a facility ~~is sited~~.

Partial Closure - the closure of a discrete part of a facility in accordance with the applicable closure requirements of Rule 335-13-4-.20. For example, partial closure may include the closure of a trench, a unit operation, a landfill cell or a pit, while other parts of the same facility continue in operation or will be placed in operation in the future.

Pathological Waste - see Medical Waste.

Permit - written authorization granted to a person by the Department to operate a solid waste management ~~system~~ facility for the processing or disposal of solid waste.

Permittee - any person possessing a valid permit issued by the Department to process, recycle and/or dispose of solid waste or possess a permit to manage medical waste. This person is responsible for the overall operation of a solid waste facility or a medical waste facility.

Person - any individual, trust, firm, joint stock company, corporation (including a government corporation), partnership, association, State, municipality, commission, political subdivision of a state, any interstate body, or any other private or public legal entity.

Personnel - all persons who work at or supervise the operations of a waste facility, and whose actions or inactions are responsible for compliance with the requirements of this Division.

Petroleum Contaminated Waste (PCW) - any material, including but not limited to soil, debris, absorbent pads/booms, oil dry, etc., that has been exposed to petroleum products in such a manner that the petroleum product can be detected by a total petroleum hydrocarbon (TPH) analysis using Standard Method 503 D & E, EPA Methods 9071 or 418.1 Infra Red, and that analysis exceeds 10 ppm TPH.

Poor Foundation Conditions - those areas where features exist which indicate that a natural or man-induced event may result in inadequate foundation support for the structural components of a landfill unit.

Post Closure - the activities, including monitoring and maintenance at the site following closure if solid waste will remain at the site after closure.

Practice - any operating method, technique or procedure for the management of solid waste.

Primary Dune System - a ridge or series of ridges of unconsolidated and usually mobile sands lying landward of the upper limit of Gulf beaches which serves as the principal defense against storm wave attack. Vegetatively, this primary protective dune can be characterized by *Uniola paniculata* (sea oats), *Spartina patens* (saltmeadow cordgrass), *Panicum amarulum* (dune panicgrass), *Distichlis spicata* (saltgrass), *Solidago pauciflosculosa* (seaside goldenrod), *Hydrocotyl bonariensis* (pennywort), and *Ipomoea stolonifera* (seaside morning glory).

Qualified Groundwater Scientist - a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields as may be demonstrated by state registration, professional certifications, or completion of accredited university programs that enable that individual to make sound professional judgments regarding groundwater monitoring, contaminant fate and transport, and corrective-action.

Recycling - any process by which solid waste, or materials which would otherwise become solid waste, are collected, separated, or processed and reused or returned to use in the form of raw materials or products.

Regulated Hazardous Waste - a solid waste that is a hazardous waste, as defined in 335-14-2-.01(3), that is not excluded from regulation as a hazardous waste under 335-14-2-.01(4)(b).

Relevant Point of Compliance - That point within the first saturated zone at which groundwater quality must be in compliance with water quality standards set forth by Rule 335-13-4-.27. Groundwater monitoring wells are to be located in order to yield samples that are representative of the quality of groundwater passing the relative point of compliance.

Representative Sample - a sample of a universe or whole (e.g., waste pile, groundwater) which can be expected to exhibit the average properties of the universe or whole.

Rubbish - nonputrescible solid wastes, excluding ashes, consisting of both combustible and noncombustible wastes. Combustible rubbish includes paper, rags, cartons, wood, furniture, rubber, plastics, yard trimmings, leaves, stumps, limbs, and similar materials. Noncombustible rubbish includes glass, crockery, metal cans, metal furniture and like materials which will not burn at ordinary incinerator temperatures, not less than 1600 degree F. Uncontaminated concrete, soil, brick, rock, and similar materials are excluded from this definition.

Run-Off - any rainwater, leachate, or other liquid that drains over land from any part of a facility.

Run-On - any rainwater, leachate, or other liquid that drains over land onto any part of a facility.

Salvaging - the controlled removal for reuse of material from a solid waste ~~disposal facility~~ landfill unit. All salvaging operations at the ~~disposal facility~~ landfill unit shall be approved by the Department in advance.

Sanitary Landfill - a controlled area of land upon which solid waste is deposited and is compacted and covered with compacted earth each day as deposited, with no on-site burning of wastes, and so located, contoured and drained that it will no constitute a source of water pollution as determined by the Water Division of this Department. See definition of Municipal Solid Waste Landfill Unit.

Sanitary Sewer - any device or system used in the treatment of municipal sewage or industrial waste of a liquid nature. This includes sewers, pipes or other conveyances only if they convey wastewater to a facility providing treatment.

Saturated Zone - that part of the earth's crust in which all voids are filled with water.

Scavenging - the removal of solid waste, not approved by the Department, from a ~~disposal facility~~ landfill unit permitted under these regulations.

Seismic Impact Zone - an area with a ten percent or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth's gravitational pull (g), will exceed 0.10 g in 250 years.

Service Area - the geographical area serviced by a solid waste facility from which solid waste is generated and collected, including any interim points, (i.e., transfer stations) at which the solid waste is repacked or reloaded onto vehicles or other methods of transport for delivery to that facility.

Sharps - see Medical Waste.

Sludge - any nonhazardous, solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.

~~Solid Wastes---all putrescible and nonputrescible discarded materials, except household sewage and livestock and poultry wastes including, but not limited to garbage, rubbish, ashes, street and highway cleanings, dead animals including offal, abandoned automobiles, and such industrial wastes as are not controlled by other agencies.~~

Solid Waste - any garbage, or rubbish, construction/demolition debris, ash, sludge from a wastewater treatment facility, water supply treatment plant, or air pollution control facility, and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations and from

community activities or materials intended for or capable of recycling, but which have not been diverted or removed from the solid waste stream. The term "solid waste" does not include recovered material, solid or dissolved materials in domestic sewage, solid or dissolved materials in irrigation return flows, or industrial discharges which are point sources subject to National Pollutant Discharge Elimination System permits under the Federal Water Pollution Control Act (33 U.S.C. 1342), as amended, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923). Also excluded from this definition are wastes from silvicultural operations, land application of crop residues, animal manure and ash resulting exclusively from the combustion of fossil fuels or wood during normal agricultural operations or mining refuse as defined and regulated pursuant to the Alabama Mining Act.

Solid Waste Boundary - the outermost perimeter of the solid waste, projected in the horizontal plane, as it would exist at completion of the disposal activity.

Special Waste - those waste requiring specific processing, handling or disposal techniques as determined necessary by the Department which are different from the techniques normally utilized for handling or disposal. Examples of such waste types may include, but are not limited to: mining waste; fly ash; bottom ash; sludges; ~~drilling fluids and drill cuttings;~~ asbestos; industrial waste; liquid waste; large dead animals or large quantities of dead animals and residue, medical waste, foundry sand, debris, petroleum contaminated wastes, municipal solid waste ash, or contaminated soil and water from the cleanup of a spill.

Speculative Accumulation - Solid waste stored or accumulated for a period exceeding one year shall, unless permitted or approved by the Department, the State Health Department, or governing Agency with authority, constitute disposal and be subject to the Rules of this Division. A person may demonstrate to the Department that storage or accumulation for greater than one year is not disposal if the material is potentially recyclable and has a feasible means of being recycled and, that during the calendar year (commencing January 1), the material has in fact been recycled.

Spill - the unplanned, accidental or unpermitted discharge, deposit, injection, leaking, pumping, pouring, emitting, dumping, placing or releasing of solid or medical waste, or materials which when spilled become solid or medical waste, into or on the land, the air or the water.

State - the State of Alabama.

State Health Department - the Alabama Department of Public Health as defined by ~~Section~~ §22-2-1, Code of Alabama 1975.

State Health Officer - the Health Officer for the State of Alabama as set out in ~~Section~~ §22-2-8, Code of Alabama 1975, or his designee provided by law.

~~Storage---the containment of solid waste, either on a temporary basis or for a period of years, in such a manner as not to constitute disposal.~~

Structural Components - liners, leachate collection systems, final covers, run-on/run-off systems, and any other component used in the construction and operation of the landfill unit that is necessary for protection of human health and the environment.

Surface Impoundment or Impoundment - a facility or part of a facility that is a natural topographic depression, human-made excavation, or diked area formed primarily of earthen materials (although it may be lined with human-made materials), that is designed to hold an accumulation of liquid wastes or wastes containing free liquids and that is not an injection well. Examples of surface impoundments are holding storage, settling, and aeration pits, ponds and lagoons.

Surgical waste - see Medical Waste.

Taking - harassing, harming, pursuing, hunting, wounding, killing, trapping, capturing or collecting or attempting to engage in such conduct.

Ten Year, Twenty-Four Hour Precipitation Event - the maximum 24 hour precipitation event with a probable reoccurrence interval of once in ten years as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U. S", May 1961, and subsequent amendments or equivalent regional or rainfall probability information developed therefrom.

Unauthorized Dump - any collection of solid wastes either dumped or caused to be dumped or placed on any property either public or private, whether or not regularly used, and not under the control and supervision of any person or agency. An abandoned automobile, large appliance or similar large item of solid waste shall be considered as forming an unauthorized dump within the meaning of this ~~Act~~ Division, but not the careless

littering of smaller individual items as tires, bottles, cans and the like. An unauthorized dump shall also mean any solid waste disposal site which does not meet the regulatory provisions of this ~~Act~~ Division.

Unstable Area - a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components responsible for preventing releases from a landfill. Unstable areas can include poor foundation conditions, areas susceptible to mass movements, and karst terrains.

Uppermost Aquifer - the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

~~Vector---an-organism-that-is-capable-of-transmitting a-disease-from-one-host-to-another.-~~

Washout - the carrying away of solid waste or earth cover by waters of the base flood.

Waste Management Unit Boundary - a vertical surface located at the hydraulically downgradient limit of the unit. This vertical surface extends down into the uppermost aquifer.

Waste Pile or Pile - any noncontainerized accumulation of solid, non-flowing waste that is used for treatment or storage. Solid waste stored or accumulated for periods exceeding one year shall, unless permitted or approved by the Department, the State Health Department, or governing Agency with authority, constitute disposal.

Waters - all waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the State, natural or artificial.

Wetlands - those areas that are inundated or saturated by surface or groundwater (salt and fresh) at a frequency and duration sufficient to support, and/or under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Vegetation typically adapted to wetlands in Alabama include, but are not limited to, the following vegetative species and in addition their presence in significant quantities creates a presumption that the area is a wetland:

(a)	Saltmarsh	*Spartina alterniflora Juncus roemerianus*
(b)	Brackish-Mixed Marsh	*Juncus roemerianus* *Spartina cynosuroides* *Distichlis spicata Borrichia frutescens Scirpus spp.* *Spartina alterniflora* *Spartina patens*
(c)	Saltflat	*Salicornia sp.* *Batis maritima Distichlis spicata*
(d)	Fresh-Mixed Marsh	*Typha angustifolia* *Typha latifolia* *Sagittaria falcata Zizania aquatica Zizaniopsis miliacea Alternanthera philoxeroides* *Scirpus validus* *Scirpus americanus* *Orontium aquaticum* *Phragmites communis* *Cladium jamaicense* *Panicum virgatum* *Vigna repens*
(e)	Saltbush	*Baccharis halimifolia* *Iva frutescens* *Iva imbricata*
(f)	Savannah	*Spartina patens* *Pinus elliottii* *Pinus palustris* *Rhynchospora spp.* *Juncus spp.* *Andropogon spp.*
(g)	Bogs	*Sphagnum spp.* *Sarracenia spp.* *Cyrilla racemiflora* *Ilex glabra* *Drosera spp.* *Dichromena colorata*

(h) Swamp — *Taxodium distichum*
Taxodium ascendens
Salix nigra
Magnolia virginiana
Nyssa biflora
Acer rubrum
Cliftonia monophylla
Pinus serotina

Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-2, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; October 2, 1990; ----- -, 1993.

335-13-1-.04 Limitations. Nothing in these rules and regulations shall be construed to limit the authority of municipal and county governments, solid waste authorities, Local Health Officer or State Health Department from adopting more stringent solid waste management requirements than those set forth in this Division.
Author:
Statutory Authority: Code of Alabama 1975, §§ 22-22A-4, 22-27-4, 22-27-5, 22-27-6, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; October 2, 1990.

335-13-1-.05 [Reserved]

335-13-1-.06 [Reserved]

335-13-1-.07 [Reserved]

335-13-1-.08 [Reserved]

335-13-1-.09 [Reserved]

335-13-1-.10 [Reserved]

335-13-1-.11 General - All solid waste shall be ~~treated, utilized, processed, reclaimed, recycled and~~ disposed of in a manner consistent with the requirements of this Division~~or the State Health Department, or covered by an exception under 335-13-1-.12~~.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-22A-4, 22-22A-5, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; October 2, 1990.

335-13-1-.12 [Reserved].~~Exceptions.--Any-householder-who chooses-to-store,-haul-and-dispose-of-his-own-household solid-waste-on-his-own-land-or-otherwise-must-have-a permit-issued-by-the-Department-unless-the-householder-has obtained-a-Certificate-of-Exception.--Individuals-shall apply-to-the-Local-Health-Officer-for-this-exception.~~

~~In-addition,-drilling-waste-generated-from-the exploration-for-oil-and-gas-in-which-the-disposal-of-these waste-are-regulated-by-the-State-Oil-and-Gas-Board-of Alabama-are-exempt-from-these-regulations.~~
~~Author:~~
~~Statutory-Authority:--Code-of-Alabama-1975,-§22-27-3.~~
~~History:--November-18,-1981;-Amended:--July-21,-1988; October-2,-1990.~~

335-13-1-.13 Open Dump or Unauthorized Dump Closing. Open dumps or unauthorized dumps are prohibited by this Division. Municipal solid waste landfill units failing to satisfy the Division 13 regulations constitute open dumps, which are prohibited, and must be closed in accordance with Rule 335-13-4-.20. An agency or person discontinuing the use of an open dump or unauthorized dump, whether on his own initiative or at the direction of the Department, or the State Health Department, shall take the following actions as determined to be needed by the Department or State Health Department following the Department's criteria:

(1) Barricade and secure entrance.

(2) Implement effective rodent or vector controls, including baiting for at least two weeks after closing, to prevent rodent migration to adjacent properties and spraying of containers to control mosquitoes, or other measures as determined necessary by the Department or State Health Department.

(3) Compact and cover existing solid waste. Final cover for the entire area shall be two feet or more of compacted earth or as otherwise determined by the Department or State Health Department. Earth cover shall be of a quality to be easily managed and with sufficient clay content to provide an adequate seal on the waste. The uppermost 6" of cover shall support an adequate stand of vegetation.

(4) The establishment of a vegetative or some other appropriate cover to minimize erosion and, when applicable, maximize evapotranspiration shall be

established. Within 30 days after completion of final grading, the owner or operator of the dump shall prepare the final cover for the establishment of a vegetative or alternative cover. For the establishment of a vegetative cover, such preparation shall include, but not be limited to:

(a) Placement of appropriate species of grass seed, fertilizer and mulch; and

(b) Watering and maintenance necessary such that germination can reasonably be anticipated.

(5) Implement and maintain erosion control measures by grading and re-establishing vegetative cover as needed or determined necessary.

(6) Post signs indicating the dump site closure and location of the nearest approved disposal site when deemed necessary by the Department.

(7) The Department or State Health Department may, based on site geology, hydrology or waste types, require the solid waste to be removed from the site and placed in an approved ~~disposal facility~~ landfill unit in accordance with ~~an approved~~ clean-up, site restoration and monitoring plan, as approved by the Department. The Department or State Health Department may also require monitoring of the site for unpermitted discharges to waters of the state as defined by the Alabama Water Pollution Control Act and other sources as may be necessary to protect public health and the environment.

(8) When closure requirements are achieved as determined by the Department, the landowner shall record a notation onto the land deed, when deemed necessary by the Department. When determining if the land owner shall record a notation onto the land deed, the Department shall consider open dump size and types of wastes disposed. The land deed notation shall contain the property utilized for disposal, and/or some other legal instrument that is normally examined during a title search, that will, in perpetuity, notify any potential purchaser of the property that:

(a) the land has been used as a solid waste disposal area, not permitted by the Department.

(b) the unauthorized dump on the land has been closed in accordance with Department regulations.

(c) the landowner shall submit a certified copy of the recording instrument to the Department within 90 days.

(9) If all solid wastes are removed from the site according to subparagraph (7) of this Rule, the land deed notation in subparagraph (8) of this Rule will not be required.

Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-4, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; October 2, 1990; ----- --, 1993.

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
LAND DIVISION - SOLID WASTE PROGRAM

CHAPTER 335-13-4
PERMIT REQUIREMENTS

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335-13-4-Appendix II - List of Hazardous Inorganic and Organic Constituents

335-13-4-.01 Solid Waste Disposal Siting Standards. ~~Solid-waste-land-disposal-facilities-or-practices~~ New or existing landfill units shall comply with the following standards in order to prevent adverse effects on health or the environment. As part of the application, the owner/operator must submit documentation addressing to the satisfaction of the Department the following siting standards.

(1) A facility ~~or-practice~~ located in a floodplain shall not restrict the flow of the ~~base~~ 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste, so as to pose a hazard to human ~~life,-wildlife,-or-land-or-water resources~~ health and the environment.

(2) A facility ~~or-practice~~ shall be located in consideration of the following:

(a) A facility ~~or-practice~~ shall not cause or contribute to the taking of any endangered or threatened species of plants, fish or wildlife.

(b) The facility ~~or-practice~~ shall not result in the destruction or adverse modification of the critical habitat of endangered or threatened species as identified in 50 CFR 17.

(3) A facility ~~or-practice~~ shall be located so as to not violate the following:

(a) A facility ~~or-practice~~ shall be located so as to protect water quality.

(b) A facility ~~or-practice~~ shall not cause a discharge of pollutants into waters of the State, including wetlands, that is in violation of the requirements of the National Pollutant Discharge Elimination System (NPDES), Alabama Water Pollution Control Act, Code of Alabama 1975, §§ 22-22-1 to 22-22-14.

(c) A facility ~~or-practice~~ shall not cause a discharge of dredged material or fill material into waters of the State that is in violation of the requirements under Section 404 of the Clean Water Act, as amended.

(d) A facility ~~or-practice~~ shall not cause non-point source pollution of waters of the State, including wetlands, that violates any requirements of an

area wide and Statewide water quality management plan that has been approved under the Alabama Water Pollution Control Act.

(e) ~~Solid-waste-disposal-facilities~~ Landfill units shall not be permissible in wetlands, beaches or dunes.

(f) ~~Solid-waste-disposal-facilities~~ Landfill units shall not be permissible in any location where the disposal of solid waste would degrade wetlands, beaches, dunes or coastal waters.

(g) ~~Solid-waste-disposal-facilities~~ Landfill units shall be located outside the boundaries of the coastal area, unless no other reasonable alternative is available. If a site within the coastal area is proposed for development as a ~~solid-waste-disposal-facility~~ landfill unit, it shall be demonstrated to the satisfaction of the Department that siting, design, construction, and operation will ensure that present levels of coastal plants and animals will be maintained.

(4) A facility ~~or-practice~~ shall not allow an unpermitted discharge to waters of the State as defined by the Alabama Water Pollution Control Act.

(a) The bottom elevation of ~~solid-waste~~ the cell for unlined landfill units and the bottom elevation of the liner system for lined landfill units shall be a minimum of five feet above the seasonal high groundwater table or bedrock or as determined by the Department.

(b) When the geological and hydrological data so indicate, the Department may specify greater than five feet separation distance, a liner(s), or a leachate collection system, or combination of the above to protect the groundwater.

(5) A ~~facility-or-practice-disposing-of-putrescible solid-waste-that-may-attract-birds-and-which-occurs-within~~ MSWLF units shall not be sited within 10,000 feet of any airport runway end ~~shall-be-operated-in-such-a-manner-so as-not-to-pose-a-bird-hazard-to-aircraft~~.

(~~b~~ a) Owners or operators proposing to renew existing or site new MSWLF units located within a five-mile radius of any airport runway must notify the affected airport and the Federal Aviation Administration (FAA).

(6) Zones of active faults, seismic impact zones, unstable areas, sink holes and karst terrain shall be

avoided in locating facilities and practices unless a site specific evaluation demonstrates minimum potential for adverse effects upon waters of the State and human health.

(a) Site specific evaluations for geology and hydrology shall comply with 335-13-4-.11 through 335-13-4-.14.

(b) Site specific evaluation shall include minimum design parameters necessary to protect the waters and human health to include minimum requirements of 335-13-4-.15 through 335-13-4-.25.

(c) Landfill Units shall not be located within 200 feet of a fault that has had displacement within the Holocene epoch unless the owner or operator demonstrates to the Department that an alternative setback distance of less than 200 feet will not result in damage to the structural integrity of the facility and will be protective of human health and the environment.

(d) Landfill units shall not be located in seismic impact zones, unless the owner or operator demonstrates to the Department that all containment structures, including liners, leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site.

(e) Landfill units shall not be located in an unstable area unless engineering measures have been incorporated in the design of the facility to ensure that the integrity of the structural components of the facility will not be disrupted. The following factors, at a minimum, must be considered when determining whether an area is unstable:

1. On-site or local soil and subsurface conditions that may result in significant differential settling;

2. On-site or local geologic or geomorphologic features; and

3. On-site or local human-made features or events (both surface and subsurface).

(7) Landfill units ~~Facilities~~ shall not be located in archaeologically or historically sensitive areas as determined by the Alabama Historical Commission. Written certification must be provided from the State Historic Preservation Officer.

(8) Solid Waste Disposal Facilities must comply with any other applicable State or Federal rules, laws, regulations, or other requirements.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; ------, 1993.

335-13-4-.02 Reserved

335-13-4-.03 Reserved

335-13-4-.04 Reserved

335-13-4-.05 Reserved

335-13-4-.06 Reserved

335-13-4-.07 Reserved

335-13-4-.08 Reserved

335-13-4-.09 Reserved

335-13-4-.10 Reserved

335-13-4-.11 General Design Standards for Disposal Facilities. 335-13-4-.12 through 335-13-4-.20 provides standards for establishing a ~~disposal facility~~ landfill unit providing that the siting standards of 335-13-4-.01 have been fully complied with to the satisfaction of the Department. Certain requirements contained in 335-13-4-.12 through 335-13-4-.20 may be enhanced or reduced by the Department as deemed necessary to comply with the Act and this Division.
Author:
Statutory Authority: Code of Alabama 1975, §§22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988.

335-13-4-.12 Plans Required. ~~Design~~ Plans and operational reports for construction, operation, maintenance, ~~and~~ closure, and post-closure care of ~~disposal facilities~~ landfill units shall comply with 335-13-5-.02(1) and this Chapter and shall include the following as determined necessary by the Department.

(1) Land use and zoning within at least ~~1,400 feet~~ 5,280 feet (one mile) of the solid waste boundary site showing the location of all residences, buildings, public and private wells, water courses, utilities, geological features and roads.

(2) Location and use of all airports within 10,000 feet of the facility to include operational requirements as may be necessary to comply with federal or state agency regulations and 335-13-4-.01(5).

(3) Sufficient control points on-site to provide for accurate horizontal and vertical control for facility construction, operation and closure and post-closure.

(4) Detail presentation of geological and hydrogeological units in the disposal site, with typical sections of disposal method and plan and profile sheets on all areas or trenches.

(5) Boundary plat and legal property description prepared, signed, and sealed by a land surveyor of the proposed boundary of the facility and disposal area of the facility.

(6) Initial and final topographics at contour intervals of five feet or as otherwise specified by the Department.

(7) Existing and proposed surface drainage pattern to include control structures designed to handle run-on and run-off. Design calculations for sediment control basins, etc. should be provided.

(8) Buffer zones, screening and other aesthetic control measures. Buffer zones around the perimeter of the ~~disposal facility~~ landfill unit shall be a minimum of 100 feet in width measured in a horizontal plane. No disposal or storage practices for waste shall take place in the buffer zone. Roads, access control measures, earth storage, and buildings may be placed in the buffer zone.

(9) Details of plans for temporary and permanent all weather access roads.

(10) A summary of 335-13-4-.01 standards and conclusions of action to be taken and implemented into facility design.

(11) A clear presentation and discussion of daily ~~disposal facility~~ landfill unit operation to include any separate areas of the facility for disposal, treatment, storage, etc. of specific wastes requiring special or separate handling.

(12) Operation procedures for unloading, compacting and covering of solid wastes consistent with 335-13-4-.21 through 335-13-4-.24.

(13) Presentation of special engineering features or considerations which must be included or maintained in facility construction, operation, maintenance and closure. Items required in 335-13-4-.12 through 335-13-4-.20 shall be included.

(14) The relevant point of compliance, shall be no more than 150 meters (492 feet) from the waste management unit boundary and shall be located on land owned by the owner of the landfill unit. In determining the relevant point of compliance, the following factors shall be considered, at a minimum:

(a) The hydrogeologic characteristics of the facility and surrounding land;

(b) The volume and physical and chemical characteristics of the leachate;

(c) The quantity, quality, and detection of groundwater flow;

(d) The proximity and withdrawal rate of the groundwater users;

(e) The availability of alternative drinking water supplies;

(f) The existing quality of the groundwater, including other sources of contamination and their cumulative impacts on the groundwater and whether groundwater is currently used or reasonably expected to be used for drinking water;

(g) Public health, safety, and welfare effects; and

(h) Practicable capability of the owner or operator.

(15) Quality assurance/quality control (QA/QC) plan for all components of the liner, leachate collection, and cap systems.

(16) Groundwater monitoring plan.

(17) Landfill explosive gas monitoring plan.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; ----- --, 1993.

335-13-4-.13 Site Geology and Hydrology. The site hydrogeology shall be established to the upper most aquifer and subsequent interconnecting aquifers. The hydrogeological evaluation for a specific site, as required by the Department, may be provided for as follows:

(1) The Department will conduct a site background hydrogeological evaluation and review all other related reports, plans or submittals.

(a) Expense for the background hydrogeological evaluation and reviews conducted by the Department shall be borne by the applicant in accordance with established procedures of the Department.

(b) The expense for soil borings, soil tests, piezometers and other data as needed by the Department shall be borne by the applicant.

(2) A hydrogeological evaluation performed by a firm or individual having expertise in hydrogeology. The expense of this evaluation shall be borne wholly by the applicant. The following shall be required on such evaluations made under this Rule:

(a) The installation of a minimum of three exploration borings to include sampling and geologic logging and completion of these borings as piezometers. Subsequent establishment of the first ~~zone-of-saturation~~ saturated zone, the upper most aquifer and subsequent underlying and interconnected aquifers, piezometer measuring point elevations, water table elevations and an estimate of groundwater flow direction and rate will be required.

(b) A report shall be submitted to the Department which includes all items, information and analyses contained in 335-13-4-.13(2)(a).

(c) Resumes and references, as necessary, to establish the qualifications of the firm or individual preparing the evaluation.

(3) A review of the information submitted under 335-13-4-.13(2) shall be conducted by the Department.

(4) The requirement for a hydrogeological evaluation may be waived by the Department based on specific geology, hydrology, or waste types proposed for disposal.
Author:
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988.

335-13-4-.14 Groundwater Resources. Groundwater resources in the vicinity of the ~~disposal facility~~ landfill unit shall be determined as a basis for facility design and groundwater protection and monitoring required under 335-13-4-.27.

(1) The depth to the groundwater including seasonal variations and the direction of flow shall be established during the hydrogeological evaluation.

(2) The permeability of on-site soils, specifically those underlying the disposal site, shall be determined by laboratory testing at a qualified soils laboratory and followed up by pump testing or slug testing of monitoring wells.

(3) The groundwater in the first ~~zone of saturation~~ saturated zone below the ~~disposal facility~~ landfill unit shall be ~~monitored~~ evaluated as follows:

(a) A minimum of one hydraulically up-gradient monitoring well for background data and two hydraulically downgradient monitoring wells shall be required.

(b) The location and design of the monitoring wells shall be approved by the Department prior to installation and the upgradient well shall be located so as not to be affected by the ~~disposal facility~~ landfill unit.

(c) The monitoring wells shall be installed well in advance of projected facility opening so as to provide an undisputed background water quality sample from each well. Background water quality shall be established using the ~~following~~ sampling and analysis procedures <u>described in 335-13-4-.27</u>. ~~The water levels, mean sea level elevation measuring point, depth to water and sampling and analysis procedures for all parameters shall be determined in all wells prior to permitting of the landfill and the data furnished to the Department. The parameters are as follows: field pH; field test for specific conductance; volatiles scan; base neutrals; acid extractables; arsenic; barium; cadmium; chromium; lead; mercury; TKN; ammonia; nitrate; selenium; endrin; lindane; methoxychlor; toxaphene; 2,4-D; 2,4,5-TP Silvex, trichalomethanes; chloride; copper; iron; manganese; sulfate; and zinc. Site specific waste streams may require additional parameters to be added.~~

~~(d) The location of the monitoring wells shall be outside the proposed solid waste boundary or an alternate boundary as designated by the Department.~~

~~(e)~~<u>(d)</u> Additional monitoring wells above the minimum may be required by the Department based on site hydrology, geology, topographical features and waste characteristics.

~~(f)~~<u>(e)</u> Groundwater monitoring wells shall be designed and constructed <u>as described in 335-13-4-.27</u>. ~~in accordance with the following reference: "Design and Installation of Groundwater Monitoring Wells in Aquifers" ASTM Subcommittee D18.21 on Groundwater Monitoring, or otherwise as specifically approved by the Department. Plans for groundwater monitoring well location, design and construction shall be submitted to the Department for review and approved prior to installation.~~

(4) The groundwater sampling and analysis plan shall be prepared <u>in accordance with 335-13-4-.27.</u> ~~as required by the Department. Sampling and analysis shall be conducted semiannually or as otherwise specified by the Department. Water levels, mean sea level elevation measuring point, depth to water and a field test for pH and specific conductance shall be recorded at the time of sampling for each well. Other parameters will include a volatiles scan; cadmium; chromium; arsenic; lead; mercury; selenium; sulfate; nitrate; chlorides and others may be required depending on waste characteristics proposed to be accepted at the facility.~~

~~(5) The groundwater monitoring system must be capable of yielding sufficient volume of groundwater samples for analysis within 24 hours after purging. Any wells failing to provide sufficient volumes of water for groundwater analysis shall be repaired or replaced as determined necessary by the Department.~~

~~(6) The requirement for groundwater monitoring wells extending to the first zone of saturation may be waived by the Department based on specific site geology, hydrology and waste types proposed for disposal.~~
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; Amended: ----- --, 1993.

335-13-4-.15 Cover. Daily, weekly, or some other periodic cover shall be required at all landfill units, as determined by the Department.

(1) The suitability and volume of any soils for daily, intermediate and final cover requirements shall be determined by soil borings and analysis.

(2) Any proposal to use alternate cover systems shall be submitted to and approved by the Department prior to implementation.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988~~.~~; ----- --, 1993.

335-13-4-.16 Explosive Gases. The generation of explosive gases, especially methane (CH_4), at a ~~disposal facility~~ landfill unit which accepts organic waste shall be considered in the design and operation of the facility. Special attention shall be given to control and monitoring of explosive gases as follows:

(1) Explosive gases shall not exceed the lower explosive limit at the facility boundary.

(2) Explosive gases shall not exceed 25 percent of the lower explosive limit in facility structures ~~but to~~ except for ~~exclude~~ gas control or recovery system components.

(3) Facility structures shall be designed and constructed so as not to allow explosive gases to collect in, under or around structures in concentrations exceeding the requirements of this Rule.

(4) Gas monitoring equipment as required by the Department shall be provided at the ~~disposal facility~~ landfill unit by the operating agency.

(5) The Department upon review of waste type, facility structures, site geology and surrounding land use may require installation of permanent gas monitoring structures, gas vents, gas control or recovery systems.

(6) An explosive gas monitoring and reporting plan shall be prepared ~~as required by the Department~~ for all landfill facilities receiving organic wastes. ~~Reports shall be kept on routine monitoring and these reports shall be made available to the Department upon request.~~ All sites required to monitor for explosive gases shall submit a plat which indicates permanent monitoring points. A plan shall also be included which addresses how monitoring shall be conducted in accordance with Division 13 regulations. The plan shall also include what measures shall be taken by the permittee, landfill supervisor, and any operators present on-site to protect human health and property should explosive gases be detected which exceed the lower explosive limit (LEL). The plan must be prepared by a registered professional engineer and include seal or signature and registration number in accordance with Rule 335-13-5-.02(1)(e)1. of the ADEM Administrative Code.

(a) The type and frequency of monitoring must be determined based on the following factors:

1. Soil conditions;

2. Hydrogeological conditions surrounding the ~~disposal facility~~ landfill unit;

3. Hydraulic conditions surrounding the ~~disposal facility~~ landfill unit;

4. Location of the facility structures and property boundaries;

5. Location of structures adjacent to facility.

(b) The minimum frequency for monitoring shall be ~~yearly~~ quarterly for MSWLF and yearly for C/DLF and ILF.

1. All monitoring reports shall be submitted to the Department and placed in the operating record of the facility within 30 days of the monitoring event.

2. Levels of gas detected shall be expressed in percent LEL and percent volume.

(c) If explosive gas levels exceeds the limits specified in this Rule, the permittee shall:

1. Immediately take all necessary steps to ensure ~~immediate~~-protection of human health and property and notify the Department;

2. ~~Immediately notify the Department of~~ Within 7 days of detection, place in the operating record of the facility the explosive gas levels detected and the immediate steps taken to protect human health and property;

3. Within ~~14~~ 20 days of detection, submit to the Department for approval a remedial plan for the explosive gas releases. This plan shall describe the nature and extent of the problem and the proposed remedy. The plan shall be implemented upon approval by the Department, but within 60 days of detection. Also within 60 days of detection, a copy of the plan shall be placed in the operating record of the facility and the Department notified that the plan has been implemented.

(d) Monitoring points shall be located every 300 feet along the landfill permit boundaries. In areas where a dwelling is within 1000 feet of the boundaries, the monitoring points shall be 100 feet apart or as otherwise directed by the Department.

1. Monitoring shall be conducted in structures, culverts, under bridges, drop inlets, and any other place that is conducive to gas accumulation.

2. Permanent gas monitoring structures, or use of the bar hole punch method, are required by the Department.

3. A minimum depth of six feet must be obtained for permanent monitoring structures and four feet when using the bar hole punch method.

Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; ----- --, 1993.

335-13-4-.17 Drainage. ~~Drainage control structures shall be designed as follows:~~ --Owners or operators of all facilities must design, construct and maintain:

(1) ~~Diversion structures shall be designed and constructed to prevent off-site surface drainage from passing over the disposal site.~~ A run-on control system to prevent flow onto the active and/or closed portions of the landfill during the peak discharge from a 25-year storm;

(2) ~~Structures shall be designed to divert the surface water from the ten-year 24-hour precipitation event or as specified by the Department.~~ A run-off control system from the active and/or closed portions of the landfill to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(3) ~~Design of~~ On-site drainage structures to carry incident precipitation from the disposal site so as to minimize the generation of leachate, erosion and sedimentation. Run-off from the active and/or closed portions of the landfill unit must be handled in accordance with 335-13-4-.01(3)(b), (c) & (d) and shall be routed to a settling basin or other sedimentation control structure to remove sediment prior to release onto adjacent properties or waters.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; ----- --, 1993.

335-13-4-.18 Liners. Where natural hydrogeologic conditions may be determined by the Department to be insufficient to minimize the impact of leachate on waters, the use of an appropriate liner(s) shall be used as approved by the Department. New MSWLF units and lateral expansions, as a minimum, shall be constructed with a composite liner, as defined in 335-13-1-.03, or an alternate design as specified in 335-13-4-.18(8). Multiple liners, including composite liners, may be required if determined necessary by the Department. In addition, a leachate collection system shall be required that is designed and constructed to maintain less than a 30 cm depth of leachate over the liner. The composite liner(s) shall comply with the following minimum standards:

(1) The permeability shall be $1x10^{-7}$ cm/sec or less for soil ~~and $1x10^{-12}$ cm/sec or less for synthetic~~ liners.

(2) The liner shall be resistant to physical and chemical attack by leachate.

(3) The liner shall be capable of maintaining integrity for the design life which must be determined on a site specific basis. ~~The use of a leachate collection system meeting the approval of the Department may be required. The liner(s) shall comply with the following minimum standards:~~

(4) The minimum allowable thickness of each layer of the composite liner ~~is~~ shall be:

(a) ~~60~~ 40 mil~~s~~ for the ~~synthetic~~ flexible membrane liner~~s~~ component unless FML consists of HDPE which requires 60 mil ~~meeting the permeability requirements of 335-13-4-.18(1)~~, and

(b) Two feet, measured after compaction, for the natural soil liner~~s~~ component meeting the permeability requirements of 335-13-4-.18(1).

(5) The installation of synthetic liners shall be as recommended by the manufacturer providing that:

(a) The installation recommendations of the manufacturer are provided to the Department for review and approval.

(b) The manufacturers' recommendations are implemented into engineered construction plans, if manufacturers' recommendations are approved by the Department.

(c) The Department finds that the recommended installation procedures are consistent with the intent of the Act and this Chapter.

(d) The installation of the liner shall be under the supervision of an engineer ~~with certification by~~ who shall certify to the Department that the liner was installed and maintained in accordance with this Division, QA/QC plans, and approved design plans.

(e) The Department may require more stringent requirements for liner design and installation to protect the environment and ~~the~~ public health.

(6) The design and installation of soil liners and the properties of soils used in a soil liner shall be as follows:

(a) Design of soil liner(s) shall be by a qualified soils engineer, geotechnical engineer or geologist.

(b) The soil liner must be compacted in lifts of 4 to 6 inches within 2 percent of optimum moisture content to a field density which correlates with a laboratory permeability of $1x10^{-7}$ cm/sec or less.

(c) The installation of soil liner(s) shall be under the supervision of a ~~qualified~~-soils engineer, geotechnical engineer or geologist who shall certify ~~with certification by the supervisor~~ to the Department that the liner(s) was installed and maintained in accordance with this Division, QA/QC plans, and approved design plans.

(d) The soils used in soil liners shall meet the minimum following criteria:

1. ~~Be~~-Free of oversize particles, such as rocks, roots, limbs and other foreign substances which would alter the design integrity of the liner;

2. ~~Be~~-Classified under the Unified Soil Classification System as CL, CH or SC (ASTM Standard D2 487-69);

3. Allow greater than 30 percent passage through a No. 200 sieve (ASTM Test D-1140);

4. Have a liquid limit equal to or greater than 30 units (ASTM Test D-423); and

5. Have a plasticity greater than or equal to 15 units (ASTM Test D-424).

(7) For a composite liner system, the synthetic liner shall be installed in direct contact with the soil liner.

(~~7~~8) ~~Liner materials other than soils and synthetics shall be considered by the Department if determined to meet the requirements of this Division.~~ An alternate liner design may be approved by the Department provided that:

(a) The owner or operator demonstrates that the alternate design ensures the concentration values listed in Table 1 of this Rule will not be exceeded in the first saturated zone at the relevant point of compliance, as specified by the Department under 335-13-4-.12(14).

(b) When approving a design that complies with subparagraph (a) of this paragraph, the Department shall consider at least the following factors:

1. The hydrogeologic characteristics of the facility and surrounding land;
2. The climatic factors of the area; and
3. The volume and physical and chemical characteristics of the leachate.

TABLE 1

Chemical	MCL (mg/l)
Arsenic	0.05
Barium	1.0
Benzene	0.005
Cadmium	0.01
Carbon tetrachloride	0.005
Chromium (hexavalent)	0.05
2,4-Dichlorophenoxy acetic acid	0.1
1,4-Dichlorobenzene	0.075
1,2-Dichloroethane	0.005
1,1-Dichloroethylene	0.007
Endrin	0.0002
Fluoride	4
Lindane	0.004
Lead	0.015
Mercury	0.002
Methoxychlor	0.1
Nitrate	10
Selenium	0.01
Silver	0.05
Toxaphene	0.005
1,1,1-Trichloromethane	0.2
Trichloroethylene	0.005
2,4,5-Trichlorophenoxy acetic acid	0.01
Vinyl Chloride	0.002

Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; ----- --, 1993.

335-13-4-.19 Access. ~~The design of barriers, both artificial and natural, shall be sufficient to prevent entry of vehicular traffic to the facility except when authorized operating personnel are on duty.~~ The owner or operator of the facility must control public access and prevent unauthorized vehicular traffic and illegal dumping of wastes by using artificial barriers, natural barriers, or both, as appropriate to protect human health and the environment.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; ----- --, 1993.

335-13-4-.20 Closure and Post-Closure. The requirements for closure and post-closure of existing and proposed landfill units shall include the following unless otherwise noted. The owner or operator must submit a closure/post-closure plan to the Department and place in the operating record, no later than the effective date of these regulations or by the initial receipt of waste, whichever is later. ~~: Detail design for the closure of existing and proposed facilities shall include closure procedures for each specific area or trench, and shall be shown on a final contour and drainage plan to include the following as determined necessary by the Department:~~

(1) The owner or operator must prepare a written closure plan that describes the steps necessary to close all existing and proposed landfill units at any point during their active life in accordance with the cover design requirements in 335-13-4-.20(2). The owner or operator must submit the closure plan as part of the permit application to the Department. The closure plan, at a minimum, must include the following information:

(a) A description of the final cover, designed in accordance with 335-13-4-.20(2) and the methods and procedures to be used to install the cover;

(b) An estimate of the largest area of the landfill unit ever requiring a final cover as required under 335-13-4-.20(2) at any time during the active life;

(c) An estimate of the maximum inventory of wastes ever on-site over the active life of the facility; and

(d) A schedule for completing all activities necessary to satisfy the closure criteria in this Rule.

(2) A final cover system must be installed which is designed to minimize infiltration and erosion. The final cover system must be comprised of an erosion layer(s) underlain by an infiltration layer(s) as follows:

(a) The infiltration layer must be comprised of a minimum of 18 inches of earthen material and/or a synthetic layer that has a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than 1×10^{-5} cm/sec, whichever is less, and

(b) The erosion layer must consist of a minimum 6 inches of earthen material that is capable of sustaining native plant growth, as specified in 335-13-4-.20(4).

(c) The Department may approve an alternative final cover design that includes:

1. An infiltration layer that achieves an equivalent reduction in infiltration as the infiltration layer specified in 335-13-4.20(2)(a), and

2. An erosion layer that provides equivalent protection from wind and water erosion as the erosion layer specified in 335-13-4.20(2)(b).

~~(1)~~(3) ~~Intermediate and~~ Final soil cover shall be graded so that:

(a) Surface water does not pond over the ~~disposal facility~~ landfill unit.

(b) The maximum final grade of the ~~two-foot soil cover does~~ final cover system shall not exceed 25 percent or as specified by the Department to minimize erosion.

(c) Slopes longer than 25 feet shall require horizontal terraces, of sufficient width for equipment operation, for every 20 feet rise in elevation or utilize other erosion control measures approved by the Department.

(d) The minimum final grade ~~for a disposal facility shall be five percent~~ of the final cover system shall not be less than 5 percent or as specified by the Department to minimize ponding.

(e) For a permitted facility utilizing the area-fill method or the trench method, final grading shall be ~~provided~~ completed within ~~60~~ 90 days after ~~landfilling has either reached the final approved elevations, or ceased to occur in each phase~~ the unit has received the last known receipt of waste. ~~When the trench method is utilized, final grading shall be provided completed within 60 90 days after landfilling has either reached the final approved elevations, or ceased to occur in each trench. For the closure of an unauthorized dump, final grading shall be provided as directed in 335-13-1-.13~~

~~(2)~~(4) The establishment of a vegetative or some other appropriate cover to minimize erosion and, when applicable, maximize evapotranspiration shall be established. Within ~~30~~ 90 days after completion of final grading requirements on each phase or each trench as specified in 335-13-4-.20(1), the Permittee or owner of a permitted ~~disposal facility~~ landfill unit shall prepare the final cover for the establishment of a vegetative cover or alternative cover. Deep rooted vegetation (roots that may grow below the 6 inch erosion layer) shall be prohibited as vegetative cover. ~~For an unauthorized dump, the agency or person who is determined responsible by the Department for the facility shall prepare the final cover for the establishment of a vegetative cover or alternative cover as specified in 335-13-1-.13.~~ Preparation of a vegetative cover shall include, but not be limited to, the following:

(a) Placement of appropriate species of grass seed, fertilizer and mulch; and

(b) Watering and maintenance necessary such that germination of grass can reasonably be anticipated.

(5) Prior to beginning closure of each landfill unit as specified in this Rule, an owner or operator must submit to the Department and place in the operating record a notice of the intent to close the unit.

(6) The owner or operator must begin closure activities of each LF unit no later than 30 days after the date of which the LF unit receives the known final receipt of wastes. If the LF unit has remaining capacity and there is reasonable likelihood that the LF unit will receive additional wastes, closure activities of each LF unit must begin no later than one year after the date of known final receipt of wastes. Extensions beyond the

one-year deadline for beginning closure may be granted by the Department if the owner or operator demonstrates that the LF unit has the capacity to receive additional wastes and the owner or operator has taken and will continue to take all steps necessary to prevent threats to human health and the environment from the unclosed LF unit.

(7) The owner or operator of all LF units must complete closure activities of each LF unit in accordance with the closure plan within 180 days following the last known receipt of waste. Extensions of the closure period may be granted by the Department if the owner or operator demonstrates that closure will, of necessity, take longer than 180 days and he has taken and will continue to take all steps necessary to prevent threats to human health and the environment from the unclosed LF unit. Extensions granted for closure of each LF unit shall not exceed a total of 180 days.

(8) Following closure of each LF unit, the owner or operator must submit to the Department a certification, signed by an independent registered professional engineer verifying that closure has been completed in accordance with the closure plan, and a copy placed in the operating record.

~~(3)~~(9) ~~Post-closure maintenance of the facility to include regular scheduled inspections by the operating agency, or responsible party, or owner unless all solid water is removed and no unpermitted discharge to waters have occurred. The following shall be maintained:~~ Following closure of each LF unit, the owner or operator must conduct post-closure care. Post-closure care must be conducted for a minimum of 30 years; or a minimum of 5 years if closed prior to October 9, 1993, or the effective date of §258.1 of 40 CFR 258, Solid Waste Disposal Criteria, whichever is later; except as provided under 335-13-4-.20(10), and consist of at least the following:

(a) Eroded areas shall be filled with suitable soil cover, compacted, graded and appropriate cover established as described in 335-13-4-.20(~~2~~4).

(b) Areas which provide for ponding of surface water ~~due to settling~~ shall be filled, graded and an appropriate cover established as described in 335-13-4-.20~~(2)~~(4).

(c) Landfilled areas with extensive surface cracks in soil cover shall be corrected as necessary, or as determined by the Department, to prevent infiltration of surface water.

(d) An appropriate cover shall be maintained on the facility at all times as described in 335-13-4-.20~~(2)~~(4).

(e) Access control structures shall be maintained or erected and signs shall be posted stating that the facility is closed and giving the location of the nearest permitted ~~disposal facility~~ landfill unit.

(f) Any waste dumped at the ~~disposal facility~~ landfill unit following closure shall be removed to an approved ~~disposal facility~~ landfill unit by the permittee, operating agency, or owner.

(g) Monitoring devices and pollution control equipment such as groundwater monitoring wells, explosive gas monitoring systems, erosion, and surface water control structures, and leachate facilities shall be maintained. Monitoring requirements shall continue in effect throughout the active life and post-closure care period as determined by the Department unless all solid waste is removed and no unpermitted discharge to waters has occurred.

(h) Other deficiencies such as vector control which may be observed by the Department shall be corrected.

(10) The length of the post-closure care period may be:

(a) Decreased by the Department if the owner or operator demonstrates that the reduced period is sufficient to protect human health and the environment and this demonstration is approved by the Department; or

(b) Increased by the Department if the Department determines that the lengthened period is necessary to protect human health and the environment.

(11) The owner or operator of all LF units must submit to the Department and receive approval as part of the permitted application, a written post-closure plan. A copy must also be placed in the operating record. The post-closure plan must include, at a minimum, the following information:

(a) A description of the monitoring and maintenance activities required in 335-13-4-.20(9) for each LF unit, and the frequency at which these activities will be performed;

(b) Name, address, and telephone number of the person or office to contact about the facility during the post-closure period; and

(c) A description of the planned uses of the property during the post-closure period.

~~(4)~~(12) Post-closure use of the property used for the disposal operation must never be allowed to disturb the integrity of the final cover, liner(s), or any other component of the containment system, or the function of the monitoring systems~~,unless the Department determines that~~ necessary to comply with the requirements of these Rules. The Department may approve any other disturbance if the owner or operator demonstrates that the disturbance, including any removal of waste, complies with the following:

(a) The activities will not increase the potential threat to human health or the environment; or

(b) The activities are necessary to reduce a threat to human health or the environment.

(13) Following completion of the post-closure care period for each LF unit, the owner or operator must submit to the Department a certification, signed by an independent registered professional engineer verifying that post-closure care has been completed in accordance with the post-closure plan, and a copy placed in the operating record.

~~(5)~~(14) Within 90 days after permit expiration, revocation or when final closure requirements in 335-13-4-.20~~(1) and (2)~~ are achieved as determined by the Department, the permittee or owner of a facility shall record a notation onto the land deed containing the property utilized for disposal, and/or some other legal instrument that is normally examined during a title search, that will in perpetuity, notify any potential purchaser of the property that:

(a) The land has been used as a solid waste disposal facility landfill unit;

(b) Its use is restricted by the items contained in 335-13-4-.20~~(4)~~(11) and 335-13-4-.20(12);

(c) The locations and dimensions of the ~~disposal facility~~ landfill unit with respect to permanently surveyed benchmarks and section corners shall be on a plat prepared and sealed by a land surveyor;

(d) Contain a note, prominently displayed, which states the name of the Permittee or operating agency, the type of ~~disposal facility~~ landfill unit and the beginning and closure dates of the disposal activity.

(e) Certification by ~~a~~ an Engineer or Land Surveyor that all closure requirements have been completed as determined necessary by the Department.

~~(6)~~(15) For a permitted facility, the permittee or land owner shall submit a certified copy of the recording instrument to the Department and place a copy in the operating record within 120 days after permit expiration, revocation or as otherwise directed by the Department.

~~(9)~~(16) If the Permittee or owner, or any subsequent owner of the land upon which a ~~solid waste disposal facility~~ landfill unit is located wishes to remove waste, waste residues, the liner, if any, or any contaminated soils, the owner must request approval from the Department. The owner may also ask permission to remove the notation from the recording instrument if all waste and contaminated soils are removed from the property and no unpermitted discharges to waters have occurred.

(17) Detail design for the closure of existing and proposed LF units shall be shown on a final contour and drainage plan. Items required in 335-13-4-.20(2) through (4), (9), (12), and (14) through (16) shall be included.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-4, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; ------- --, 1993.

335-13-4-.21 General Operational Standards for Disposal. Any person or agency operating or planning to operate a ~~solid waste disposal facility~~ landfill unit shall operate and maintain the facility consistent with this Division. The Department will make periodic evaluations of the disposal facility. General requirements for operating and maintaining an acceptable ~~disposal facility~~ landfill unit shall be:

(1) Open burning of solid waste at any landfill unit~~,-sanitary-landfill-or-other-disposal facility shall not-occur~~ is prohibited unless approved by the Department as follows:

(a) Clearing debris at the ~~disposal-facility~~ landfill unit such as trees and stumps may be burned if prior approval is received from the Department and the Alabama Forestry Commission.

(b) Emergency clean-up debris resulting from catastrophic incidents may be burned at a permitted ~~disposal-facility~~ landfill unit or in special areas if consistent with the intent of this Division. Prior approval must be received from this Department and other appropriate agencies.

(c) If approved, the burning shall not occur over previously filled areas or within 200 feet of existing disposal operations unless otherwise specified by the Department and such burning shall not cause a public nuisance or pose a threat to public health.

(d) The person or agency requesting permission to burn solid waste shall apply in writing to the Department, outlining why a burn request should be granted. This request should include, but not be limited to, specifically what areas will be utilized, types of waste to be burned, the projected starting and completion dates for the project, and the projected days and hours of operation.

(2) The operation and use of the ~~disposal-facility~~ landfill unit shall be as stipulated in the permit.

(3) Waste accepted at the facility shall be strictly controlled so as to allow only waste stipulated on the permit or otherwise as may be approved by the Department. ~~Free-liquid-waste-or-containers-larger-than 10-gallons-which-are-capable-of-holding-liquids-shall-not be-accepted-at-a-disposal-facility~~ landfill unit~~-except-as follows.- Empty-containers-larger-than-10-gallons-must-be rendered-unsuitable-for-holding-liquids-prior-to-delivery to-the-disposal-facility-unless-otherwise-approved-by-the Department.~~

(a) The permittee of any facility permitted under these Rules must submit a plan to be approved by the Department describing procedures the permittee will implement for detecting and preventing the disposal of

free liquids, regulated hazardous wastes, ~~and~~ medical wastes, and regulated PCB wastes at the facility. This plan must include at a minimum:

1. Random inspections of incoming loads to ensure that incoming loads do not contain free liquids, hazardous wastes, medical wastes, or PCB wastes.

2. Inspection of suspicious loads.

3. Records of all inspections to include origin of waste suspected to be hazardous or ~~untreated~~ medical waste if known; transporters, to include transfer stations and all handlers of the waste enroute to the disposal site; and any certifications from generators provided to the permittee or facility personnel. These records must be maintained on file in the operating record of the facility.

4. Training of facility personnel to recognize free liquids, regulated hazardous wastes, ~~and untreated~~ medical wastes, and regulated PCB wastes.

5. Procedures for notifying the proper authorities if free liquids, regulated hazardous wastes, ~~or untreated~~ medical wastes, or regulated PCB wastes are discovered at the facility.

6. Methods to identify all industrial users of the facility, ~~and~~ producers of special wastes, and transporters of these wastes.

7. If the permittee proposes to receive waste from outside the boundaries of the State, except for solid waste from the drilling of wells for the production of oil and gas in federal waters immediately adjacent to waters of the State, the following information shall be ~~provided~~ maintained on file in the operating record of the facility, and made available to the Department upon request:

(i) ~~Identify~~ The place of origin of the wastes (state, county, and municipality).

(ii) A general description of how wastes are managed from the point of generation to the ~~disposal facility~~ landfill unit. The description should name major collectors, transporters, transfer stations, and all others who handle waste enroute to the ~~disposal facility~~ landfill unit.

(iii) ~~Identify~~ A general description of the steps taken at each point to ensure wastes are not commingled with other wastes which may be free liquids, regulated hazardous wastes, ~~or untreated~~ medical wastes, or regulated PCB wastes.

(b) Certification shall be provided to the Department and maintained on file in the operating record of the facility by the permittee for all waste received at the facility. Such certification shall include but not be limited to the following:

1. Identification of the place of origin (state, county, and municipality).

2. Certification from the ~~permittee~~ generator that the wastes do not contain free liquids, regulated hazardous wastes, ~~or untreated~~ medical wastes, or regulated PCB wastes.

3. Certification from the ~~permittee~~ collector or generator that the wastes are collected and transported in accordance with all regulatory requirements within the State of origin.

4. If available, certification from a government official of the State or locality of origin where governmental oversite of shipment is involved.

5. Permittee shall identify contact persons in the State of origin including the collector, transporter, local and state regulatory authorities, etc. Such information shall include current names, addresses, and telephone numbers of all required parties.

(4) The ~~disposal facility~~ landfill unit shall be operated in such a manner that there will be no water pollution or unauthorized discharge.

(a) Any discharge resulting from a ~~disposal facility~~ landfill unit or practice may require:

1. A National Pollutant Discharge Elimination System (NPDES) permit under the Alabama Water Pollution Control Act as issued by the Department.

2. A dredge or fill permit from the Army Corps of Engineers as required under Section 404 of the Clean Water Act, as amended; or

3. That a non-point source of surface waters does not violate an area wide or statewide water quality management plan that has been approved under the Alabama Water Pollution Control Act.

(b) The groundwater shall not be contaminated as specified by this Division.

(5) Prior to disposal, the permittee shall obtain from each generator of Industrial Waste proposing to dispose at the permittee's facility, a written certification that the material to be disposed does not contain ~~untreated~~ free liquids, medical wastes, ~~nor a~~ regulated hazardous wastes, or regulated PCB wastes. Copies of analyses supporting this certification as required by the Department shall be made a part of the certification. Prior to disposal, the permittee shall cause to be submitted copies of this written certification to the Department for approval for disposal and for any specific requirements as to the method of disposal. Certification shall be renewed or revised annually or at such times operational changes at the point of generation could render the waste hazardous, whichever is more frequent, unless otherwise approved by the Department. Copies of these certifications shall be maintained on file in the operating record of the facility ~~by the permittee~~ and shall be made available for inspection by the Department upon request.

(6) The facility shall be identified with a sufficient number of permanent markers which are at least visible from one marker to the next.

~~(7) Municipal solid waste landfill units containing sewage sludge and failing to satisfy the criteria in this Division violate sections 309 and 405(e) of the Clean Water Act.~~

~~(8) Owners or operators of all MSWLFs must ensure that the units do not violate any applicable requirements developed under a State Implementation Plan (SIP) approved or promulgated by the Administrator pursuant to section 110 of the Clean Air Act, as amended.~~

(7) Measuring or weighing devices shall be required for all municipal solid waste and industrial landfill units accepting solid waste not generated by the permittee. All solid waste shall be properly measured or weighed prior to disposal unless otherwise approved by the Department.

(a) New MSWLFs shall install measuring or weighing devices prior to accepting any waste for disposal.

(b) Existing MSWLFs shall install measuring or weighing devices by October 9, 1995.

(c) New or existing ILFs shall install measuring or weighing devices by October 9, 1995.

(d) Measuring or weighing devices shall be maintained in appropriate working order.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-22A-5, 22-27-3, 22-27-4, 22-27-7~~.~~, 22-27-47, 22-27-48.
History: November 18, 1981; Amended: March 31, 1988 (Emergency Regulations); July 21, 1988; October 2, 1990; ----- --, 1993.

335-13-4-.22 Specific Requirements for ~~Sanitary~~ Municipal Solid Waste Landfills. The following requirements in conjunction with 335-13-4-.21 shall be for operating and maintaining an acceptable ~~sanitary landfill~~ MSWLF:

(1) All waste shall be covered as follows:

(a) A minimum of six inches of compacted earth or other alternative cover material that includes but is not limited to foams, geosynthetic or waste products, and is approved by the Department shall be added at the conclusion of each day's operation or as otherwise approved by the Department to control disease vectors, fires, odors, blowing litter, and scavenging.

~~(b) Landfilled areas (cells) which will not have additional waste placed on them for three months or more shall be covered within 30 days with a minimum of 12 inches of intermediate soil cover, graded to prevent ponding of surface water, and prepared for the establishment of a vegetative cover. Such preparation shall include, but not be limited to, the placement of appropriate species of grass seed, fertilizer, mulch, and watering such that germination can reasonably be anticipated.~~

~~(c) Grading and final cover requirements for completed portions of the facility are as follows:~~

~~1. Final grading shall be provided within 60 days after landfilling has been completed for each area fill of two acres or more. When the trench method is utilized, final grading shall be provided within 60 days after landfilling has been completed on each trench. Final earth cover shall be a minimum of two feet of compacted soil.~~

~~2. The establishment of a vegetative or some other appropriate cover to minimize erosion and, when applicable, maximize evapotranspiration shall be established. Within 30 days after completion of final grading on each filled area or each trench, as noted in 335-13-4-.22(1), the permittee shall prepare the final cover for the establishment of a vegetative or alternative cover. For the establishment of a vegetative cover, such preparation shall include, but not be limited to:~~

~~(i) Placement of appropriate species of grass seed, fertilizer and mulch; and~~
~~(ii) Watering and maintenance necessary such that germination can reasonably be anticipated.~~

~~(d) Earth cover shall be of a quality to be easy manageable and with sufficient clay content to provide an adequate seal on the landfilled waste.~~

<u>(b) Final closure shall be carried out in accordance with §335-13-4-.20 of this Division.</u>

(2) All waste shall be confined to as small an area as possible and spread to a depth ~~of approximately~~ <u>not exceeding</u> two feet prior to compaction~~.~~<u>, and</u> such compaction shall be accomplished on a face slope <u>not to exceed</u> ~~of 20 to 30 degrees~~ <u>4 to 1 (25%)</u> or as ~~specified~~ <u>otherwise approved</u> by the Department.

(3) All waste shall be thoroughly compacted with adequate landfill equipment before the daily cover is applied. A completed daily cell shall not exceed eight feet in vertical thickness measured perpendicular to the slope of the preceding cell.

(4) Scavenging shall be prohibited and salvaging operations shall be ~~permitted~~ <u>controlled</u> in accordance with plans approved by the Department.

(5) Litter shall be controlled along the access roads<u>,</u> ~~and~~ over the ~~sanitary landfill~~ <u>landfill unit</u>, and adjoining property.

(6) Adequate fire control measures shall be established and followed.

(7) The site shall be operated in accordance with approved plans and permits.

(8) Adequate personnel shall be provided to insure continued and smooth operation of the facility. The facility personnel and supervisor must be trained in ~~sanitary-landfill~~ MSWLF techniques.

(9) Personnel facilities (shelter, communications, lavatory and toilet) shall be provided for employees' use and shall be kept clean and in good repair. Sewage disposal systems shall be approved by the Department, ~~or~~ the State Health Department, or the local Health Department.

(10) Adequate equipment shall be provided to insure continued operation and suitable stand-by equipment shall be available within 24 hours in case of prolonged breakdown of primary equipment.

(11) An all-weather access road shall be provided to the dumping face. The access road shall be wide enough to allow passage of collection vehicles.

(12) Measures shall be taken to prevent the breeding or accumulation of disease vectors. If determined necessary by the Department or the State Health Department, additional disease vector control measures shall be conducted.

(13) Provisions shall be included for disposal activities in adverse weather conditions.

(14) The site shall be adequately secured using artificial barriers, natural barriers, or both ~~as appropriate~~ to prevent entry of unauthorized vehicular traffic~~-except-when-facility-personnel-are-on-duty~~.

(15) A sign outlining instructions for use of the site shall be posted at the entrance and shall include: name of facility, name of permittee~~,~~ and/or operating agency or person, days and hours of operation, disposal fees, and types of waste accepted if the site is available to the general public or commercial haulers.

(16) Environmental monitoring and treatment structures shall be protected and maintained in good repair.

(17) Completed sites or portions of sites shall be properly closed as provided by this Division and approved facility plans.

(18) Records shall be maintained on the daily volume of waste received at ~~sanitary landfills~~ MSWLFs. A quarterly report utilizing a format approved by the Department which summarizes the daily volumes shall be submitted to the Department and maintained on file in the operating record of the facility by the permittee.

(19) Special provisions shall be made for handling large dead animals or highly putrescible waste. Immediately covering the waste with a minimum of 12 inches of soil in a designated area of the facility shall be included in these provisions.

(20) Bulk or noncontainerized liquid waste, or containers capable of holding liquids, shall not be accepted at a landfill unit unless:

(a) The liquid is household waste other than septic waste;

(b) The liquid is leachate or gas condensate derived from the MSWLF unit, and the MSWLF unit is designed with a minimum composite liner and leachate collection system or approved equivalent liner and leachate collection system; or

(c) The containers:

1. Are similar in size to that normally found in household waste;

2. Are designed to hold liquids for use other than storage; or

3. Contain household wastes.

(21) Empty containers larger ~~than 10 gallons~~ in size than normally found in household waste must be rendered unsuitable for holding liquids prior to delivery to the ~~disposal facility~~ landfill unit unless otherwise approved by the Department.

(22) MSWLF units containing sewage sludge and failing to satisfy the criteria in this Division violate Sections 309 and 405(e) of the Clean Water Act.

(23) Owners or operators of all MSWLFs must ensure that the units do not violate any applicable requirements developed under a State Implementation Plan (SIP) approved or promulgated by the Administrator pursuant to Section 110 of the Clean Air Act, as amended.

(24) Notwithstanding this Rule, additional requirements for operating and maintaining a ~~sanitary landfill~~ MSWLF may be imposed by the Department, as deemed necessary, to comply with the Act and this Division.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-4, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; October 2, 1990; ----- --, 1993.

335-13-4-.23 Specific Requirements for ~~Landfills~~ Construction/Demolition Landfills and Industrial Landfills. The following requirements in conjunction with 335-13-4-.21 shall be for operating and maintaining an acceptable ~~landfill~~ C/DLF or ILF:

(1) All waste shall be covered as follows:

(a) A minimum of six inches of compacted earth or other alternative cover material that includes but is not limited to foams, geosynthetic or waste products, and is approved by the Department shall be added at the conclusion of each week's operation or as otherwise specified by the Department~~.~~ to control disease vectors, fires, odors, blown litter and scavenging.

~~(b) Landfilled areas (cells) which will not have additional waste placed on them for three months or more shall be covered--within 30 days with a minimum of 12 inches of intermediate soil cover, graded to prevent ponding of surface water, and prepared for the establishment of a vegetative cover.--Such preparation shall include, but not be limited to, the placement of appropriate species of grass seed, fertilizer, mulch, and watering such that germination can reasonably be anticipated.~~

~~(c) Grading and final cover requirements for completed portions of the facility are as follows:~~

~~1. Final grading shall be provided within 60 days after landfilling has been completed for each area fill of two acres or more. When the trench method is utilized, final grading shall be provided within 60 days after landfilling has been completed on each trench. Final earth cover shall be a minimum of two feet of compacted soil.~~

~~2. The establishment of a vegetative or some other appropriate cover to minimize erosion and, when applicable, maximize evapotranspiration shall be established. Within 30 days after completion of final grading on each filled area or each trench, the permittee shall prepare the final cover for the establishment of a vegetative or alternative cover. For the establishment of a vegetative cover, such preparation shall include, but not be limited to:~~

~~(i) Placement of appropriate species of grass seed, fertilizer and mulch; and~~
~~(ii) Watering and maintenance necessary such that germination can reasonably be anticipated.~~

~~(d) Earth cover shall be of a quality to be easy manageable and with sufficient clay content to provide an adequate seal on the landfilled waste.~~

(b) Final closure shall be carried out in accordance with 335-13-4-.20 of this Division.

(2) All waste shall be thoroughly spread in layers two feet or less in thickness and thoroughly compacted daily with adequate landfill equipment prior to placing additional layers of waste or placing the weekly cover as specified in 335-13-4-.23(1), unless otherwise approved by the Department. Waste such as construction/demolition waste and other types of waste which cannot be managed by landfill equipment in this manner shall be managed in a manner approved by the Department.

(3) All waste shall be confined to as small an area as possible and placed onto an appropriate slope of 4 to 1 (25%) or as approved by the Department.

(4) Scavenging shall not be permitted, and salvaging operations shall be controlled in accordance with plans approved by the Department.

(5) Litter shall be controlled along the access roads, ~~and~~ over the landfill unit, and the adjoining property.

(6) Adequate fire control measures shall be established and followed.

(7) The facility shall be operated in accordance with approved plans and permits.

(8) The site shall be adequately secured to prevent entry except when a trained operator or caretaker is on site.

(9) If the site is available to the public or commercial haulers, a sign shall be posted at the landfill stating: name of permittee, owner and/or operator, name of landfill, days and hours of operation, waste types accepted and disposal fees for use of the landfill.

(10) An all-weather access road shall be provided to the dumping face. The access road shall be wide enough to allow passage of collection vehicles.

(11) Provisions shall be included for disposal activities in adverse weather conditions.

(12) Adequate personnel shall be provided to insure continued and smooth operation of the site. The facility personnel and landfill supervisor must be trained in landfill techniques.

(13) Completed sites or portions of sites shall be properly closed as provided by this Division and approved facility plans.

(14) The Department may require the following based on the extent the site is used:

(a) Personnel facilities which provide shelter, communications, lavatory, and toilets for employees. Such facilities shall be kept clean and well repaired. Sewage disposal systems shall be approved by the Department, ~~or~~ the State Health Department, ~~and~~ or Local Health ~~Officer~~ Department.

(b) Equipment allocated to the landfill shall be such that the site can be properly maintained to meet the requirements of this Division.

(15) Environmental monitoring and treatment structures shall be protected and maintained in good repair.

(16) Records shall be maintained on the daily volume of waste received at C/DLFs and ILFs. A quarterly report utilizing a format approved by the Department which summarizes the daily volumes shall be submitted to the Department and maintained on file in the operating record of the facility by the permittee.

(17) Measures shall be taken to prevent the breeding or accumulation of disease vectors. If determined necessary by the Department or the State Health Department, additional disease vector control measures shall be conducted.

(18) Bulk or noncontainerized liquid waste, or containers capable of holding liquids, shall not be accepted at a C/DLF or ILF unless:

1. The liquid is leachate or gas condensate derived from the C/DLF or ILF unit and, the C/DLF or ILF unit is designed with a minimum single liner and leachate collection system or approved equivalent liner and leachate collection system; or

2. The containers are designed to hold liquids for use other than storage.

(19) Empty containers larger than 10 gallons in size must be rendered unsuitable for holding liquids prior to delivery to the landfill unit unless otherwise approved by the Department.

(~~16~~20) Notwithstanding this Rule, certain requirements for operating and maintaining a ~~landfill~~ C/DLF or ILF may be enhanced or reduced by the Department as deemed necessary to comply with the Act and this Division.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-4, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; October 2, 1990.

335-13-4-.24 Septic Tank Pumpings and Sewage Sludge. The practice of accepting septic tank pumpings and sewage sludge shall not occur at ~~disposal facilities~~ landfill units unless specifically approved in writing by the Department.
Author:
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988.

335-13-4-.25 **Specific Requirements for Other Disposal Methods.** Construction and operation of a ~~solid-waste disposal-facility~~ landfill unit for which specific rules and regulations under this Division have not been developed is prohibited unless:

(1) A permit application for the location, construction, and operation of the facility is submitted as stated in 335-13-5-.01 of this Division, and

(2) The ~~solid-waste-disposal-facility~~ landfill unit is determined by the Department to be consistent with the intent of the Act and this Division.
Author:
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988.

335-13-4-.26 **Requirements for Management and Disposal of Special Waste.** Requirements for the management and disposal of special waste at a ~~disposal-facility~~ landfill unit permitted by the Department shall meet the following requirements. Certain requirements may be modified by the Department as deemed necessary to comply with the Act and this Division. Waste types for which specific rules and regulations under this Division have not been developed shall be managed and disposed of in a manner as determined by the Department to be consistent with the intent of the Act and this Division. Generators of a special waste may be required by the Department to provide an analysis and certification that the waste is nonhazardous or treated medical waste.

~~(1) Disposal-requirements-for-drilling-fluids-and drill-cuttings.--Any-person,-agency,-or-permittee-who generates,-processes,-treats,-or-disposes-of-drilling-muds shall-comply-with-the-following-practices:~~

~~(a) Drilling-fluids-and-drill-cuttings-intended-for disposal-shall-be-disposed-of-in-a-facility-permitted-by the-Department-unless-disposal-is-regulated-by-another agency-such-as-the-State-Oil-and-Gas-Board.~~

~~(b) Prior-to-disposal-at-a-solid-waste-facility, the-following-conditions-shall-be-met:~~

~~1. A-written-certification-from-the-generator-that the-drilling-fluids-and-drill-cuttings-are-nonhazardous and-has-not-been-mixed-with-hazardous-waste-shall-be submitted-to-the-Department.~~

~~2. The drilling fluids and drill cuttings shall be dewatered or solidified to a bladeable consistency and certified to contain no "free liquids" as defined by Method 9095 (Paint Filter Liquids Test), as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA Pub. No. SW-846).~~

~~(e) The area used for disposal shall be covered at least weekly or as determined necessary by the Department.~~

~~(d) Final earth cover shall be as noted in 335-13-4-.22(1).~~

(~~2~~1) Disposal requirements for asbestos. Any person who generates, processes, treats, or disposes of asbestos shall comply with the following practices:

(a) Asbestos shall be disposed of in a facility permitted by the Department. The asbestos shall arrive at the ~~disposal facility~~ landfill unit in properly labeled, leak-tight containers as determined by the Department. The material inside the containers should be in a form that it will not easily become airborne.

(b) Containers shall be placed intact in a specially prepared place and covered with a minimum of 12 inches of earth at the end of each working day. Asbestos waste may be landfilled in an excavation at the bottom of the operating face if no liner is present or the design depth restriction is not exceeded. The waste may also be placed in a separately designated area. If a separate area is utilized, it shall be clearly marked to prevent future excavation into the waste.

(c) Proper handling precautions shall be taken to ensure that containers are not ruptured prior to placing the required daily earth cover as noted in 335-13-4-.26(2)(b). No machinery shall be operated over uncovered containers.

(d) Final ~~earth~~-cover shall be as noted in 335-13-4-.~~22(1)(e)~~.20(2).

(2) Foundry sand which exhibits less than 50 percent of each of the TC Levels for metals as defined by the USEPA's Toxicity Characteristic Leaching Procedure (TCLP) may be managed in the following manner:

(a) Foundry sand may be managed in areas other than

1. Flood Plains;

2. Wetlands;

3. Residential zones; or

4. Areas less than 5 feet above the seasonal high groundwater table.

(b) Each foundry must maintain records at the manufacturing facility. These records must include:

1. A description of the site to within the 1/4, 1/4 Section of a specific Township and Range.

2. Volume of foundry sand disposed of at each location.

(c) The waste must be certified by the generator on a quarterly basis or whenever the process changes which would significantly alter the test results, whichever is more frequent. Certification of the foundry sand shall be accomplished by submitting the following:

1. A completed Solid/Hazardous Waste Determination Form.

2. A TCLP Analysis for metals.

(d) Each foundry must contact the Water Division of ADEM with regards to General Stormwater and/or NPDES permits.

(e) Foundry sand from two or more foundries may be managed at one location provided adequate documentation and record keeping is maintained for each foundry.

(f) Foundry sands not meeting the requirements of paragraph (2) of this Rule must be managed at an approved recycle/reuse facility or at a landfill unit approved for the disposal of foundry sand and permitted by the Department.

(3) Disposal requirements for petroleum contaminated waste. Any person who disposes of petroleum contaminated waste shall comply with the following practices:

(a) Petroleum contaminated waste must be disposed of in a permitted facility with groundwater monitoring wells.

(b) Prior to disposal at a MSWLF, C/DLF or ILF, the following conditions must be met:

1. Written certification from generator that petroleum contaminated waste is non-hazardous supported by TPH analysis and TCLP analysis, where applicable.

(i) TPH analysis will be required for all petroleum contaminated waste certifications.

(ii) TCLP is required on used heavy petroleum contaminated waste or as determined by the Department.

(iii) No TCLP will be required for petroleum contaminated waste containing less than 100 TPH.

(iv) TPH and TCLP sampling frequency will be determined by the Department.

2. The petroleum contaminated waste must be solidified to a bladeable consistency and certified to contain no free liquids as defined by Method 9095 (Paint Filter Liquid Test).

3. TPH contaminated waste acceptable for disposal in an unlined, or clay lined, permitted landfill unit shall not exceed the following TPH and Total Lead limits. Written approval from ADEM must be obtained before petroleum contaminated waste is disposed of.

PETROLEUM CONTAMINANT	**TPH (MAXIMUMS)**	**LEAD ANALYSIS**
Light (gasoline & similar weights)	< 250 ppm	< 100 total (or certification < 5.0 TCLP statement that product is unleaded)
Medium (diesel & similar weights)	< 500 ppm	Not required
Heavy (motor oil & similar weights)	< 3,000 ppm	Used - TCLP required Virgin - No TCLP required

4. Any petroleum contaminated waste in which the original product did not have a flash point < 140 degrees Fahrenheit or would not otherwise be classified as a light petroleum product may be disposed of at a permitted landill unit with Departmental approval which has been synthetically lined according to Division 13 requirements. Used, heavy petroleum material such as waste oil, is still subject to TCLP analysis.

(c) Petroleum contaminated waste with a TPH of less than 10 ppm is considered noncontaminated and is not regulated by the ADEM.

(d) Petroleum contaminated waste from UST removals with a TPH greater than 10 ppm but less than 100 ppm may be disposed of on site under the following conditions:

1. The distance from land surface to existing groundwater must be 5 feet or more.

2. The soil is placed back in the excavation from which it was removed or spread in a thin layer on site. On site disposal requires the approval of the ADEM UST Section.

(e) Petroleum contaminated waste that exceeds the established TPH limits for disposal at a permitted landfill unit must be remediated to acceptable levels by aeration, bioremediation, thermal treatment or other Department approved remediation method.

(4) Municipal Solid Waste Ash shall be disposed of at a MSWLF meeting at a minimum the design criteria established under 335-13-4-.18. Alternative disposal methods or uses must be approved by the Department prior to implementation.

Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-4, 22-27-7.
History: July 21, 1988; Amended: October 2, 1990~~.~~; ------, 1993.

335-13-4-.27 Groundwater Monitoring and Corrective Action. The requirements for groundwater monitoring and corrective action at MSWLFs, C/DLFs, and ILFs are presented in the following rules:

(1) The requirements in this Rule shall apply to all MSWLF units and, when determined necessary by the Department to protect public health and the environment, C/DLF units or ILF units, except as provided in paragraph (2) of this Rule.

(2) Groundwater monitoring requirements under paragraphs (6) through (31) of this Rule may be suspended by the Department for a LF unit if the owner or operator can demonstrate that there is no potential for migration of hazardous constituents from that LF unit to the first saturated zone, as defined in 335-13-1-.03, during the active life of the unit and the post-closure care period. This demonstration must be certified by a qualified groundwater scientist, as defined in 335-13-1-.03, and approved by the Department, and must be based upon:

(a) Site-specific field collected measurements, sampling, and analysis of physical, chemical, and biological processes affecting contaminant fate and transport, and

(b) Contaminant fate and transport predictions that maximize contaminant migration and consider impacts on human health and environment.

(3) Owners and operators of LF units must comply with the groundwater monitoring requirements of this Rule according to the following schedule.

(a) Existing LF units and lateral expansions must be in compliance with the groundwater monitoring requirements specified in paragraphs (6) through (31) of this Rule by October 9, 1993, or the effective date of §258.1 of 40 CFR 258, Solid Waste Disposal Criteria, whichever is later.

(b) New LF units must be in compliance with the groundwater monitoring requirements specified in paragraphs (6) through (31) of this Rule before waste can be placed in the unit.

(4) Once established at a LF unit, groundwater monitoring shall be conducted throughout the active life and post-closure care period of that LF unit as specified in 335-13-4-.20.

(5) The Department may establish alternative schedules for demonstrating compliance with subparagraph (9)(b) of this Rule, pertaining to notification of placement of certification in operating record; subparagraph (21)(a) of this Rule, pertaining to notification that a statistically significant increase (SSI) notice is in the operating record; subparagraphs

(21)(b) and (c) of this Rule, pertaining to an assessment monitoring program; paragraph (23) of this Rule, pertaining to sampling and analyzing Appendix II constituents; subparagraph (25)(a) of this Rule, pertaining to placement of notice (Appendix II constituents detected) in record and notification of notice in record; subparagraph (25)(b) of this Rule, pertaining to sampling for Appendix I and II of this Chapter; paragraph (28)of this Rule, pertaining to notification (and placement of notice in record) of SSI above groundwater protection standard; subparagraph (28)(a)4. and paragraph (32) of this Rule, pertaining to assessment of corrective measures; paragraph (36) of this Rule, pertaining to selection of remedy and notification of placement in record; subparagraph (43)(d) of this Rule, pertaining to notification of placement in record (alternative corrective action measures); and paragraph (46) of this Rule, pertaining to notification of placement in record (certification of remedy completed).

(6) A groundwater monitoring system must be installed that consists of a sufficient number of wells, installed at appropriate locations and depths, to yield groundwater samples from the first saturated zone (as defined in 335-13-1-.03) that:

(a) Represent the quality of background groundwater that has not been affected by leakage from a unit. A determination of background quality may include sampling of wells that are not hydraulically upgradient of the waste management area where:

1. Hydrogeologic conditions do not allow the owner or operator to determine what wells are hydraulically upgradient; or

2. Sampling at other wells will provide an indication of background groundwater quality that is as representative or more representative than that provided by the upgradient wells; and

(b) Represent the quality of groundwater passing the relevant point of compliance specified by the Department under 335-13-4-.12(14). The downgradient monitoring system must be installed at the relevant point of compliance specified by the Department under 335-13-4-.12(14) that ensures detection of groundwater contamination in the first saturated zone. When physical obstacles preclude installation of groundwater monitoring

wells at the relevant point of compliance at existing units, the down-gradient monitoring system may be installed at the closest practicable distance hydraulically down-gradient from the relevant point of compliance specified by the Department under 335-13-4-.12(14) that ensures detection of groundwater contamination in the uppermost aquifer.

(7) The Department may approve a multi-unit groundwater monitoring system instead of separate groundwater monitoring systems for each MSWLF unit when the facility has several units, provided the multi-unit groundwater monitoring system meets the requirement of paragraph (6) of this Rule and will be as protective of human health and the environment as individual monitoring systems for each MSWLF unit, based on the following factors:

(a) Number, spacing, and orientation of the MSWLF units;

(b) Hydrogeologic setting;

(c) Site history;

(d) Engineering design of the MSWLF units; and

(e) Type of waste accepted at the MSWLF units.

(8) Groundwater monitoring wells shall be designed and constructed in accordance with the following reference: "Design and Installation of Groundwater Monitoring Wells in Aquifers" ASTM Subcommittee D18.21 on Groundwater Monitoring, or otherwise as specifically approved by the Department. Plans for groundwater monitoring well location, design, construction and/or abandonment shall be submitted to the Department for review and approval prior to installation. The monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole. This casing must be screened or perforated and packed with gravel or sand, where necessary, to enable collection of groundwater samples. The annular space (i.e., the space between the bore hole and well casing) above the sampling depth must be sealed to prevent contamination of samples and the groundwater.

(a) The owner or operator must notify the Department that the design, installation, development, and/or abandonment of any monitoring wells, piezometers and other measurement, sampling, and analytical devices has been documented and placed in the operating record; and

(b) The monitoring wells, piezometers, and other measurement, sampling, and analytical devices must be operated and maintained so that they perform to design specifications throughout the life of the monitoring program.

(c) Abandoned wells and bore holes shall be abandoned in accordance with the following procedures in order to prevent contamination of groundwater resources. A plan of abandonment must be submitted and approved by the Department prior to implementing abandonment of any well.

1. A well shall be measured for depth prior to sealing to ensure that it is free from any obstructions that may interfere with sealing operations.

2. Where feasible, wells shall be completely filled with neat cement. If the well cannot be completely filled, the sealing materials for the top 20 feet must be neat cement and no material that could impart taste, odor, or toxic components to water may be used in the sealing process.

3. Liner pipe shall be removed from each well in order to ensure placement of an effective seal. If the liner pipe cannot be readily removed, it shall be perforated to ensure that proper sealing is obtained.

4. Concrete, cement grout, or neat cement shall be used as primary sealing materials and shall be placed from the bottom upwards using methods that will avoid segregation or dilution of material.

5. Complete, accurate records of the abandonment procedure shall be kept for each well abandoned. The record of abandonment shall include, at a minimum, the depth of each layer of all sealing and backfilling materials, the quantity of sealing materials used, measurements of static water levels and depths, and any changes made in the well during the sealing. A copy of these records shall be submitted to the Department and a copy placed in the operating record.

(9) The number, spacing, and depths of monitoring systems shall be:

(a) Determined based upon site-specific technical information that must include thorough characterization of:

1. Aquifer thickness, groundwater flow rate, groundwater flow direction including seasonal and temporal fluctuations in groundwater flow; and

2. Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer, including, but not limited to: thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.

(b) Certified by a qualified groundwater scientist and approved by the Department. Within 14 days of the Department's approval, the owner or operator must notify the Department that the certification has been placed in the operating record.

(10) The groundwater monitoring program must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide an accurate representation of groundwater quality at the background and downgradient wells installed in compliance with paragraph (6) of this Rule. The owner or operator must submit for approval to the Department the sampling and analysis program documentation and place a copy in the operating record. The program must include procedures and techniques for:

(a) Sample collection;

(b) Sample preservation and shipment;

(c) Analytical procedures;

(d) Chain of custody control; and

(e) Quality assurance and quality control.

(11) The groundwater monitoring program must include sampling and analytical methods that are appropriate for groundwater sampling and that accurately measure hazardous constituents and other monitoring parameters in groundwater samples. Groundwater samples shall not be field-filtered prior to laboratory analysis.

(12) The sampling procedures and frequency must be protective of human health and the environment.

(13) Groundwater elevations (MSL) must be measured in each well immediately prior to purging, each time groundwater is sampled. The owner or operator must determine the rate and direction of groundwater flow each time groundwater is sampled. Groundwater elevations in wells which monitor the same waste management area must be measured within a 48 hour period to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater flow rate and direction.

(14) The owner or operator must establish background groundwater quality in a hydraulically upgradient or background well(s) for each of the monitoring parameters or constituents required in the particular groundwater monitoring program that applies to the LF unit, as determined under paragraphs (19) or (22) of this Rule. Background groundwater quality may be established at wells that are not located hydraulically upgradient from the LF unit if it meets the requirements of subparagraph (6)(a) of this Rule.

(15) The number of samples collected to establish groundwater quality data must be consistent with the appropriate statistical procedures determined pursuant to paragraph (16) of this Rule. The sampling procedures shall be those specified under paragraph (20) of this Rule for detection monitoring, paragraphs (23) and (25) of this Rule for assessment monitoring, and paragraph (33) of this Rule for corrective action.

(16) The owner or operator must specify in writing to the Department and place in the operating record one of the following statistical methods to be used in evaluating groundwater monitoring data for each hazardous constituent. The statistical test chosen shall be conducted separately for each hazardous constituent in each well.

(a) A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.

(b) An analysis of variance (ANOVA) based on ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.

(c) A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.

(d) A control chart approach that gives control limits for each constituent.

(e) Another statistical test method that meets the performance standards of paragraph (17) of this Rule. The owner or operator must place a justification for this alternative in the operating record and submit it to the Department for approval to use this alternative test. The justification must demonstrate that the alternative method meets the performance standards of paragraph (17) of this Rule.

(17) Any statistical method chosen under paragraph (16) of this Rule shall comply with the following performance standards, as appropriate:

(a) The statistical method used to evaluate groundwater monitoring data shall be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used. If the distributions for the constituents differ, more than one statistical method may be needed.

(b) If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a groundwater protection standard, the test shall be done at a Type I error level no less than 0.01 for each testing period. If a multiple comparisons procedure is used, the Type I experiment wise error rate for each testing period shall be no less than 0.05; however, the Type I error of no less than 0.01 for individual well comparisons must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.

(c) If a control chart approach is used to evaluate groundwater monitoring data, the specific type of control chart and its associated parameter values shall be protective of human health and the environment. The

parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

(d) If a tolerance interval or a prediction interval is used to evaluate groundwater monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, shall be protective of human health and the environment. These parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

(e) The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment. Any practical quantitation limit (pql) that is used in the statistical method shall be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.

(f) If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability, as well as temporal correlation in the data.

(18) The owner or operator must determine whether or not there is a statistically significant increase (SSI) over background values for each parameter or constituent required in the particular groundwater monitoring program that applies to the LF unit as determined under paragraphs (19) or (22) of this Rule. If an SSI over background groundwater quality is detected owner/operator must notify the Department within 14 days of this event.

(a) In determining whether a statistically significant increase has occurred, the owner or operator must compare the groundwater quality of each parameter or constituent at each monitoring well designated pursuant to subparagraph (6)(b) of this Rule to the background value of that constituent, according to the statistical procedures and performance standards specified under paragraphs (16) and (17) of this Rule.

(b) Within 30 days after completing sampling and receiving analytical results, the owner or operator must determine whether there has been a statistically significant increase over background at each monitoring well.

(19) Detection monitoring is required at LF units for all groundwater monitoring wells defined under subparagraphs (6)(a) and (6)(b) of this Rule. At a minimum, a detection monitoring program for MSWLF units must include the monitoring for the constituents listed in Appendix I of this Chapter. Detection monitoring programs for C/DLFs or ILFs must include monitoring for constituents as specified by the Department.

(a) The Department may delete any of the detection monitoring parameters for a LF unit if it can be shown that the removed constituents are not reasonably expected to be contained in or derived from the waste contained in the unit.

(b) The Department may establish an alternative list of inorganic indicator parameters for a MSWLF unit, in lieu of some or all of the heavy metals (constituents 1-15 in Appendix I), if the alternative parameters provide a reliable indication of inorganic releases from the MSWLF unit to the groundwater. In determining alternative parameters, the Department shall consider the following factors:

1. The types, quantities, and concentrations of constituents in waste managed at the MSWLF unit;

2. The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the MSWLF unit;

3. The detectability of indicator parameters, waste constituents, and reaction products in the groundwater; and

4. The concentration or values and coefficients of variation of monitoring parameters or constituents in the groundwater background.

(20) The monitoring frequency for all constituents listed in Appendix I, or in the alternative list approved in accordance with paragraph (19) of this Rule, shall be at least semiannual during the active life of the facility

(including closure) and the post-closure period. A minimum of four independent samples from each well (background and downgradient) must be collected and analyzed for the Appendix I constituents, or the alternative list approved in accordance with paragraph (19) of this Rule, during the first semiannual sampling event. At least one sample from each well (background and downgradient) must be collected and analyzed during subsequent semiannual sampling events.

The Department may specify an appropriate alternative frequency for repeated sampling and analysis for Appendix I constituents, or the alternative list approved in accordance with paragraph (19) of this Rule, during the active life (including closure) and the post-closure care period. The alternative frequency during the active life (including closure) shall be no less than annual. The alternative frequency shall be based on consideration of the following factors:

(a) Lithology of the aquifer and unsaturated zone;

(b) Hydraulic conductivity of the aquifer and unsaturated zone;

(c) Groundwater flow rates;

(d) Minimum distance between upgradient edge of the LF unit and downgradient monitoring well screen (minimum distance of travel); and

(e) Resource value of the aquifer.

(21) If the owner or operator determines, pursuant to paragraph (16) of this Rule, that there is a statistically significant increase over background for one or more of the constituents listed in Appendix I, or in the alternative list approved in accordance with paragraph (19) of this Rule, at any monitoring well at the boundary specified under subparagraph (6)(b) of this Rule, the owner or operator:

(a) Must, within 14 days of this finding, place a notice in the operating record, and submit a copy of this notice to the Department, indicating which constituents have shown statistically significant changes from background levels, and notify the Department that this notice was placed in the operating record; and

(b) Must establish an assessment monitoring program meeting the requirements of paragraphs (22) through (31) of this Rule within 90 days except as provided for under subparagraph (21)(c) of this Rule.

(c) The owner/operator may demonstrate that a source other than a LF unit caused the contamination or that the statistically significant increase resulted from an error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. A report documenting this demonstration must be certified by a qualified groundwater scientist, approved by the Department and be placed in the operating record. If a successful demonstration is made and documented, the owner or operator may continue detection monitoring as specified in this Rule. If, after 90 days, a successful demonstration is not made, the owner or operator must initiate an assessment monitoring program as required in paragraphs (22) through (31) of this Rule.

(22) Assessment monitoring is required whenever a statistically significant increase over background has been detected for one or more of the constituents listed in Appendix I or in the alternative list approved in accordance with subparagraph (19)(b) of this Rule.

(23) Within 90 days of triggering an assessment monitoring program, and annually thereafter, the owner or operator must sample and analyze the groundwater for all constituents identified in Appendix II of this Chapter. A minimum of one sample from each downgradient well must be collected and analyzed during each sampling event. For any constituent detected in the downgradient wells as the result of the complete Appendix II analysis, a minimum of four independent samples from each well (background and downgradient) must be collected and analyzed to establish background for the new constituents.

The Department may specify an appropriate subset of wells to be sampled and analyzed for Appendix II constituents during assessment monitoring. The Department may delete any of the Appendix II monitoring parameters for a LF unit if it can be shown that the removed constituents are not reasonably expected to be in or derived from the waste contained in the unit.

(24) The Department may specify an appropriate alternate frequency for repeated sampling and analysis for the full set of Appendix II constituents required by paragraph (23) of this Rule, during the active life (including closure) and post-closure care of the unit considering the following factors:

(a) Lithology of the aquifer and unsaturated zone;

(b) Hydraulic conductivity of the aquifer and unsaturated zone;

(c) Groundwater flow rates;

(d) Minimum distance between upgradient edge of the MSWLF unit and downgradient monitoring well screen (minimum distance of travel);

(e) Resource value of the aquifer; and

(f) Nature (fate and transport) of any constituents detected in response to this Rule.

(25) After obtaining the results from the initial or subsequent sampling events required in paragraph (23) of this Rule, the owner or operator must:

(a) Within 14 days, place a notice in the operating record identifying the Appendix II constituents that have been detected and notify the Department that this notice has been placed in the operating record;

(b) Within 90 days, and on at least a semiannual basis thereafter, resample all wells specified by paragraph (6) of this Rule, conduct analyses for all constituents in Appendix I or in the alternative list approved in accordance with subparagraph (19)(b) of this Rule, and for those constituents in Appendix II that are detected in response to paragraph (23) of this Rule, and record their concentrations in the facility operating record. At least one sample from each well (background and downgradient) must be collected and analyzed during these sampling events.

The Department may specify an alternative monitoring frequency during the active life (including closure) and the post closure period for the constituents referred to in this paragraph. The alternative frequency for Appendix I constituents, or the alternative list approved in

accordance with subparagraph (19)(b) of this Rule, during the active life (including closure) shall be no less than annual. The alternative frequency shall be based on consideration of the factors specified in paragraph (24) of this Rule;

(c) Establish background concentrations for any constituents detected pursuant to paragraph (23) or subparagraph (25)(b) of this Rule; and

(d) Establish groundwater protection standards for all constituents detected pursuant to paragraph (23) or subparagraph (25)(b) of this Rule. The groundwater protection standards shall be established in accordance with paragraphs (29) or (30) of this Rule.

(26) If the concentrations of all Appendix II constituents are shown to be at or below background values, using the statistical procedures in paragraph (16) of this Rule, for two consecutive sampling events, the owner or operator must notify the Department of this finding and may return to detection monitoring.

(27) If the concentrations of any Appendix II constituents are above background values, but all concentrations are below the groundwater protection standard established under paragraphs (29) or (30) of this Rule, using the statistical procedures in paragraph (16) of this Rule, the owner or operator must continue assessment monitoring in accordance with this Rule.

(28) If one or more Appendix II constituents are detected at statistically significant levels above the groundwater protection standard established under paragraphs (29) or (30) of this Rule in any sampling event, the owner or operator must, within 14 days of this finding, place a notice in the operating record identifying the Appendix II constituents that have exceeded the groundwater protection standard and notify the Department and all appropriate local government officials that the notice has been placed in the operating record.

(a) The owner or operator also:

1. Must characterize the nature and extent of the release by installing additional monitoring wells as necessary;

2. Must install at least one additional monitoring well at the facility boundary in the direction of contaminant migration and sample this well in accordance with subparagraph (25)(b) of this Rule;

3. Must notify all persons who own the land or reside on the land that directly overlies any part of the plume of contamination if contaminants have migrated off-site as indicated by sampling of wells in accordance with subparagraph (28)(a) of this Rule; and

4. Must initiate an assessment of corrective measures as required by paragraphs (32) through (35) of this Rule within 90 days; or

(b) The owner or operator may demonstrate that a source other than a LF unit caused the contamination, or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. A report documenting this demonstration must be certified by a qualified groundwater scientist or approved by the Department and placed in the operating record. If a successful demonstration is made, the owner or operator must continue monitoring in accordance with the assessment monitoring program pursuant to paragraphs (22) through (31) of this Rule, and may return to detection monitoring if the Appendix II constituents are at or below background as specified in paragraph (26) of this Rule. Until a successful demonstration is made, the owner or operator must comply with paragraph (28) of this Rule, including initiating an assessment of corrective measures.

(29) The owner or operator must establish a groundwater protection standard for each Appendix II constituent detected in the groundwater. The groundwater protection standard shall be:

(a) For constituents for which a maximum contaminant level (MCL) has been promulgated under Section 1412 of the Safe Drinking Water Act (codified) under 40 CFR 141, the MCL for that constituent;

(b) For constituents for which MCLs have not been promulgated, the background concentration for the constituent established from wells in accordance with subparagraph (6)(a) of this Rule; or

(c) For constituents for which the background level is higher than the MCL identified under subparagraph (29)(a) of this Rule or health based levels identified under subparagraph (30)(a) of this Rule, the background concentration.

(30) The Department may establish an alternative groundwater protection standard for constituents for which MCLs have not been established. These groundwater protection standards shall be appropriate health based levels that satisfy the following criteria:

(a) The level is derived in a manner consistent with Agency guidelines for assessing the health risks of environmental pollutants (51 FR 33992, 34006, 34014, 34028, September 24, 1986);

(b) The level is based on scientifically valid studies conducted in accordance with the Toxic Substances Control Act Good Laboratory Practice Standards (40 CFR 792) or equivalent;

(c) For carcinogens, the level represents a concentration associated with an excess lifetime cancer risk level (due to continuous lifetime exposure) with the 1×10^{-4} to 1×10^{-6} range; and

(d) For systemic toxicants, the level represents a concentration to which the human population (including sensitive subgroups) could be exposed to on a daily basis that is likely to be without appreciable risk of deleterious effects during a lifetime. For purposes of this subpart, systemic toxicants include toxic chemicals that cause effects other than cancer or mutation.

(31) In establishing groundwater protection standards under paragraph (30) of this Rule, the Department may consider the following:

(a) Multiple contaminants in the groundwater;

(b) Exposure threats to sensitive environmental receptors; and

(c) Other site-specific exposure or potential exposure to groundwater.

(32) Within 90 days of finding that any of the constituents listed in Appendix II have been detected at a statistically significant level exceeding the groundwater protection standards defined under paragraphs (29) or (30)

of this Rule, the owner or operator must initiate an assessment of corrective measures. Such an assessment must be completed within a reasonable period of time.

(33) The owner or operator must continue to monitor in accordance with the assessment monitoring program as specified in paragraphs (22) through (31) of this Rule.

(34) The assessment shall include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy as described under paragraphs (36) through (40) of this Rule, addressing at least the following:

(a) The performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts, and control of exposure to any residual contamination;

(b) The time required to begin and complete the remedy;

(c) The costs of remedy implementation; and

(d) The institutional requirements such as State or local permit requirements or other environmental or public health requirements that may substantially affect implementation of the remedy(s).

(35) The owner or operator must discuss the results of the corrective measures assessment, prior to the selection of remedy, in a public meeting with interested and affected parties.

(36) Based on the results of the corrective measures assessment conducted under paragraphs (32) through (35) of this Rule, the owner or operator must select a remedy that, at a minimum, meets the standards listed in this paragraph. The owner or operator must notify the Department, within 14 days of selecting a remedy, that a report describing the selected remedy has been placed in the operating record and how it meets the standards in this paragraph. Remedies must:

(a) Be protective of human health and the environment;

(b) Attain the groundwater protection standard as specified pursuant to paragraphs (29) or (30) of this Rule;

(c) Control the source(s) of releases so as to reduce or eliminate, to the maximum extent practicable, further releases of Appendix II constituents into the environment that may pose a threat to human health or the environment; and

(d) Comply with standards for management of wastes as specified in paragraph (44) of this Rule.

(37) In selecting a remedy that meets the standards of paragraph (36) of this Rule, the owner or operator shall consider the following evaluation factors:

(a) The long- and short-term effectiveness and protectiveness of the potential remedy(s), along with the degree of certainty that the remedy will prove successful based on consideration of the following:

1. Magnitude of reduction of existing risks;

2. Magnitude of residual risks in terms of likelihood of further releases due to waste remaining following implementation of a remedy;

3. The type and degree of long-term management required, including monitoring, operation, and maintenance;

4. Short-term risks that might be posed to the community, workers, or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and redisposal or containment;

5. Time until full protection is achieved;

6. Potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to human health and the environment associated with excavation, transportation, redisposal, or containment;

7. Long-term reliability of the engineering and institutional controls; and

8. Potential need for replacement of the remedy.

(b) The effectiveness of the remedy in controlling the source to reduce further releases based on consideration of the following factors:

1. The extent to which containment practices will reduce further releases;

2. The extent to which treatment technologies may be used.

(c) The ease or difficulty of implementing a potential remedy(s) based on consideration of the following types of factors:

1. Degree of difficulty associated with constructing the technology;

2. Expected operational reliability of the technologies;

3. Need to coordinate with and obtain necessary approvals and permits from other agencies;

4. Availability of necessary equipment and specialists; and

5. Available capacity and location of needed treatment, storage, and disposal services.

(d) Practicable capability of the owner or operator, including a consideration of the technical and economic capability.

(e) The degree to which community concerns are addressed by a potential remedy(s).

(38) The owner or operator shall specify as part of the selected remedy a schedule(s) for initiating and completing remedial activities. Such a schedule must require the initiation of remedial activities within a reasonable period of time taking into consideration the factors set forth in this paragraph. The owner or operator must consider the following factors in determining the schedule of remedial activities:

(a) Extent and nature of contamination;

(b) Practical capabilities of remedial technologies in achieving compliance with groundwater protection standards established under paragraphs (28) or (29) of this Rule and other objectives of the remedy;

(c) Availability of treatment or disposal capacity for wastes managed during implementation of the remedy;

(d) Desirability of utilizing technologies that are not currently available, but which may offer significant advantages over already available technologies in terms of effectiveness, reliability, safety, or ability to achieve remedial objectives;

(e) Potential risks to human health and the environment from exposure to contamination prior to completion of the remedy;

(f) Resource value of the aquifer including:

1. Current and future uses;

2. Proximity and withdrawal rate of users;

3. Groundwater quantity and quality;

4. The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

5. The hydrogeologic characteristic of the facility and surrounding land;

6. Groundwater removal and treatment costs; and

7. The cost and availability of alternative water supplies.

(g) Practicable capability of the owner or operator.

(h) Other relevant factors.

(39) The Department may determine that remediation of a release of an Appendix II constituent from a LF unit is not necessary if the owner or operator demonstrates to the Department that:

(a) The groundwater is additionally contaminated by substances that have originated from a source other than a LF unit and those substances are present in concentrations such that cleanup of the release from the LF unit would provide no significant reduction in risk to actual or potential receptors; or

(b) The constituent(s) is present in groundwater that:

1. Is not currently or reasonably expected to be a source of drinking water; and

2. Is not hydraulically connected with waters to which the hazardous constituents are migrating or are likely to migrate in a concentration(s) that would exceed the groundwater protection standards established under paragraphs (29) or (30) of this Rule; or

(c) Remediation of the release(s) is technically impracticable; or

(d) Remediation results in unacceptable cross-media impacts.

(40) A determination by the Department pursuant to paragraph (39) of this Rule shall not affect the authority of the State to require the owner or operator to undertake source control measures or other measures that may be necessary to eliminate or minimize further releases to the groundwater, to prevent exposure to the groundwater, or to remediate the groundwater to concentrations that are technically practicable and significantly reduce threats to human health or the environment.

(41) Based on the schedule established under paragraph (38) of this Rule for initiation and completion of remedial activities the owner/operator must:

(a) Establish and implement a corrective action groundwater monitoring program that:

1. At a minimum, meets the requirements of an assessment monitoring program under paragraphs (22) through (31) of this Rule;

2. Indicates the effectiveness of the corrective action remedy; and

3. Demonstrates compliance with groundwater protection standards pursuant to paragraph (45) of this Rule.

(b) Implement the corrective action remedy selected under paragraphs (36) through (40) of this Rule; and

(c) Take any interim measures necessary to ensure the protection of human health and the environment. Interim measures should, to the greatest extent practicable, be consistent with the objectives of and contribute to the performance of any remedy that may be required pursuant to paragraphs (36) through (40) of this Rule. The following factors must be considered by an owner or operator in determining whether interim measures are necessary:

1. Time required to develop and implement a final remedy;

2. Actual or potential exposure of nearby populations or environmental receptors to hazardous constituents;

3. Actual or potential contamination of drinking water supplies or sensitive ecosystems;

4. Further degradation of the groundwater that may occur if remedial action is not initiated expeditiously;

5. Weather conditions that may cause hazardous constituents to migrate or be released;

6. Risks of fire or explosion, or potential for exposure to hazardous constituents as a result of an accident or failure of a container or handling system; and

7. Other situations that may pose threats to human health and the environment.

(42) An owner or operator may determine, based on information developed after implementation of the remedy has begun or other information, that compliance with requirements of paragraph (36) of this Rule are not being achieved through the remedy selected. In such cases, the owner or operator must implement other methods or techniques that could practicably achieve compliance with the requirements, unless the owner or operator makes the determination under paragraph (43) of this Rule.

(43) If the owner or operator determines that compliance with requirements under paragraph (36) of this Rule cannot be practically achieved with any currently available methods, the owner or operator must:

(a) Obtain certification of a qualified groundwater scientist or approval by the Department that compliance with requirements under paragraph (36) of this Rule cannot be practically achieved with any currently available methods;

(b) Implement alternate measures to control exposure of humans or the environment to residual contamination, as necessary to protect human health and the environment; and

(c) Implement alternate measures for control of the sources of contamination, or for removal or decontamination of equipment, units, devices, or structures that are:

1. Technically practicable; and

2. Consistent with the overall objective of the remedy.

(d) Notify the Department within 14 days that a report justifying the alternative measures prior to implementing the alternative measures has been placed in the operating record.

(44) All solid wastes that are managed pursuant to a remedy required under paragraphs (36) through (40) of this Rule, or an interim measure required under subparagraph (41)(c) of this Rule, shall be managed in a manner:

(a) That is protective of human health and the environment; and

(b) That complies with applicable RCRA requirements.

(45) Remedies selected pursuant to paragraphs (36) through (40) of this Rule shall be considered complete when:

(a) The owner or operator complies with the groundwater protection standards established under paragraphs (29) or (30) of this Rule at all points within the plume of contamination that lie beyond the groundwater monitoring well system established under paragraph (6) of this Rule.

(b) Compliance with the groundwater protection standards established under paragraphs (29) or (30) of this Rule has been achieved by demonstrating that concentrations of Appendix II constituents have not

exceeded the groundwater protection standard(s) for a period of three consecutive years using the statistical procedures and performance standards in paragraphs (16) and (17) of this Rule. The Department may specify an alternative length of time during which the owner or operator must demonstrate that concentrations of Appendix II constituents have not exceeded the groundwater protection standard(s) taking into consideration:

1. Extent and concentration of the release(s);

2. Behavior characteristics of the hazardous constituents in the groundwater;

3. Accuracy of monitoring or modeling techniques, including any seasonal, meteorological, or other environmental variabilities that may affect the accuracy; and

4. Characteristics of the groundwater.

(c) All actions required to complete the remedy have been satisfied.

(46) Upon completion of the remedy, the owner or operator must notify the Department within 14 days that a certification that the remedy has been completed in compliance with the requirements of paragraph (45) of this Rule has been placed in the operating record. The certification must be signed by the owner or operator and by a qualified groundwater scientist or approved by the Department.

(47) When, upon completion of the certification, the owner or operator determines that the corrective action remedy has been completed in accordance with the requirements under paragraph (45) of this Rule, the owner or operator shall be released from the requirements for financial assurance for corrective action under 40 CFR 258, Subpart G.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-4, 22-27-7.
History: ----- --, 1993.

335-13-4-.28 Financial Assurance Criteria. [Reserved]

335-13-4-.29 Recordkeeping Requirements. Recordkeeping shall be maintained as follows:

(1) The owner or operator of a MSWLF, C/DLF or ILF unit must record and retain in an operating record ~~near~~ at the facility, ~~in an operating record~~ or in an alternative location approved by the Department, the following information as it becomes available:

(a) Solid Waste Disposal Facility Permit as issued by the Department.

(b) Permitted application, operational narrative, and engineering drawings. This may include, but is not limited to:

1. Any location restriction demonstration required under 335-13-4-.01 of this Division;

2. Any MSWLF unit design documentation for placement of leachate or gas condensate in a MSWLF unit as required under 335-13-4-.21(3)(a) of this Division;

3. Closure and post closure care plans as required by 335-13-4-.20 of this Division;

4. Explosive gas monitoring plans as required by 335-13-4-.16 of this Division;

5. Corrective action plan, if necessary, which includes detection in assessment monitoring;

6. Any other documentation submitted to the Department during the permitting process.

(c) Reports or documentation generated during the normal operation of the facility may include, but are not limited to:

1. Gas monitoring results from monitoring and any remediation plans required by 335-13-4-.16;

2. Inspection records, training procedures, notification procedures, and other information required in 335-13-4-.21(3)(a);

3. Any monitoring, testing, or analytical data as required by 335-13-4-.20 of this Division concerning closure;

4. Any demonstration, certification, finding monitoring, testing, or analytical data required by 335-13-4-.27 concerning groundwater monitoring and corrective action;

5. Quarterly volume reports as required in 335-13-4-.22(18) or 335-13-4-.23(16) of this Division;

6. Waste certifications as required by 335-13-4-.21(3)(b) and 335-13-4-.21(5) of this Division;

7. Any other report or document generated in the normal operation of the facility which is submitted to the Department.

(d) Any cost estimates and financial assurance documentation required by 40 CFR 258, Subpart G.

(2) The owner/operator must notify the Department when the documents from subparagraph (1)(b) of this Rule have been placed or added to the operating record, and all information contained in the operating record must be furnished upon request to the Department or be made available at all reasonable times for inspection by the Department.

(3) The Department can set alternative schedules for recordkeeping and notification requirements as specified in paragraphs (1) and (2) of this Rule, except for notification requirements in 335-13-4-.01(5)(b) and 335-13-4-.27(29)(a)3.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§22-22A-8, 22-27-7.
Effective Date: ----- --, 1993.

Moved to Document 230

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
LAND DIVISION - SOLID WASTE PROGRAM

CHAPTER 335-13-5
PROCEDURES FOR OBTAINING PERMITS

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335-13-5-.01 Disposal Permits. All solid waste shall be disposed of in a ~~disposal-facility~~ landfill unit permitted by the Department. Rules 335-13-5-.02 through 335-13-5-.06~~7~~ establish the minimum requirements and procedures for obtaining a solid waste disposal facility permit for existing and proposed facilities.~~--Individual households-with-valid-Certificate-of-Exceptions-and drilling-waste-in-which-disposal-is-regulated-by-the-State Oil-and-Gas-Board-are-exempted-from-these-requirements-as noted-in-335-13-1-.12.~~
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-22A-5, 22-27-3, 22-27-5, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988; ----- --, 1993.

335-13-5-.02 Permit Application. Existing and proposed ~~solid-waste-disposal-facilities~~ landfill units shall obtain permits to construct and/or operate in accordance with the following:

(1) ~~Solid-waste-disposal-facilities~~ Landfill units proposed after the effective date of this Division shall submit the following in order to request a permit:

(a) Host government approval, as provided in the Code of Alabama 1975, § 22-27-48;

(b) Statement of consistency, as provided in the Code of Alabama 1975, § 22-27-48;

(c~~a~~) Facility design plans and operational procedures in accordance with Permit Application Procedures for Solid Waste Disposal Facilities as prepared by the Department; and

(d~~b~~) Technical data and reports to comply with 335-13-4-.01, 335-13-4-.11 through 335-13-4-.24 and this Division,

(e~~e~~) All technical reports, plans and specifications, plats, geological and hydrological reports required by this Division, prepared under the following:

1. Plans, specifications, operational procedures and other technical data, except as provided in 335-13-5-.02(1)(e~~e~~)2. and 3., for the construction and operation of a facility shall be prepared by an engineer. The seal or signature and registration number of the design engineer shall be affixed to the plans, specifications and reports.

2. Reports, letters of certification and other documents and technical data concerning the siting standards of 335-13-4-.01 shall be prepared by a person with technical expertise in the field of concern.

3. Legal property descriptions and survey plats shall be by a land surveyor with the seal or signature and registration number of the land surveyor affixed.

(f) The name and mailing address of all adjacent landowners shall be submitted as part of a landfill unit's permit application.

(2) Solid waste disposal permits obtained under compliance with this Division shall be valid for the design life of the facility or as otherwise determined by the Department, but no longer than a period of five years. Permits, however, are subject to revocation under 335-13-5-.05 of this Division.

(3) Request for extension, renewal, or a new permit for any ~~solid-waste-disposal-facility,-except-as-provided in-335-13-1-.12,~~ landfill unit shall be filed with the Department by the operating agency at least 180 days prior to expiration date for existing permits or proposed construction date for new facilities.

(4) Prior to any change in the permitted service area, increasing the volume of waste received or changing the design or operating procedure as described in 335-13-5-~~.05(1)~~.06(1) and (2) and the current permit, the permittee shall request a modification of the permit as described in 335-13-5-~~.05(2)~~.06(3). This modification request must be filed with the Department at least 90 days prior to the anticipated change and shall receive approval from the Department prior to the implementation of the proposed change.

~~(5) The Department may delete provisions for plans and specifications by a engineer and monitoring requirements for landfills which will be utilized for the disposal of inert materials such as building debris, stumps, limbs and similar type waste.~~

~~(a) The following information shall be provided by the requesting agency to the Department for consideration:~~

~~1. Name and address of operating agency.~~

~~2. Waste type and estimated life of facility.~~

~~3. A location map and location by quarter Section, Township and Range; and~~

~~4. A written description of proposed operating procedures.~~

(5) Effect of non-compliance

(a) As determined by the Director, substantial non-compliance of another facility within the State, owned or operated by the permittee requesting reissuance of a permit, will be grounds for denial of permit reissuance until such non-compliance is corrected.

(b) The Director may deny a permit application if:

1. The applicant operates other permitted facilities within the State which are in substantial non-compliance, as determined by the Director, until such non-compliance is corrected;

2. The Director determines that a permit could not be issued that would result in compliance with applicable solid waste standards; or

3. The applicant could not comply with the permit as issued.

Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-27-3, 22-27-5, 22-27-7, 22-27-48.
History: November 18, 1981; Amended: March 31, 1988 (Emergency Regulations), July 21, 1988; October 2, 1990.

335-13-5-.03 ~~Notices of Request for Public Hearings~~Public Notice Procedures. The Department ~~may~~ shall provide notice and an opportunity for public hearing on ~~disposal facility~~ landfill unit permits if determined necessary to meet the requirements of this Division. ~~If the Department determines the need for public notice and public hearing~~ The following procedures shall be observed.

(1) The Department shall ~~circulate in a manner designed to inform~~ notify interested and potentially interested persons of the proposed ~~disposal facility~~ landfill unit ~~and shall include at least~~ by publishing ~~of~~ a notice in a newspaper of general circulation in the area.

(a) The notice shall be given ~~at a time specified by the Department but in all cases prior to the submittal of final plans per 335-13-5-.02(2) and~~ not less than 35 days prior to the issuance of a permit.

(b) The notice shall contain the specific type and nature of the ~~disposal facility~~ landfill unit, the type of waste to be disposed, the person or agency requesting the permit, and the descriptive location of the ~~disposal facility~~ landfill unit, address and telephone number of the Department, and that interested persons may request a public hearing on the proposed ~~disposal facility~~ landfill unit.

(c) Landowners adjacent to a proposed landfill unit shall receive a copy of public notice.

(2) Requests for public hearings shall be submitted in writing to the Department by interested persons.

(a) Frivolous, ~~or~~ insubstantial, or nontechnical requests shall be denied by the Department.

(b) Requests for public hearing must be submitted within 35 days after the publication of the public notice and must contain the following:

1. The name, address and telephone number of the person requesting the hearing.

2. A brief statement of the person's interest and the information the person wishes to submit.

3. The person's signature, if an individual, or the signature of a responsible officer of an organization or legal entity.

Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-22A-5, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988~~.~~; ----- --, 1993.

335-13-5-.04 ~~Notice of Public Hearing and Disposition~~ Procedures. The Department shall authorize a public hearing upon significant requests as provided in 335-13-5-.03(2).

(1) When a hearing has been authorized, the Department shall appoint a hearing officer to conduct the hearing and shall establish a time, date, and location for the hearing. The location for the hearing shall comply with the requirements of the Americans with Disabilities Act.

(2) The Department shall give notice of the public hearing in the manner set forth in 335-13-5-.03(1), and also to the persons requesting the hearing in 335-13-5-.03(2). The notice given not less than 35 days prior to the time of the public hearing shall include:

(a) A summary of the proposed permit.

(b) The place, time, and date of the hearing.

(c) The name, address and telephone number of an office at which interested persons may receive further information.

(3) ~~If a hearing was held pursuant to this rule,~~ The Department shall take one of the following actions after the hearing:

(a) Deny the permit~~ in which case, the Department shall state~~ stating in writing the reasons for denial and inform the person requesting the permit of appeal procedures in 335-13-8-.08~~.~~;

(b) Issue the permit ~~following proper permit application of 335-13-5-.01 and compliance~~ if the application complies with this Division~~.~~; or

(c) ~~The Department may~~ Require additional information, elements of design for the facility, and specify procedures for inclusion into ~~335-13-5-.01~~ the permit prior to issuance of the permit.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-22A-5, 22-27-7.
History: November 18, 1981; Amended: July 21, 1988~~.~~; ----- --,1993.

335-13-5-.05 Permit ~~Modification~~ Denial, Suspension or Revocation.

(1) The Department may ~~modify,~~ deny, suspend or revoke any permit if the permittee is found to be in violation of any of the permit conditions, if the permittee fails to perform the permitted activity in accordance with the approved ~~plan~~ operational narrative or engineering drawings, if the permittee fails to seek a modification of the permit as required by the Rules, if an active site stops receiving waste for more than one year, or if ~~such activity~~ the design operations creates a nuisance or is inconsistent with the Act or this Division. ~~Permits may be modified at any time to include provisions of regulations or statute not in the existing permit.~~ In the event of ~~modification,~~ denial, suspension or revocation of a permit, the Department shall serve written notice of such action on the permittee and shall set forth in such notice the reason for such action. ~~Within 45 days from the effective date of these Rules, each solid waste disposal facility permittee shall submit to the Department the average daily volume of waste received and the geographical area normally or traditionally served by the facility. The area served may not include those areas where special waste is received with Departmental approval.~~

~~(1) Permit modification shall be required utilizing forms designated by the Department when the permittee proposes to modify its operation in any of the following ways:~~

~~(a) There is any change in the traditional or permitted service area. The traditional or permitted service area may not include those areas where special waste is received with Departmental approval. The~~

~~Director may temporarily or on a one-time basis waive permit modification requirements on a case-by-case basis for special waste or other solid waste if it is demonstrated that a disposal alternative is needed immediately to protect health or the environment.~~

~~(b) The average daily volume of waste specified by the permit for a disposal facility is proposed to be exceeded, or is exceeded for two or more consecutive reporting quarters, by 20 percent, or 100 tons/day, whichever is less.~~

~~1. The average daily volume of waste received at a disposal facility shall be calculated by dividing the total months receipts by the total number of days in the reporting month.~~

~~2. Volumes received shall be reported to the Department in a format specified by the Department.~~

~~(c) There will be a significant change in design or operational procedure (i.e., balefill, volume, hours of operation, fill sequence, liner design, etc.).~~

~~(2) Permittee shall request a permit modification in accordance with the following procedures:~~

~~(a) Submit a request for modification to the Department at least 90 days prior to the anticipated change.~~

~~(b) Identify each and every part of the permit or plans to be modified.~~

~~(c) Receive approval from the Department prior to implementing modification.~~

~~(3) Upon revocation of the permit, the permittee shall meet the closure requirements found in 335-13-4-.20.~~

(2) Upon revocation or suspension of the permit, or denial of the renewal of the permit, the permittee shall meet the closure requirements found in 335-13-4-.20.

Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-22A-5, 22-27-3, 22-27-5, 22-27-7.
History: November 18, 1981; Amended: March 31, 1988 (Emergency Regulations); July 21, 1988; October 2, 1990; ----- --, 1993.

335-13-5-.06 Permit Modification. The Department may modify any permit after receiving a satisfactory application that is found in compliance with ADEM rules and regulations. Modifications required under paragraph (1) of this Rule are subject to the provisions of Rules 335-13-5-.03 and 335-13-5-.04.

(1) Permit modification shall be required utilizing forms designated by the Department when the permittee proposes to modify its operation in any of the following ways:

(a) There is any change in the permitted service area. The Director may temporarily or on a one-time basis waive permit modification requirements on a case-by-case basis for special waste or other solid waste if it is demonstrated that a disposal alternative is needed immediately to protect health or the environment.

(b) Convert an industrial landfill (ILF) or construction/demolition landfill (C/DLF) to a municipal solid waste landfill (MSWLF).

(c) Addition of a liner and leachate collection system or any design change in existing permitted liner and leachate collection system.

(d) Addition of disposal acreage inside the permitted perimeter where design plans have not been previously submitted.

(2) A permit modification may be required, utilizing forms designated by the Department, when the permittee proposes to modify its operations or design in any of the following ways:

(a) Addition of a waste stream to a ILF or C/DLF.

(b) Addition or relocation of a monitoring well.

(c) Addition of sedimentation basins or any other drainage control devices.

(d) Any operational changes that include:

1. Any change from the approved disposal method (i.e., trench method to area method or area method to trench method);

2. Any change from the approved form of waste (i.e., raw garbage, ash, or bales);

3. Any change in fill sequence; or

4. Conversion of a MSWLF to a ILF or C/DLF.

(e) Any change in the permitted final fill elevations.

(f) The average daily volume of waste specified by the permit for a landfill unit is proposed to be exceeded, or is exceeded for two or more consecutive reporting quarters, by 20 percent, or 100 tons/day, whichever is less.

1. The average daily volume of waste received at a landfill unit shall be calculated by dividing the total months receipts by the total number of days in the reporting month.

2. Volumes received shall be reported to the Department in a format specified by the Department.

(3) Permittee shall request a permit modification in accordance with the following procedures:

(a) Submit a request for modification to the Department at least 90 days prior to the anticipated change.

(b) Identify each and every part of the permit or plans to be modified.

(c) Submit revised plans and narratives as required by the Department.

(d) Receive approval from the Department prior to implementing modification.
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-22A-5, 22-27-3, 22-27-5, 22-27-7.
History: ----- --, 1993.

335-13-5-.067 Transfer of Permit. Permits are not transferable~~ from one person to another or from one site or facility to another~~ except as follows:

(1) A notification must be ~~filed with~~ submitted to and approved by the Department prior to any proposed transfer from one person or company to another or name change of any permitted facility.

(a) The notification must be ~~filed~~ submitted to the Department at least 30 days prior to the proposed transfer.

(b) Information regarding the transfer must be ~~filed~~ submitted on form(s) designated by the Department.

(2) ~~All permit transfers are subject to the provisions of 335-13-5-.03 and 335-13-5-.04.~~[Reserved]
Author: Russell A. Kelly.
Statutory Authority: Code of Alabama 1975, §§ 22-22-A-5, 22-27-7.
History: November 18, 1981; Amended: March 31, 1988 (Emergency Regulations); July 21, 1988; ----- --, 1993.

335-13-5-.08 Vertical Expansion. Existing MSWLF units may continue to operate past October 8, 1993, or the effective date of §258.1 of 40 CFR 258, Solid Waste Disposal Criteria, whichever is later, provided that the following requirements are met and approval is granted by the Department.

(1) A vertical expansion application request must be submitted to the Department. The application, at a minimum, shall include the following:

(a) An assessment of the existing groundwater data and groundwater monitoring system. The assessment shall include:

1. Submittals of past groundwater data and conclusions as to whether or not the groundwater has been impacted by the landfill.

2. Monitoring well data such as: well logs, total well depth, screen depth, depth to water level (MSL), indication/documentation of upgradient or downgradient well location, numbering sequence, etc. and conclusions as to whether or not the groundwater monitoring system is adequate.

(b) A plat or engineering drawing, designating the active footprint; i.e., area where waste has previously been disposed and has not reached final closure elevations. Areas that have the final closure cap in place will not be considered active areas.

(2) In determining whether to approve or deny the vertical expansion request, the Department shall consider the following criteria:

(a) If the groundwater analysis indicates no significant impact to the groundwater, the MSWLF will be allowed to fill vertically over the active footprint, according to their approved plans, until final closure elevations are reached, provided the active footprint is over a lined area with a leachate collection system. If the approved active footprint is over an unlined area, the MSWLF may not operate vertically past October 8, 1997.

(b) If the groundwater analysis indicates an increase over the background data (initial sampling data), and no sampling data has exceeded primary drinking water standards, unlined MSWLFs will be allowed to expand vertically until October 8, 1995 and MSWLFs operating over liners and leachate collection systems may operate according to the approved plans until final closure elevations are reached.

(c) If the groundwater analysis indicates an increase over the background data and exceeds the primary drinking water standards, the MSWLF must perform a groundwater assessment. After Departmental review of the groundwater assessment, a remediation plan (if required) must be submitted to and approved by the Department prior to October 9, 1993, or the effective date of §258.1 of 40 CFR 258, Solid Waste Disposal Criteria, whichever is later. If a remediation plan is approved by ADEM and implemented by the MSWLF unit, the facility may expand vertically until October 8, 1995.

(d) The active footprint shall be determined by the Department.

Author: Russell A. Kelly.

Statutory Authority: Code of Alabama 1975, §§ 22-22-A-5, 22-27-4, 22-27-7.

History: ----- --, 1993.

use of procurement office only)

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US Environmental Protection Agency
Washington, DC 20460

Procurement Request/Order

1. Name of Originator: J. Kelly Ewing		2. Date of Requisition: January 13, 1994
3. Mail Code: 4WD-OSW	4. Telephone Number: 404-347-2091	5. Date Item Required: January 27, 1994
...ure of Originator: [signature]	7. Recommended Procurement Method: ☐ Competitive ☐ Other than full and open competition ☒ Sole source small purchase	

8. Deliver To (Project Manager)	9. Address	10. Mail Code	11. Telephone Number
J. Kelly Ewing	345 Courtland Street, N. E. Atlanta, GA 30365	4WD-OSW	404-347-2091

12. Financial Data	a. Appropriation	b. Servicing Finance Office Number	NOTE: Item 12(d) Document Type — Contract = "C," Purchase Order = "P"
	684/50108	04	

FMO Use (c) (13 digits)	DT (d)	Document Control Number (e) (6 digits)	Account Number (f) (10 digits)	Object Class (g) (4 digits)	Amount (h) Dollars	Cents
		MF0037	4B4E0460MA LA	2568	100	00

13. Suggested Source (Name, Address, ZIP Code, Phone/Contact)	14. Amount of money committed is:	15. For Small Purchases Only: Contracting Office is authorized to exceed the amount shown in Block 12(h) by 10% or $100, whichever is less.
Huntsville Times, 2317 Memorial Pkwy., Huntsville, AL 35801; Faith 205-532-4000	☒ Original ☐ Increase ☐ Decrease	☐ Yes ☐ No

16. Approvals

a. Branch/Office: Patricia S. Zweig, OSW	Date	d. Property Management Officer/Designee	Date
b. Division/Office: Waste Division	Date	e. Other (Specify): [signature]	Date 1/14/94
c. Funds listed in Block 12 and Block 15 (if any) are available and reserved. (Signature of Certifying Official): [signature]	Date 1/14/94	f. Other (Specify)	Date

17. Date of Order	18. Order Number	19. Contract Number (if any)	20. Discount Terms
01/19/94	4R0608NASA		

21. FOB Point	22. Delivery to FOB Point by On or before (Date)	23. Person Taking Order/Quote and Phone No.

24. Contractor (Name, address, ZIP Code)

25. Type of Order: ☐ a. Purchase — Reference your quote (See block 23)

Please furnish the above on the terms specified on both sides of this order and on the attached sheets, if any, including delivery as indicated.

☐ b. Delivery provisions on the reverse are deleted. The delivery order is subject to the terms and conditions of the contract. (See Block 19)

c. ☐ Oral ☐ Written ☐ Confirming

26. Schedule

Item Number (a)	Supplies or Services (b)	Quantity Ordered (c)	Unit (d)	Estimated Unit Price (e)	Unit Price (f)	Amount (g)	Quantity Accepted (h)
1	To publish Notice of Public Hearing on Alabama's Municipal Soild Waste Landfill Permit Program. Notice to be published on or about January 27, 1994.			100.00			
					Total $		

27. United States of America By (Signature)	28. Typed Name and Title of Contracting Officer

EPA Form 1900-8 (Rev. 9-86) Previous editions are obsolete.

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US Environmental Protection Agency
Washington, DC 20460

EPA Procurement Request/Order

1. Name of Originator: J. Kelly Ewing		2. Date of Requisition: January 13, 1994
3. Mail Code: 4WD-OSW	4. Telephone Number: 404/347-2091	5. Date Item Required: February 10, 1994
6. Signature of Originator	7. Recommended Procurement Method: ☐ Competitive ☐ Other than full and open competition ☒ Sole source small purchase	
8. Deliver To (Project Manager): J. Kelly Ewing	9. Address: 345 Courtland Street, N. E. Atlanta, Ga 30365	10. Mail Code: 4WD-OSW; 11. Telephone Number: 404/347-2091

12. Financial Data	a. Appropriation	b. Servicing Finance Office Number	NOTE: Item 12(d) Document Type — Contract = "C," Purchase Order = "P"
	684/50108	04	

FMO Use (c) (13 digits)	DT (d)	Document Control Number (e) (6 digits)	Account Number (f) (10 digits)	Object Class (g) (4 digits)	Amount (h) Dollars	Cents
		MK0058	4B4E04G0GF	2583	1000	00

13. Suggested Source (Name, Address, ZIP Code, Phone/Contact)	14. Amount of money committed is:	15. For Small Purchases Only: Contracting Office is authorized to exceed the amount shown in Block 12(h) by 10% or $100, whichever is less.
	☐ Original ☐ Increase ☐ Decrease	☐ Yes ☐ No

16. Approvals

a. Branch/Office: Patricia S. Zweig, OSW	Date	d. Property Management Officer/Designee	Date
b. Division/Office: WASTE DIVISION	Date	e. Other (Specify)	Date
c. Funds listed in Block 12 and Block 15 (if any) are available and reserved. (Signature of Certifying Official): Connie Bonfield	Date: 1/14/94	f. Other (Specify)	Date

17. Date of Order	18. Order Number	19. Contract Number (if any)	20. Discount Terms
01-25-94	4R-0622NASA		Net 30

21. FOB Point	22. Delivery to FOB Point by On or before (Date)	23. Person Taking Order/Quote and Phone No.
Destination	February 10, 1994	Jana Tyler 205-364-6433

24. Contractor (Name, address, ZIP Code)

Richard Wilson & Associates
P. O. Box 4067
Montgomery, AL 36101
ATTN: Jana Tyler

25. Type of Order: ☒ a. Purchase

Reference your quote (See block 23)

Please furnish the above on the terms specified on both sides of this order and on the attached sheets, if any, including delivery as indicated.

☐ b. Delivery provisions on the reverse are deleted. The delivery order is subject to the terms and conditions of the contract. (See Block 19)

c. ☐ Oral ☐ Written ☐ Confirming

26. Schedule

Item Number (a)	Supplies or Services (b)	Quantity Ordered (c)	Unit (d)	Estimated Unit Price (e)	Unit Price (f)	Amount (g)	Quantity Accepted (h)
1	Court Reporter - Meeting on Thursday, February 10, 1994, at 7:00 P.M. at 1751 Congressman W. L. Dickinson Drive, Montgomery, AL, in the Main Hearing Room. The Court Reporter should arrive 30 minutes before the scheduled hearing and deliver three (3) copies and one (1) original within ten (10) working days of the hearing.			1000.00	XXXXXXX Appearance Fee $60.00 for first 4 hrs. over 4 hrs. $100.00/hr Original and one $2.60/pg .60 for ea add'l copy/pg.		
					Total $	$1,000 DTH	

NOTICE TO SUPPLIER (APR 1984)
This is a firm order ONLY if your price does not exceed the maximum line item or total price in the Schedule. Submit invoices to the Contracting Officer. If you cannot perform in exact accordance with this order, WITHHOLD PERFORMANCE and notify the Contracting Officer immediately, giving your quotation.

AL 014

27. United States of America By (Signature)	28. Typed Name and Title of Contracting Officer
	Ethelreen H. Murdix, Purchasing Agent 404-347-[illegible]74

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US Environmental Protection Agency
Washington, DC 20460

Procurement Request/Order

1. Name of Originator: J. Kelly Ewing		2. Date of Requisition: January 13, 1994
3. Mail Code: 4WD-OSW	4. Telephone Number: 404/347-2091	5. Date Item Required: January 27, 1994
6. Name of Originator	7. Recommended Procurement Method: ☐ Competitive ☐ Other than full and open competition ☒ Sole source small purchase	

8. Deliver To (Project Manager): J. Kelly Ewing	9. Address: 345 Courtland Street, N. E. Atlanta, GA 30365	10. Mail Code: 4WD-OSW	11. Telephone Number: 404/347-2091

12. Financial Data	a. Appropriation	b. Servicing Finance Office Number	NOTE: Item 12(d) Document Type — Contract = "C," Purchase Order = "P"
	684/50108	04	

FMO Use (c) (13 digits)	DT (d)	Document Control Number (e) (6 digits)	Account Number (f) (10 digits)	Object Class (g) (4 digits)	Amount (h) Dollars	Cents
		MF0034	4B4E04G0LA	2568	100	00

13. Suggested Source (Name, Address, ZIP Code, Phone/Contact): Mobile Register, P.O. Box 2488, Mobile, AL 36630 — Louise Barnett, 205/434-8558	14. Amount of money committed is: ☐ Original ☐ Increase ☐ Decrease	15. For Small Purchases Only: Contracting Office is authorized to exceed the amount shown in Block 12(h) by 10% or $100, whichever is less. ☐ Yes ☐ No

16. Approvals

a. Branch/Office: Patricia S. Zweig, OSW	Date	d. Property Management Officer/Designee	Date
b. Division/Office: Waste Division	Date	e. Other (Specify) [signature]	Date 1/14/94
c. Funds listed in Block 12 and Block 15 (if any) are available and reserved. (Signature of Certifying Official) [signature]	Date 1/14/94	f. Other (Specify)	Date

17. Date of Order: 01/19/94	18. Order Number: 4R0609NASA	19. Contract Number (if any)	20. Discount Terms
21. FOB Point	22. Delivery to FOB Point by On or before (Date)	23. Person Taking Order/Quote and Phone No.	

24. Contractor (Name, address, ZIP Code)

25. Type of Order ☐ a. Purchase — Reference your quote (See block 23)

Please furnish the above on the terms specified on both sides of this order and on the attached sheets, if any, including delivery as indicated.

☐ b. Delivery provisions on the reverse are deleted. The delivery order is subject to the terms and conditions of the contract. (See Block 19)

c. ☐ Oral ☐ Written ☐ Confirming

26. Schedule

Item Number (a)	Supplies or Services (b)	Quantity Ordered (c)	Unit (d)	Estimated Unit Price (e)	Unit Price (f)	Amount (g)	Quantity Accepted (h)
1	To publish Notice of Public Hearing on Alabama's Municipal Solid Waste Landfill Permit Program. Notice to be published on or about January 27, 1994.			100.00			
					Total $		

27. United States of America By (Signature)	28. Typed Name and Title of Contracting Officer

EPA Form 1900-8 (Rev. 9-86) Previous editions are obsolete.

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S Environmental Protection Agency
Washington, DC 20460

Procurement Request/Order

1. Name of Originator: J. Kelly Ewing		2. Date of Requisition: January 13, 1994
3. Mail Code: 4WD-OSW	4. Telephone Number: 404-347-2091	5. Date Item Required: January 27, 1994
e of Originator	7. Recommended Procurement Method: ☐ Competitive ☐ Other than full and open competition ☒ Sole source small purchase	

8. Deliver To *(Project Manager)*: J. Kelly Ewing	9. Address: 345 Courtland Street, N.E. Atlanta, GA 30365	10. Mail Code: 4WD-OSW	11. Telephone Number: 404-347-2091

12. Financial Data	a. Appropriation	b. Servicing Finance Office Number
	68/88108	04

NOTE: Item 12(d) Document Type — Contract = "C," Purchase Order = "P"

FMO Use (c) *(13 digits)*	DT (d)	Document Control Number (e) *(6 digits)*	Account Number (f) *(10 digits)*	Object Class (g) *(4 digits)*	Amount (h) Dollars	Cents
		MF0028	4E4E04GC LA	2568	100	00

13. Suggested Source *(Name, Address, ZIP Code, Phone/Contact)*	14. Amount of money committed is:	15. **For Small Purchases Only:** Contracting Office is authorized to exceed the amount shown in Block 12(h) by 10% or $100, whichever is less.
Montgomery Advertiser Kristy Cantrell Box 1000 205/262-1611 Montgomery, AL 36101	☐ Original ☐ Increase ☐ Decrease	☐ Yes ☐ No

16. Approvals

a. Branch/Office: Patricia S. Zweig, OSW	Date	d. Property Management Officer/Designee	Date
b. Division/Office: Waste Division	Date	e. Other *(Specify)*	Date 1/14/94
c. Funds listed in Block 12 and Block 15 *(if any)* are available and reserved. *(Signature of Certifying Official)*	Date 1/14/94	f. Other *(Specify)*	Date

17. Date of Order	18. Order Number	19. Contract Number *(if any)*	20. Discount Terms
01-19-94	4R0610NASA		

21. FOB Point	22. Delivery to FOB Point by *On or before (Date)*	23. Person Taking Order/Quote and Phone No.

24. Contractor *(Name, address, ZIP Code)*

25. Type of Order
☐ a. Purchase

Reference your quote *(See block 23)*

Please furnish the above on the terms specified on both sides of this order and on the attached sheets, if any, including delivery as indicated.

☐ b. Delivery provisions on the reverse are deleted. The delivery order is subject to the terms and conditions of the contract. *(See Block 19)*

c. ☐ Oral ☐ Written ☐ Confirming

26. Schedule

Item Number (a)	Supplies or Services (b)	Quantity Ordered (c)	Unit (d)	Estimated Unit Price (e)	Unit Price (f)	Amount (g)	Quantity Accepted (h)
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					Total $		

27. United States of America By *(Signature)*	28. Typed Name and Title of Contracting Officer

EPA Form 1900-8 (Rev. 9-86) Previous editions are obsolete.

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US Environmental Protection Agency
Washington, DC 20460

Procurement Request/Order

1. Name of Originator: J. Kelly Ewing		2. Date of Requisition: January 13, 1994
3. Mail Code: 4WD-OSW	4. Telephone Number: 404/347-2091	5. Date Item Required: January 27, 1994

...ure of Originator

7. Recommended Procurement Method
☐ Competitive ☐ Other than full and open competition ☒ Sole source small purchase

8. Deliver To (Project Manager)	9. Address	10. Mail Code	11. Telephone Number
J. Kelly Ewing	345 Courtland Street, N. E. Atlanta, GA 30365	4WD-OSW	404/347-2091

12. Financial Data	a. Appropriation	b. Servicing Finance Office Number
	684/50108	04

NOTE: Item 12(d) Document Type — Contract = "C," Purchase Order = "P"

FMO Use (c) (13 digits)	DT (d)	Document Control Number (e) (6 digits)	Account Number (f) (10 digits)	Object Class (g) (4 digits)	Amount (h) Dollars	Cents
		MF0030	4B4E04GULA	2568	100	00

13. Suggested Source (Name, Address, ZIP Code, Phone/Contact)
Birmingham News
P. O. Box 2553
Birmingham, AL 35202
Melvis McKay
205/325-2222

14. Amount of money committed is:
☐ Original
☐ Increase
☐ Decrease

15. For Small Purchases Only: Contracting Office is authorized to exceed the amount shown in Block 12(h) by 10% or $100, whichever is less.
☐ Yes ☐ No

16. Approvals

a. Branch/Office: Patricia S. Zweig, OSW	Date: 1-13-94	d. Property Management Officer/Designee	Date
b. Division/Office: Waste DIvision	Date	e. Other (Specify): [signature]	Date: 1/11/94
c. Funds listed in Block 12 and Block 15 (if any) are available and reserved. (Signature of Certifying Official): [signature]	Date: 1/14/94	f. Other (Specify)	Date

17. Date of Order	18. Order Number	19. Contract Number (if any)	20. Discount Terms
01/19/94	4R0611NASA		

21. FOB Point	22. Delivery to FOB Point by On or before (Date)	23. Person Taking Order/Quote and Phone No.

24. Contractor (Name, address, ZIP Code)

25. Type of Order
☐ a. Purchase
Reference your quote (See block 23)

Please furnish the above on the terms specified on both sides of this order and on the attached sheets, if any, including delivery as indicated.

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1	To publish Notice of Public Hearing on Alabama's Municipal Solid Waste Landfill Permit Program. Notice to be published on or about January 27, 1994.			100.00			
					Total $		

27. United States of America
By (Signature)

28. Typed Name and Title of Contracting Officer

EPA Form 1900-8 (Rev. 9-86) Previous editions are obsolete.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

AUG 03 1993

Mr. Russell Kelly, Chief
Solid Waste Section, Land Division
Alabama Department of Environmental Management
1751 Congressman W. L. Dickinson Drive
Montgomery, Alabama 36130

Dear Mr. Kelly:

Alabama's municipal solid waste landfill permit program application was received on July 9, 1993. We have been reviewing your application and have several comments that are enclosed as an attachment entitled "COMMENTS ON THE FINAL APPLICATION FOR APPROVAL OF ALABAMA'S MSWLF PROGRAM."

Most of the comments require only minor corrections or an explanation of how the State of Alabama is satisfying the particular federal criteria requirement. In addition to responding to the above comments, the certification by the Attorney General is necessary for your application to be determined complete.

Based on the submitted application, it is our understanding that Alabama is applying for partial approval for all portions of the federal criteria except Financial Assurance. Alabama must indicate to EPA that they are seeking partial approval and submit a schedule that projects when the State's program will include Financial Assurance requirements comparable to the federal criteria.

Your cooperation and a timely response to the attached comments will help move us one step closer to approval for the State of Alabama. If you have any questions, please do not hesitate to call me at (404) 347-2091.

Sincerely yours,

Kelly Ewing
Office of Solid Waste
Waste Management Division

Enclosure

AL-003

ATTACHMENT

COMMENTS ON THE FINAL APPLICATION FOR APPROVAL OF ALABAMA'S MSWLF PROGRAM

FEDERAL CRITERIA CITATION	COMMENT
258.2	The definition of "Solid Waste" found in the state regulations at 355-13-1-.03 includes additional exclusions as indicated in the following quotation from the state definition. "Also excluded from this definition are wastes from silvicultural operations, land applications of crop residues, animal manure and ash resulting exclusively from the combustion of fossil fuels or wood during normal agricultural operations or mining refuse as defined and regulated pursuant to the Alabama Mining Act." While these exclusions may not be affected by the federal MSWLF criteria, it is important that the state definition of solid waste is consistent with the federal definition found in RCRA to avoid confusion in the identification of solid waste for the purposes of both Subtitle C and Subtitle D.
SUBPART B	The State should provide an explanation of when facilities will have to make the demonstrations required for location restrictions and when those demonstrations must be placed in the operating record. In addition, the state must provide an explanation of when facilities that cannot make the demonstrations for airports, floodplains, and unstable areas must close if they do not make satisfactory demonstrations. If the State cannot provide an adequate explanation in the narrative of their application of how they are at least as protective as the federal criteria, the State should make the necessary changes to their proposed regulations.

Note to SUBPART B:	The State should ensure that their Wellhead Protection (WHP) program will be considered in the siting of landfills by placing the following statement on the worksheets: "MSWLF siting requirements shall take into consideration wellhead protection areas and wellhead protection requirements established pursuant to an EPA-approved state Wellhead Protection Program."
258.11(a)	Paragraph 335-13-4-.01(1) should be changed to ensure protection of "human health and the environment."
258.24(a)	The citation, 335-13-4-.21(8), appears to have been accidentally deleted in the proposed regulations.
258.28(a)(2)	Paragraph 335-13-4-.22(20)(b) should be changed to clarify that a flexible membrane liner is required for leachate or gas condensate to be placed in the landfill.
258.40 TABLE 1	In Table 1 of 335-13-4-.18, 1,1,1-Trichloroethane should be changed to 1,1,1-Trichloromethane.
258.50	In paragraph 335-13-4-.27(2), the word "waived" should be changed to "suspended" to avoid the impression of a permanent or irrevocable exemption that may be given by the word "waived".
258.60(c)	The State should provide an explanation in the narrative portion of the application of when facilities, including existing facilities, must prepare a closure plan, or specify a date that is consistent with the federal criteria in the proposed regulations.

258.60(d)	The State should provide an explanation in the narrative portion of the application of when facilities, including existing facilities, must notify the state that a closure plan has been prepared, or specify a date that is consistent with the federal criteria in the proposed regulations.
258.61(d)	The State should provide an explanation in the narrative portion of the application of when facilities, including existing facilities, must prepare a post-closure plan and place it in the operating record, or specify a date that is consistent with the federal criteria in the proposed regulations.
GENERAL	Please submit a copy of Chapter 335-13-8, Procedures for Variances and Appeals, to be included in your application. This chapter should include a statement ensuring that variances and waivers will not be granted that are less stringent that the federal criteria with regards to MSWLF.

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State of Alabama: Partial Program Adequacy Determination of State/Tribal Municipal Solid Waste Permit Program

AGENCY: Environmental Protection Agency

ACTION: Notice of tentative determination on partial program application of the State of Alabama for partial program adequacy determination, public hearing and public comment period.

SUMMARY: Section 4005(c)(1)(B) of the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments (HSWA) of 1984, requires States to develop and implement permit programs to ensure that municipal solid waste landfills (MSWLFs) which may receive hazardous household waste or small quantity generator waste will comply with the revised Federal MSWLF Criteria (40 CFR part 258). RCRA section 4005(c)(1)(C) requires the Environmental Protection Agency (EPA) to determine whether States have adequate "permit" programs for MSWLFs, but does not mandate issuance of a rule for such determinations. EPA has drafted and is in the process of proposing the State/Tribal Implementation Rule (STIR) that will provide procedures by which EPA will approve, or partially approve, State/Tribal landfill permit programs. The Agency intends to approve adequate State/Tribal MSWLF permit programs as applications are submitted. Thus, these approvals are not dependent on final promulgation of the STIR. Prior to promulgation of STIR, adequacy determinations will be made based on the statutory authorities and requirements. In addition, States/Tribes may use the draft STIR as an aid in interpreting these requirements. The Agency believes that

AL-012

early approvals have an important benefit. Approved State/Tribal permit programs provide interaction between the State/Tribe and the owner/operator regarding site-specific permit conditions. Only those owners/operators located in State/Tribes with approved permit programs can use the site-specific flexibility provided by part 258 to the extent the State/Tribal permit program allows such flexibility. EPA notes that regardless of the approval status of a State/Tribe and the permit status of any facility, the federal landfill criteria will apply to all permitted and unpermitted MSWLF facilities.

The State of Alabama applied for a partial determination of adequacy under section 4005 of RCRA. Region IV of EPA reviewed the State of Alabama's application and made a tentative determination of adequacy for those portions of the State of Alabama's MSWLF permit program that are adequate to assure compliance with the revised MSWLF Criteria. These portions are described later in this notice. The State of Alabama plans to revise the remainder of its permit program to assure complete compliance with the revised MSWLF Criteria and gain full program approval. The State of Alabama's application for partial program adequacy determination is available for public review and comment.

Although RCRA does not require EPA to hold a public hearing on a determination to approve any State/Tribe's MSWLF program, the Region has scheduled an opportunity for a public

hearing on this tentative determination. Details appear below in the "DATES" section.

DATES: All comments on Alabama's application for a partial determination of adequacy must be received by the close business on February 10, 1994 at the EPA Region IV Office of Solid Waste, or comments may be submitted during the public hearing. The public hearing will be held on February 10, 1994 at 7 p.m., at 1751 Congressman W. L. Dickinson Drive, Montgomery, Alabama in the Main Hearing Room. The State will participate in the public hearing held by the EPA. Please contact the individual indicated as the contact below at least 72 hours before the hearing if special accommodations are required.

ADDRESSES: Copies of Alabama's application for adequacy determination are available during the hours of 8:00 a.m. to 4:30 p.m. at the following addresses for inspection and copying: Solid Waste Section, Land Division, Alabama Department of Environmental Management, 1751 Congressman W. L. Dickinson Drive, Montgomery, Alabama 36130, Attn: Ms. Marilyn Elliott, telephone 205-271-7715; and U.S. EPA Region IV Library, 345 Courtland Street, NE., Atlanta, Georgia, 30365, Attn: Ms. Priscilla Pride, telephone 404-347-4216. Written comments should be submitted to Ms. Patricia S. Zweig,

mail code 4WD-OSW, EPA Region IV, Office of Solid Waste, 345 Courtland Street, NE., Atlanta, Georgia 30365.

FOR FURTHER INFORMATION CONTACT: EPA Region IV, 345 Courtland Street, NE., Atlanta, Georgia 30365, Attn: Ms. Patricia S. Zweig, mail code 4WD-OSW, telephone 404-347-2091.

SUPPLEMENTARY INFORMATION:

A. Background

On October 9, 1991, EPA promulgated revised Criteria for MSWLFs (40 CFR part 258). Subtitle D of RCRA, as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), requires States to develop permitting programs to ensure that MSWLFs comply with the Federal Criteria under part 258. Subtitle D also requires in section 4005 that EPA determine the adequacy of State municipal solid waste landfill permit programs to ensure that facilities comply with the revised Federal Criteria. To fulfill this requirement, the Agency has drafted and is in the process of proposing the State/Tribal Implementation Rule (STIR). The rule will specify the requirements which State/Tribal programs must satisfy to be determined adequate.

EPA intends to propose in STIR to allow partial approvals if: 1) the Regional Administrator determines that the State/Tribal permit program largely meets the requirements for ensuring compliance with part 258; 2) changes to limited

narrow part(s) of the State/Tribal permit program are needed to meet these requirements; and, 3) provisions not included in the partially approved portions of the State/Tribal permit program are a clearly identifiable and separable subset of part 258. These requirements, if promulgated, will address the potential problems posed by the dual State/Tribal and Federal programs that will come into effect in October 1993 in those States/Tribes that only have partial approvals of their MSWLF programs. On that date, Federal rules covering any portion of a State/Tribe's program that has not received EPA approval will become enforceable. Owners and operators of MSWLFs subject to such dual programs must be able to understand which requirements apply and comply with them. In addition, the pieces of the Federal program that are in effect must mesh well enough with the approved portions of the State/Tribal program to leave no significant gaps in regulatory control of MSWLF's. Partial approval would allow the Agency to approve those provisions of the State/Tribal permit program that meet the requirements and provide the State/Tribe time to make necessary changes to the remaining portions of its program. As a result, owners/operators will be able to work with the State/Tribal permitting agency to take advantage of the Federal Criteria's flexibility for those portions of the program which have been approved.

As provided in the October 9, 1991 municipal solid waste landfill rule, EPA's national Subtitle D standards took effect

on October 9, 1993. Consequently, any remaining portions of the Federal Criteria that are not included in an approved State/Tribal program apply directly to the owner/operator without any approved State/Tribal flexibility. On October 1, 1993, EPA published the Final Rule to extend the effective date of the landfill criteria for certain classifications of landfills (58 FR 51536). On October 14, 1993, EPA published corrections to the Final Rule to extend the effective date (58 FR 53137).

EPA intends to approve portions of State/Tribal MSWLF permit programs prior to the promulgation of STIR. EPA interprets the requirements for States or Tribes to develop "adequate" programs for permits or other forms of prior approval to impose several minimum requirements. First, each State/Tribe must have enforceable standards for new and existing MSWLFs that are technically comparable to EPA's revised MSWLF criteria. Next, the State/Tribe must have the authority to issue a permit or other notice of prior approval to all new and existing MSWLFs in its jurisdiction. The State/Tribe also must provide for public participation in permit issuance and enforcement as required in section 7004(b) of RCRA. Finally, EPA believes that the State/Tribe must show that it has sufficient compliance monitoring and enforcement authorities to take specific action against any owner or operator that fails to comply with an approved MSWLF program.

EPA Regions will determine whether a State/Tribe has submitted an "Adequate" program based on the interpretation outlined above. EPA plans to provide more specific criteria for this evaluation when it proposes the State/Tribal Implementation Rule. EPA expects States/Tribes to meet all of these requirements for all elements of a MSWLF program before it gives full approval to a MSWLF program.

EPA also is requesting States/Tribes seeking partial program approval to provide a schedule for the submittal of all remaining portions of their MSWLF permit programs. EPA notes that it intends to propose to make submission of a schedule mandatory in STIR.

B. State of Alabama

On July 9, 1993, the State of Alabama submitted an application for partial program adequacy determination. Region IV of EPA reviewed Alabama's application and tentatively determined that the State's Subtitle D program will ensure compliance with all portions of the Federal Criteria except for the Financial Assurance Criteria set forth in Subpart G. Alabama currently does not have statutory authority to promulgate or enforce financial assurance regulations, and therefore, is not requesting approval of this portion of their program. Alabama has submitted a schedule and intends to make statutory changes and subsequent

regulatory changes to ensure that their program is fully comparable to the federal criteria.

Not all States/Tribes will have existing permit programs through which they can ensure compliance with all provisions of the revised Federal Criteria. Were EPA to restrict a State/Tribe from submitting its application until it could ensure compliance with the entirety of 40 CFR part 258, many States/Tribes would need to postpone obtaining approval of their permit programs for a significant amount of time. This delay in determining the adequacy of the State/Tribal permit program while the State/Tribe revises its statutes or regulations could impose a substantial burden on owners and operators of landfills because the State/Tribe would be unable to exercise the flexibility available to States/Tribes with permit programs which have been approved as adequate.

As a State's/Tribe's regulations and statutes are amended to comply with the federal MSWLF landfill regulations, unapproved portions of a partially approved MSWLF permit program may be approved by the EPA. The State/Tribe may submit an amended application to EPA for review and an adequacy determination will be made using the same criteria as for the initial application. This adequacy determination will be published in the **Federal Register** summarizing the Agency's decision and the portion(s) of the State/Tribal MSWLF permit program affected and providing an opportunity to comment for a period of 30 days. The adequacy determination will become

effective sixty (60) days following publication if no adverse comments are received. If EPA receives adverse comments on its adequacy determination, another Federal Register notice will be published either affirming or reversing the initial decision while responding to the public comments.

To ensure compliance with all of the revised Federal Criteria, Alabama needs to revise particular aspects of its permit program. Alabama submitted a schedule indicating that it will be able to complete these revisions by January of 1995. To allow the State to begin exercising some of the flexibility allowed in States/Tribes with adequate permit programs, EPA is proposing to approve those portions of the State/Tribe's program that are ready for action today.

EPA reviewed the State's schedule and believes it is reasonable because it allows sufficient time for the legislative schedule and the rule making process, but it still will ensure that Alabama's financial assurance criteria are in effect by the date the federal financial assurance criteria take effect.

The Alabama Department of Environmental Management (ADEM) believes that enabling legislation will be passed to authorize ADEM to adopt regulations for financial assurance by July, 1994. If that schedule is met, ADEM plans to begin the rulemaking process in August, 1994, with the regulations becoming final in January, 1995.

The public may submit written comments on EPA's tentative determination until February 10, 1994. Copies of Alabama's application are available for inspection and copying at the locations indicated in the "Addresses" section of this notice. Comments may be submitted at the public hearing as transcribed from the discussion of the hearing or in writing at the time of the hearing.

The State of Alabama proposed and passed amendments to Division 13, the Solid Waste Program, of the Alabama Department of Environmental Management (ADEM) Administrative Code to make changes necessary to implement a solid waste disposal program that is equivalent to Subtitle D of RCRA. The amendments developed by the State of Alabama became effective on November 2, 1993, and the State of Alabama's MSWLF regulations have been determined to be technically comparable to the federal criteria.

The State of Alabama is applying for partial approval of their program for all portions of the federal criteria except the Financial Assurance Criteria as set forth in Subpart G. The State of Alabama currently does not have statutory authority to promulgate and enforce financial assurance regulations for municipal solid waste landfills. Therefore, they are unable to satisfy this requirement at this time. According to the submitted schedule, Alabama will pursue the necessary statutory authority and subsequently make the regulatory and program changes necessary to attain

comparability with the Federal Financial Assurance Criteria as set forth in Subpart G of part 258. The effects of Alabama obtaining partial approval instead of full approval should be minimal since the Federal Financial Assurance Criteria will not go into effect until after Alabama is scheduled to obtain full approval.

The State of Alabama's municipal solid waste landfill program is not enforceable within the boundaries of the designated tribal land of the Poarch Band of Creek Indians.

EPA will consider all public comments on its tentative determination received during the public comment period and during the public hearing. Issues raised by those comments may be the basis for a determination of inadequacy for Alabama's program. Region IV of EPA will make a final decision on whether or not to approve Alabama's program after all comments are received and reviewed, and will give notice of the final decision in the **Federal Register**. The notice will include a summary of the reasons for the final determination and a response to all major comments.

Section 4005(a) of RCRA provides that citizens may use the citizen suit provisions of Section 7002 of RCRA to enforce the Federal MSWLF criteria in 40 CFR part 258 independent of any State/Tribal enforcement program. As EPA explained in the preamble to the final MSWLF criteria, EPA expects that any owner or operator complying with provisions in a State/Tribal program approved by EPA should be considered to be in

compliance with the Federal Criteria. See 56 FR 50978, 50995 (October 9, 1991).

Compliance With Executive Order 12866

The office of Management and Budget has exempted this notice from the requirements of Section 6 of Executive Order 12866.

Certification Under the Regulatory Flexibility Act

Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that this tentative approval will not have a significant economic impact on a substantial number of small entities. It does not impose any new burdens on small entities. This proposed notice, therefore, does not require a regulatory flexibility analysis.

Authority: This notice of tentative partial program adequacy determination of Alabama's municipal solid waste permit program is issued under the authority of Section 4005 of the Solid Waste Disposal Act as amended; 42 U.S.C. 6946.

Patrick M. Tobin
Acting Regional Administrator.

Dated: DEC 9 1993

BILLING CODE: 6560-50-P

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

DEC 9 1993

4WD-OSW

MEMORANDUM

SUBJECT: Tentative Decision to Partially Approve Alabama's Municipal Solid Waste Landfill (MSWLF) Permitting Program

FROM: Joseph R. Franzmathes, Director, Waste Management Division

TO: Patrick Tobin, Acting Regional Administrator

Pursuant to Section 4005(c) of the Resource Conservation and Recovery Act, the State of Alabama submitted an application to Region IV requesting approval of their MSWLF permit program on July 9, 1993. The Office of Solid Waste and Office of Regional Counsel have reviewed Alabama's application and determined that the application is complete and satisfies the requirements for partial approval to include all Subparts of Subtitle D except Subpart G which contains the financial assurance requirements. Alabama currently does not have statutory authority to include financial assurance requirements that are technically comparable to the federal criteria. Alabama has submitted a schedule and anticipates meeting the requirements to obtain approval for financial assurance by January, 1995.

The attached Federal Register notice will announce the tentative decision, establish a public comment period, and announce a public hearing to be held in Montgomery, Alabama on February 10, 1994.

Attachment

DEC 9 1993

4WD-OSW

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Attachment

KEWING/ke:4WD-OSW:2091/12/9/93/ALTDR4.MEM

EWING: 12-9-93 | ZWEIG: 12/9/93 | NEWTON: 12/9/93

KUTZMAN: | FRANZMATHES: | TOBIN:

FEDERAL REGISTER TYPESETTING REQUEST

Requestor: Complete items 1, 2, 7, 8, 9, 10, 11, 12 and 13. Retain copy number 7 and submit the balance with manuscript copy to the Hq. Federal Register Office.

HQ Federal Register Office: Complete items 3, 4, 5 and 6. Retain copy number 6 and submit balance to Hq. Printing Management.

1. TITLE

ALABAMA: PARTIAL PROGRAM ADEQUACY DETERMINATION OF STATE/TRIBAL MUNICIPAL SOLID WASTE PERMIT PROGRAM

2. SUBMITTING ACTIVITY

OFFICE OF SOLID WASTE, RCRA & FFB

3. ASSIGNED FRL NUMBER *(include alpha & numeric characters for identification.)*

4. OPEN REQUISITION NUMBER

5. BILLING CODE

6. FORWARDED TO GSA, NARS – SIGNATURE

DATE

7. NUMBER OF MANUSCRIPT PAGES: 14

8. ESTIMATED NUMBER OF COLUMNS: 7

9. ESTIMATED COST: $700.00

10. FINANCIAL DATA

FMO USE (a)	DT (b)	DOCUMENT CONTROL NO. (c)	ACCOUNT NO. (d)	OBJECT CLASS (e)	AMOUNT (f) DOLLARS	CTS
2 0 0		MF00204	B4E0480LA	2413	700	00
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2 0 0						

11. SIGNATURE: (a) REQUESTING OFFICER

James R. Franzmathes

JOSEPH R. FRANZMATHES

(b) DATE: 12-9-93

(c) TELEPHONE NUMBER: 404-347-3454

12. SIGNATURE: (a) FEDERAL REGISTER DESIGNEE

Connie Barfield

(b) DATE: 12/10/93

(c) TELEPHONE NUMBER: 404/347-2140

13. FUNDS ARE AVAILABLE *(Committment Clerk)*

Connie Barfield

SFO:27

BILLING CODE: 6560-50-P

THIS DOCUMENT WAS SUBMITTED WITH A DISKETTE CONTAINING THE ATTACHED FR NOTICE IN FILE "ALFEDREG.FIN" IN WORDPERFECT 5.1 FORMAT AND IS ELIGIBLE FOR A 20 PERCENT DISCOUNT.

x 2091.
Kelly Ewing

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

DEC 10 1993

4WD-OSW

MEMORANDUM

SUBJECT: Federal Register Notice of Tentative Determination to Partially Approve the Adequacy of the State of Alabama's Municipal Solid Waste Permitting Program, Public Hearing, and Public Comment Period

FROM: Kelly Ewing
Environmental Engineer
Office of Solid Waste
Waste Management Division, Region IV

K. Ewing 12-10-93

TO: Vickie Reed, Federal Register Liaison
Regulatory Development Branch
PM-2234

This letter is to verify that the disk furnished with the original and three copies of a Federal Register Notice of Tentative Determination to Partially Approve the Adequacy of the State of Alabama's Municipal Solid Waste Permitting Program FRL_____is a true copy of the original signed document, and should be used by GPO in preparing the document for publication.

The date of the public hearing has been set for February 10, 1994, but contact Kelly Ewing at (404) 347-2091 to verify this date once the publication date is determined. Please notify Kelly Ewing of the publication date so that public notices can be published concurrently, or if you have questions regarding the dates that should be incorporated into the notice.

The billing code 6560-50-P is cited to ensure typesetting discount.

Attachments (3)
1. Diskette
2. Federal Register Typesetting Request
3. Original and three copies of Federal Register Notice

DEC 1 0 1993

4WD-OSW

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KEWING/ke:4WD-OSW:2091/12/10/93/ALTDFR.MEM

EWING: 12-10-93

ZWEIG: 12/10/93

Construction and Operation, Site Selection, Lake Arcadia, City of Guthrie or Fort Reno, Logan, Canadian or Oklahoma County, OK.

Summary: EPA had no objections to the proposed project as described in the Final EIS.

Regulations

ERP No. R-CGD-A59010-00 33 CFR part 157: Structural and Operational Measures to Reduce Oil Spills from Existing Tank Vessels Without Double Hulls; Proposed Rules (58 FR 54870).

Summary: EPA concurred with the Coast Guard's proposed rule regarding interim protection measures recommended to safeguard United States seas from oil spills. This rule is to be in effect until 2015, when double hulls will be manadatory for oil carrying vessels over the weight of 5,000 pounds.

Dated: December 13, 1993.

William D. Dickerson,

Deputy Director, Office of Federal Activities.

[FR Doc. 93-30889 Filed 12-16-93; 8:45 am]

BILLING CODE 6560-50-P

[ER-FRL-4706-5]

Environmental Impact Statements; Availability

RESPONSIBLE AGENCY: Office of Federal Activities, General Information (202) 260-5076 or (202) 260-5075. Weekly receipt of Environmental Impact Statements Filed December 6, 1993 Through December 10, 1993 Pursuant to 40 CFR 1506.9.

EIS No. 930439, FINAL EIS, EPA, FL, Cedar Bay Cogeneration Facility, Construction and Operation, NPDES Permit, Duval County, FL, Due: January 18, 1994, Contact: Heinz Mueller (404) 347-3776.

EIS No. 930440, DRAFT EIS, FAA, DC, Airport Surveillance Radar Model 9 (ASR-9) Facility to support the Washington National Airport and security coverage over the White House and Capitol Building, Site Selection, Construction and Operation, Washington, DC, Due: January 31, 1994, Contact: Mike Lanz (718) 553-1198.

EIS No. 930441, FINAL EIS, BLM, NM, Dark Canyon Special Management Area, Oil and Gas Leasing, Permit for Approval to Drill near Carlsbad Caverns National Park, Eddy County, NM, Due: January 18, 1994, Contact: Joe Incardine (505) 438-7458.

EIS No. 930442, LEGISLATIVE DRAFT, AFS, OR, Wallowa River Wild and Scenic River Study, Designation or Nondesignation in the National Wild and Scenic Rivers System, Umatilla National Forests, Union and Wallowa Counties, OR, Due: January 31, 1994, Contact: Steve Davis (503) 523-6391.

Dated: December 13, 1993.

William D. Dickerson,

Deputy Director, Office of Federal Activities.

[FR Doc. 93-30888 Filed 12-16-93; 8:45 am]

BILLING CODE: 6560-50-P

Toxics Data Reporting Subcommittee of the Environmental Information and Assessments Committee National Advisory Council for Environmental Policy and Technology; Public Meeting

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of public meeting.

SUMMARY: Under the Federal Advisory Committee Act, EPA gives notice of a 2 day meeting of the Toxics Data Reporting subcommittee of the National Advisory Council for Environmental Policy and Technology. This will be the fifth meeting of the Toxics Data Reporting subcommittee, whose mission is to provide advice to EPA regarding the Agency's Toxics Release Inventory (TRI) Program.

DATES: The public meeting will take place on January 13, 1994 from 8:30 a.m. to 5 p.m., and January 14, 1994 from 8:30 a.m. to 3 p.m. Members of the public wishing to make comments at this meeting should submit their comments, in writing, by January 6, 1994.

ADDRESSES: The public meeting will be held at the Bellevue Hotel, Lexington Room, 15 E Street, Northwest, Washington, DC 20001 (202-638-0900). Written comments must be submitted to: U.S. Environmental Protection Agency, 401 M St., SW., Washington, DC 20460, Attn: Sam Sasnett, 7408.

FOR FURTHER INFORMATION CONTACT: Cassandra Vail, Environmental Assistance Division, U.S. Environmental Protection Agency, Mail Stop 7408, 401 M St., SW., Washington, DC 20460 Telephone: 202-260-0675.

SUPPLEMENTARY INFORMATION: EPA is proposing that the subcommittee discuss the following subjects: Expansion of the facilities subject to reporting under TRI, development of the subcommittee's report on its previously discussed sufficiency of the new data elements in meeting the mandate of the Pollution Prevention Act. The agenda for the two days will focus on those topics.

Dated: December 13, 1993.

David J. Graham,

Designated Federal Official, Office of Cooperative Environmental Management.

[FR Doc. 93-30861 Filed 12-16-93; 8:45 am]

BILLING CODE 6560-50-M

[FRL-4815-1]

State of Alabama: Partial Program Adequacy Determination of State/Tribal Municipal Solid Waste Permit Program

AGENCY: Environmental Protection Agency.

ACTION: Notice of tentative determination on partial program application of the State of Alabama for partial program adequacy determination, public hearing and public comment period.

SUMMARY: Section 4005(c)(1)(B) of the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments (HSWA) of 1984, requires States to develop and implement permit programs to ensure that municipal solid waste landfills (MSWLFs) which may receive hazardous household waste or small quantity generator waste will comply with the revised Federal MSWLF Criteria (40 CFR part 258). RCRA section 4005(c)(1)(C) requires the Environmental Protection Agency (EPA) to determine whether States have adequate "permit" programs for MSWLFs, but does not mandate issuance of a rule for such determinations. EPA has drafted and is in the process of proposing the State/Tribal Implementation Rule (STIR) that will provide procedures by which EPA will approve, or partially approve, State/Tribal landfill permit programs. The Agency intends to approve adequate State/Tribal MSWLF permit programs as applications are submitted. Thus, these approvals are not dependent on final promulgation of the STIR. Prior to promulgation of STIR, adequacy determinations will be made based on the statutory authorities and requirements. In addition, States/Tribes may use the draft STIR as an aid in interpreting these requirements. The Agency believes that early approvals have an important benefit. Approved State/Tribal permit programs provide interaction between the State/Tribe and the owner/operator regarding site-specific permit conditions. Only those owners/operators located in State/Tribes with approved permit programs can use the site-specific flexibility provided by part 258 to the extent the State/Tribal permit program allows such flexibility.

AL-013

EPA notes that regardless of the approval status of a State/Tribe and the permit status of any facility, the Federal landfill criteria will apply to all permitted and unpermitted MSWLF facilities.

The State of Alabama applied for a partial determination of adequacy under section 4005 of RCRA. Region IV of EPA reviewed the State of Alabama's application and made a tentative determination of adequacy for those portions of the State of Alabama's MSWLF permit program that are adequate to assure compliance with the revised MSWLF Criteria. These portions are described later in this notice. The State of Alabama plans to revise the remainder of its permit program to assure complete compliance with the revised MSWLF Criteria and gain full program approval. The State of Alabama's application for partial program adequacy determination is available for public review and comment.

Although RCRA does not require EPA to hold a public hearing on a determination to approve any State/Tribe's MSWLF program, the Region has scheduled an opportunity for a publichearing on this tentative determination. Details appear below in the **DATES** section.

DATES: All comments on Alabama's application for a partial determination of adequacy must be received by the close business on February 10, 1994 at the EPA Region IV Office of Solid Waste, or comments may be submitted during the public hearing. The public hearing will be held on February 10, 1994 at 7 p.m. The State will participate in the public hearing held by the EPA. Please contact the individual indicated as the contact below at least 72 hours before the hearing if special accommodations are required.

ADDRESSES: Written comments should be submitted to Ms. Patricia S. Zweig, mail code 4WD-OSW, EPA Region IV, Office of Solid Waste, 345 Courtland Street, NE., Atlanta, Georgia 30365.

The public hearing will be held at 1751 Congressman W.L. Dickinson Drive, Montgomery, Alabama in the Main Hearing Room.

Copies of Alabama's application for adequacy determination are available during the hours of 8 a.m. to 4:30 p.m. at the following addresses for inspection and copying: Solid Waste Section, Land Division, Alabama Department of Environmental Management, 1751 Congressman W. L. Dickinson Drive, Montgomery, Alabama 36130, Attn: Ms. Marilyn Elliott, telephone 205–271–7715; and U.S. EPA Region IV Library, 345 Courtland Street, NE., Atlanta, Georgia, 30365, Attn: Ms. Priscilla Pride, telephone 404–347–4216.

FOR FURTHER INFORMATION CONTACT: EPA Region IV, 345 Courtland Street, NE., Atlanta, Georgia 30365, Attn: Ms. Patricia S. Zweig, mail code 4WD-OSW, telephone 404–347–2091.

SUPPLEMENTARY INFORMATION:

A. Background

On October 9, 1991, EPA promulgated revised Criteria for MSWLFs (40 CFR part 258). Subtitle D of RCRA, as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), requires States to develop permitting programs to ensure that MSWLFs comply with the Federal Criteria under part 258. Subtitle D also requires in section 4005 that EPA determine the adequacy of State municipal solid waste landfill permit programs to ensure that facilities comply with the revised Federal Criteria. To fulfill this requirement, the Agency has drafted and is in the process of proposing the State/Tribal Implementation Rule (STIR). The rule will specify the requirements which State/Tribal programs must satisfy to be determined adequate.

EPA intends to propose in STIR to allow partial approvals if: (1) The Regional Administrator determines that the State/Tribal permit program largely meets the requirements for ensuring compliance with part 258; (2) changes to limited narrow part(s) of the State/Tribal permit program are needed to meet these requirements; and (3) provisions not included in the partially approved portions of the State/Tribal permit program are a clearly identifiable and separable subset of part 258. These requirements, if promulgated, will address the potential problems posed by the dual State/Tribal and Federal programs that will come into effect in October 1993 in those States/Tribes that only have partial approvals of their MSWLF programs. On that date, Federal rules covering any portion of a State/Tribe's program that has not received EPA approval will become enforceable. Owners and operators of MSWLFs subject to such dual programs must be able to understand which requirements apply and comply with them. In addition, the pieces of the Federal program that are in effect must mesh well enough with the approved portions of the State/Tribal program to leave no significant gaps in regulatory control of MSWLF's. Partial approval would allow the Agency to approve those provisions of the State/Tribal permit program that meet the requirements and provide the State/Tribe time to make necessary changes to the remaining portions of its program. As a result, owners/operators will be able to work with the State/Tribal permitting agency to take advantage of the Federal Criteria's flexibility for those portions of the program which have been approved.

As provided in the October 9, 1991 municipal solid waste landfill rule, EPA's national Subtitle D standards took effect on October 9, 1993. Consequently, any remaining portions of the Federal Criteria that are not included in an approved State/Tribal program apply directly to the owner/operator without any approved State/Tribal flexibility. On October 1, 1993, EPA published the Final Rule to extend the effective date of the landfill criteria for certain classifications of landfills (58 FR 51536). On October 14, 1993, EPA published corrections to the Final Rule to extend the effective date (58 FR 53137).

EPA intends to approve portions of State/Tribal MSWLF permit programs prior to the promulgation of STIR. EPA interprets the requirements for States or Tribes to develop "adequate" programs for permits or other forms of prior approval to impose several minimum requirements. First, each State/Tribe must have enforceable standards for new and existing MSWLFs that are technically comparable to EPA's revised MSWLF criteria. Next, the State/Tribe must have the authority to issue a permit or other notice of prior approval to all new and existing MSWLFs in its jurisdiction. The State/Tribe also must provide for public participation in permit issuance and enforcement as required in section 7004(b) of RCRA. Finally, EPA believes that the State/Tribe must show that it has sufficient compliance monitoring and enforcement authorities to take specific action against any owner or operator that fails to comply with an approved MSWLF program.

EPA Regions will determine whether a State/Tribe has submitted an "Adequate" program based on the interpretation outlined above. EPA plans to provide more specific criteria for this evaluation when it proposes the State/Tribal Implementation Rule. EPA expects States/Tribes to meet all of these requirements for all elements of a MSWLF program before it gives full approval to a MSWLF program.

EPA also is requesting States/Tribes seeking partial program approval to provide a schedule for the submittal of all remaining portions of their MSWLF permit programs. EPA notes that it intends to propose to make submission of a schedule mandatory in STIR.

B. State of Alabama

On July 9, 1993, the State of Alabama submitted an application for partial program adequacy determination. Region IV of EPA reviewed Alabama's application and tentatively determined that the State's Subtitle D program will ensure compliance with all portions of the Federal Criteria except for the Financial Assurance Criteria set forth in Subpart G. Alabama currently does not have statutory authority to promulgate or enforce financial assurance regulations, and therefore, is not requesting approval of this portion of their program. Alabama has submitted a schedule and intends to make statutory changes and subsequent regulatory changes to ensure that their program is fully comparable to the Federal criteria.

Not all States/Tribes will have existing permit programs through which they can ensure compliance with all provisions of the revised Federal Criteria. Were EPA to restrict a State/Tribe from submitting its application until it could ensure compliance with the entirety of 40 CFR part 258, many States/Tribes would need to postpone obtaining approval of their permit programs for a significant amount of time. This delay in determining the adequacy of the State/Tribal permit program while the State/Tribe revises its statutes or regulations could impose a substantial burden on owners and operators of landfills because the State/Tribe would be unable to exercise the flexibility available to States/Tribes with permit programs which have been approved as adequate.

As a State's/Tribe's regulations and statutes are amended to comply with the Federal MSWLF landfill regulations, unapproved portions of a partially approved MSWLF permit program may be approved by the EPA. The State/Tribe may submit an amended application to EPA for review and an adequacy determination will be made using the same criteria as for the initial application. This adequacy determination will be published in the **Federal Register** summarizing the Agency's decision and the portion(s) of the State/Tribal MSWLF permit program affected and providing an opportunity to comment for a period of 30 days. The adequacy determination will become effective sixty (60) days following publication if no adverse comments are received. If EPA receives adverse comments on its adequacy determination, another **Federal Register** notice will be published either affirming or reversing the initial decision while responding to the public comments.

To ensure compliance with all of the revised Federal Criteria, Alabama needs to revise particular aspects of its permit program. Alabama submitted a schedule indicating that it will be able to complete these revisions by January of 1995. To allow the State to begin exercising some of the flexibility allowed in States/Tribes with adequate permit programs, EPA is proposing to approve those portions of the State/Tribe's program that are ready for action today.

EPA reviewed the State's schedule and believes it is reasonable because it allows sufficient time for the legislative schedule and the rule making process, but it still will ensure that Alabama's financial assurance criteria are in effect by the date the Federal financial assurance criteria take effect.

The Alabama Department of Environmental Management (ADEM) believes that enabling legislation will be passed to authorize ADEM to adopt regulations for financial assurance by July, 1994. If that schedule is met, ADEM plans to begin the rulemaking process in August, 1994, with the regulations becoming final in January, 1995.

The public may submit written comments on EPA's tentative determination until February 10, 1994. Copies of Alabama's application are available for inspection and copying at the locations indicated in the "Addresses" section of this notice. Comments may be submitted at the public hearing as transcribed from the discussion of the hearing or in writing at the time of the hearing.

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The State of Alabama is applying for partial approval of their program for all portions of the Federal criteria except the Financial Assurance Criteria as set forth in Subpart G. The State of Alabama currently does not have statutory authority to promulgate and enforce financial assurance regulations for municipal solid waste landfills. Therefore, they are unable to satisfy this requirement at this time. According to the submitted schedule, Alabama will pursue the necessary statutory authority and subsequently make the regulatory and program changes necessary to attain comparability with the Federal Financial Assurance Criteria as set forth in subpart G of part 258. The effects of Alabama obtaining partial approval instead of full approval should be minimal since the Federal Financial Assurance Criteria will not go into effect until after Alabama is scheduled to obtain full approval.

The State of Alabama's municipal solid waste landfill program is not enforceable within the boundaries of the designated tribal land of the Poarch Band of Creek Indians.

EPA will consider all public comments on its tentative determination received during the public comment period and during the public hearing. Issues raised by those comments may be the basis for a determination of inadequacy for Alabama's program. Region IV of EPA will make a final decision on whether or not to approve Alabama's program after all comments are received and reviewed, and will give notice of the final decision in the **Federal Register**. The notice will include a summary of the reasons for the final determination and a response to all major comments.

Section 4005(a) of RCRA provides that citizens may use the citizen suit provisions of Section 7002 of RCRA to enforce the Federal MSWLF criteria in 40 CFR part 258 independent of any State/Tribal enforcement program. As EPA explained in the preamble to the final MSWLF criteria, EPA expects that any owner or operator complying with provisions in a State/Tribal program approved by EPA should be considered to be in compliance with the Federal Criteria. See 56 FR 50978, 50995 (October 9, 1991).

Compliance With Executive Order 12866

The office of Management and Budget has exempted this notice from the requirements of section 6 of Executive Order 12866.

Certification Under the Regulatory Flexibility Act

Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that this tentative approval will not have a significant economic impact on a substantial number of small entities. It does not impose any new burdens on small entities. This proposed notice, therefore, does not require a regulatory flexibility analysis.

Authority: This notice of tentative partial program adequacy determination of Alabama's municipal solid waste permit program is issued under the authority of

section 4005 of the Solid Waste Disposal Act as amended; 42 U.S.C. 6946.

Dated: December 9, 1993.

Don Guinyard,

Acting Regional Administrator.

[FR Doc. 93-30831 Filed 12-16-93; 8:45 am]

BILLING CODE 6560-50-F

[FRL-4815-2]

Nebraska; Final Partial Program Determination of Adequacy of State/Tribal Municipal Solid Waste Landfill Permit Program

AGENCY: Environmental Protection Agency.

ACTION: Notice of final partial program determination of adequacy on Nebraska's application.

SUMMARY: Section 4005(c)(1)(B) of the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments (HSWA) of 1984, requires States to develop and implement permit programs to ensure that Municipal Solid Waste Landfills (MSWLFs) which may receive hazardous household waste or small quantity generator waste will comply with the revised Federal MSWLF Criteria (40 CFR part 258). RCRA section 4005(c)(1)(C) requires the Environmental Protection Agency (EPA) to determine whether States have adequate "permit" programs for MSWLFs, but does not mandate issuance of a rule governing such determinations. The EPA has drafted and is in the process of proposing a State/Tribal Implementation Rule (STIR) that will provide procedures by which the EPA will approve, or partially approve, State/Tribal landfill permit programs. The Agency intends to approve adequate State/Tribal MSWLF permit programs as applications are submitted. Thus the approvals are not dependent on final promulgation of the STIR. Prior to promulgation of the STIR, adequacy determinations will be made based on the statutory authorities and requirements. In addition, States/Tribes may use the draft STIR as an aid in interpreting these requirements. The Agency believes that early approvals have an important benefit. Approved State/Tribal permit programs provide for interaction between the State/Tribe and the owner/operator regarding site-specific permit conditions. Only those owners/operators located in State/Tribes with approved permit programs can use the site-specific flexibility provided by 40 CFR part 258 to the extent the State/Tribal permit program allows such flexibility. The EPA notes that regardless of the approval status of a State/Tribe and the permit status of any facility, the Federal criteria under 40 CFR part 258 will apply to all permitted and unpermitted MSWLF facilities.

Nebraska applied for a determination of adequacy under section 4005 of RCRA. The EPA reviewed Nebraska's application and made a tentative determination that Nebraska's permit program would be adequate to ensure compliance with 40 CFR part 258, with one exception. After consideration of the one comment received, today EPA is issuing a final determination of partial program adequacy for the Nebraska landfill permit program.

EFFECTIVE DATE: The determination of adequacy for Nebraska shall be effective on December 17, 1993.

FOR FURTHER INFORMATION CONTACT: Ms. Altheà M. Moses, 726 Minnesota Avenue, Kansas City, Kansas 66101; (913) 551-7055.

SUPPLEMENTARY INFORMATION:

A. Background

On October 9, 1991, the EPA promulgated 40 CFR part 258 for MSWLFs. Subtitle D of RCRA, as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), requires States to develop permitting programs to ensure that facilities comply with the Federal Criteria under 40 CFR part 258. Subtitle D also requires in section 4005 of RCRA that the EPA determine the adequacy of State municipal solid waste landfill permit programs to ensure that facilities comply with the 40 CFR part 258. To fulfill this requirement, the Agency has drafted and is in the process of proposing a State/Tribal Implementation Rule (STIR). The rule will specify the requirements which State/Tribal programs must satisfy to be determined adequate.

The EPA intends to propose in the STIR to allow partial approval if: (1) The Regional Administrator determines that the State/Tribal permit program largely meets the requirements for ensuring compliance with 40 CFR part 258; (2) changes to a limited narrow part(s) of the State/Tribal permit program are needed to meet these requirements; and (3) provisions not included in the partially approved portions of the State/Tribal permit program are a clearly identifiable and separable subset of 40 CFR part 258. As provided in 40 CFR part 258, the EPA's Subtitle D standards took effect on October 9, 1993. Consequently, any portion(s) of 40 CFR part 258 which are not included in an approved State/Tribal program by October 9, 1993 would apply directly to the owner/operator. The requirements of the STIR, if promulgated, will ensure that any mixture of State/Tribal and Federal rules that take effect will be fully workable and leave no significant gaps in environmental protection. These practical concerns apply to individual partial approvals granted prior to the promulgation of the STIR. Consequently, the EPA reviewed the program approved today and concluded that the State/Tribal and the Federal requirements mesh reasonably well and leave no significant gaps. Partial approval would allow the Agency to approve those provisions of the State/Tribal permit program that meet the requirements and provide the State/Tribe time to make necessary changes to the remaining portions of its program. As a result owners/operators will be able to work with the State/Tribal permitting agency to take advantage of 40 CFR part 258's flexibility for those portions of the program which have been approved.

The EPA will review State/Tribal requirements to determine whether they are "adequate" under section 4005(c)(1)(C) of RCRA. The EPA interprets the requirements for States or Tribes to develop "adequate" programs for permits or other forms of prior approval to impose several minimum requirements. First, each State/Tribe must have enforceable standards for new and existing MSWLFs that are technically comparable to 40 CFR part 258. Next, the State/Tribe must have the authority to issue a permit or other notice of prior approval to all new and existing MSWLFs in its jurisdiction. The State/Tribe also must provide for public participation in permit issuance and enforcement as required in section 7004(b) of RCRA. Finally, the EPA believes that the State/Tribe must show that it has sufficient compliance monitoring and enforcement authorities to take specific action against any owner or operator that fails to comply with an approved MSWLF program.

The EPA Regions will determine whether a State/Tribe has submitted an "adequate" program based on the interpretation outlined above. The EPA plans to provide more specific criteria for this evaluation when it proposes the STIR. The EPA expects State/Tribes to meet all of these requirements for all elements of a MSWLF program before it gives full approval to a MSWLF program. The EPA also is requesting State/Tribes seeking partial program approval to provide a schedule for the submittal of all remaining portions of their MSWLF permit programs. The EPA notes that it intends to propose to

MEMORANDUM

DATE: JAN 13 1994

SUBJECT: Priority Procurement for Court Reporter

FROM: Patricia S. Zweig, Program Manager
Office of Solid Waste

TO: Carole Wallace
Small Purchases Unit

The purpose of this memorandum is to provide justification for the attached Purchase Request for a Court Reporter for a public hearing to be held by EPA on February 10, 1994, regarding approval of Alabama's municipal solid waste landfill (MSWLF) permit program. There are also Purchase Requests for announcements in four local newspapers for the hearing. This memorandum will also provide an explanation for the delay in submitting the Purchase Request for approval.

EPA is required to offer a public hearing on the agency's decision to grant approval to states for their MSWLF permit programs. Upon publication of the agency's tentative determination of adequacy in the Federal Register, a 30 day public comment period commences along with the opportunity for a public hearing. If there is significant interest in holding a hearing, EPA must schedule the hearing at least 45 days after publication of the tentative determination. The tentative determination for Alabama appeared in the Federal Register on December 17, 1993. A hearing has been requested and has been scheduled for February 10, 1994. It was necessary to schedule the hearing as soon as possible (about 45 days after publication in FR) to minimize the disruption to the State of Alabama's MSWLF permitting program.

Because of the importance of state program approvals in Region IV, the Waste Management Division requests approval of the attached Purchase Request as an urgent priority. We appreciate your assistance regarding this most important request for services. If you should have any questions concerning this request, please contact Kelly Ewing at X2091.

K EWING/FL/4WD-OSW/2091/1-13-94/WALLACE(DISK:KELLY)

EWING: ZWEIG: HUMPHRIES: BUDGET: PURCHASING

K Ewing

Notice of Public Hearing

Notice is hereby given, that the Environmental Protection Agency (EPA), Region IV, has scheduled a public hearing regarding the tentative decision, which was published in the Federal Register on December 17, 1993, in accordance with RCRA §4005, to give partial approval to the State of Alabama for its Municipal Solid Waste Landfill (MSWLF) permit program.

The hearing will be held on February 10, 1994, at 7:00 p.m., at 1751 Congressman W. L. Dickinson Drive, Montgomery, Alabama in the Main Hearing Room. Interested parties should plan to attend the public hearing. Please contact Patricia Zweig at the address given below at least 72 hours before the hearing if special accommodations are required. Comments regarding EPA's tentative determination of adequacy may be presented orally or in writing at the public hearing, or comments may be submitted in advance to Patricia S. Zweig, U.S. EPA, Region IV, 345 Courtland Street NW, Atlanta, Georgia, 30365.

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BROWNING-FERRIS INDUSTRIES

P.O. BOX 3151 • HOUSTON, TEXAS 77253 • (713) 584-8184

John H. Turner
Director, State Regulatory Affairs

January 14, 1994

Ms. Patricia S. Zweig
Mail Code 4WD-OSW
EPA Region IV
Office of Solid Waste
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Re: State of Alabama: Partial Program Adequacy Determination (58 Fed. Reg. 65,982 (Dec. 17, 1993))

Dear Ms. Zweig:

Browning-Ferris Industries, Inc. ("BFI") is pleased to comment on the application of the State of Alabama for Part 258 program approval. We believe the Agency should expeditiously grant the State partial program approval to the extent described in the Federal Register notice of December 17, 1993. We urge the Agency to partially approve Alabama's program as soon as possible in order that the Department of Environmental Management and municipal solid waste landfill owners/operators may exercise the flexibility afforded approved jurisdictions. The expeditious award of full program approval will help to ensure that MSWLF owners/operators are not subject to the inflexible "default" provisions applicable in unapproved jurisdictions.

Very truly yours,

John H. Turner

cc: Sue R. Robertson
Alabama Department of Environmental Management
1751 Cong. W.L. Dickinson Drive
Montgomery, Alabama 36130

RECEIVED
1 9 1994
OFFICE OF SOLID WASTE

AL-015

United States Environmental Protection Agency, Region IV
Public Hearing for the Adequacy Determination of Alabama's
Municipal Solid Waste Landfill Permit Program

Please sign below *only* if you wish to present oral comments.

#	NAME	ADDRESS/AFFILIATION
	~~CRAIG MALLETTE~~	~~B.F.I. N. AL. DISPOSAL DISTRICT.~~

AL-016

ENVIRONMENTAL PROTECTION AGENCY
REGION IV

PUBLIC HEARING
FEBRUARY 10, 1994
7:00 P.M.

ALABAMA MUNICIPAL SOLID WASTE LANDFILL PERMIT PROGRAM ADEQUACY DETERMINATION

IF YOU WISH TO PRESENT ORAL COMMENTS, PLEASE RECORD YOUR NAME ON THE SIGN-IN SHEET

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

4WD-OSW

MEMORANDUM

DATE: FEB 22 1994

SUBJECT: Federal Register Notice of Final Determination to Partially Approve the Adequacy of the State of Alabama's Municipal Solid Waste Permitting Program

FROM: Kelly Ewing
Environmental Engineer
Office of Solid Waste
Waste Management Division, Region IV

Kelly Ewing 2-22-94

TO: Vickie Reed, Federal Register Liaison
Regulatory Development Branch
PM-2234

This letter is to verify that the disk furnished with the original and three copies of a Federal Register Notice of Final Determination to Fully Approve the Adequacy of the State of Alabama's Municipal Solid Waste Permitting Program FRL_____is a true copy of the original signed document, and should be used by GPO in preparing the document for publication.

There is one set of brackets located on page two in the "EFFECTIVE DATE:" section that requires the publication date to be inserted in to the Federal Register notice.

Please contact Kelly Ewing at 404-347-2091 to confirm the publication date or if you have questions.

The billing code 6560-50-P is cited to ensure typesetting discount.

Attachments (3)
1. Diskette
2. Federal Register Typesetting Request
3. Original and three copies of Federal Register Notice

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

4WD-OSW

MEMORANDUM

DATE: FEB 18 1994

SUBJECT: Final Decision to Partially Approve Alabama's Municipal Solid Waste Landfill (MSWLF) Permitting Program

FROM: Joseph R. Franzmathes, Director, Waste Division

TO: John H. Hankinson, Jr., Regional Administrator

Pursuant to Section 4005(c) of the Resource Conservation and Recovery Act, on July 9, 1993, the State of Alabama submitted an application to Region IV requesting partial approval of their MSWLF permit program for all portions of the federal criteria except financial assurance. Alabama does not currently have statutory authority to develop and enforce financial assurance regulations.

The Office of Solid Waste and Office of Regional Counsel have reviewed Alabama's application and determined that the application is complete and satisfies the requirements for partial approval. A Tentative Determination was published in the Federal Register on December 17, 1993. There was one comment from Browning-Ferris Industries (BFI) supporting EPA's decision. There were no other comments during the public comment period or at the public hearing that was held in Montgomery, Alabama on February 10, 1994. Therefore, the Office of Solid Waste has prepared the attached Federal Register notice that will announce the Final Decision to Partially Approve Alabama's Municipal Solid Waste Landfill Permitting Program.

Attachment

Alabama: Final Determination of Adequacy of State/Tribal Municipal Solid Waste Permit Program

AGENCY: Environmental Protection Agency

ACTION: Notice of final partial program determination of adequacy of the State of Alabama's municipal solid waste landfill permit program.

SUMMARY: Section 4005(c)(1)(B) of the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments (HSWA) of 1984, requires States to develop and implement permit programs to ensure that municipal solid waste landfills (MSWLFs) which may receive hazardous household waste or small quantity generator waste will comply with the revised Federal MSWLF Criteria (40 CFR part 258). RCRA section 4005(c)(1)(C) requires the Environmental Protection Agency (EPA) to determine whether States have adequate "permit" programs for MSWLFs, but does not mandate issuance of a rule governing such determinations. EPA has drafted and is in the process of proposing a State/Tribal Implementation Rule (STIR) that will provide procedures by which EPA will approve, or partially approve, State/Tribal landfill permit programs. The Agency intends to approve adequate State/Tribal MSWLF permit programs as applications are submitted. Thus, these approvals are not dependent on final promulgation of the STIR. Prior to promulgation of the STIR, adequacy determinations will be made based on the statutory authorities and requirements. In addition, States/Tribes may use the draft STIR as an aid in interpreting these requirements. The Agency believes that early approvals have an important benefit. Approved State/Tribal permit programs provide interaction

AL-018

between the State/Tribe and the owner/operator regarding site-specific permit conditions. Only those owners/operators located in State/Tribes with approved permit programs can use the site-specific flexibility provided by part 258 to the extent the State/Tribal permit program allows such flexibility. EPA notes that regardless of the approval status of a State/Tribe and the permit status of any facility, the federal landfill criteria will apply to all permitted and unpermitted MSWLF facilities.

Alabama applied for a determination of adequacy under section 4005 of RCRA. EPA Region IV reviewed Alabama's MSWLF application and made a tentative determination of adequacy for those portions of the MSWLF permit program that are adequate to ensure compliance with the revised MSWLF criteria. After reviewing all comments received, EPA today is granting final approval to Alabama's partial program.

EFFECTIVE DATE: The determination of adequacy for the State of Alabama shall be effective on [Insert date of publication in the Federal Register].

FOR FURTHER INFORMATION CONTACT: EPA Region IV, 345 Courtland Street NE., Atlanta, Georgia 30365, Attn: Ms. Patricia S. Zweig, mail code 4WD-OSW, telephone 404-347-2091.

SUPPLEMENTARY INFORMATION:

A. Background

On October 9, 1991, EPA promulgated revised Criteria for MSWLFs (40 CFR part 258). Subtitle D of RCRA, as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), requires States to develop permitting programs to ensure that facilities comply with the Federal Criteria under part 258. Subtitle D also requires in section 4005 that EPA determine the adequacy of State municipal solid waste landfill permit programs to ensure that facilities comply with the revised Federal Criteria. To fulfill this requirement, the Agency has drafted and is in the process of proposing a State/Tribal Implementation Rule (STIR). The rule will specify the requirements which State/Tribal programs must satisfy to be determined adequate.

EPA intends to propose in STIR to allow partial approval if: 1) the Regional Administrator determines that the State/Tribal permit program largely meets the requirements for ensuring compliance with part 258; 2) changes to a limited narrow part(s) of the State/Tribal permit program are needed to meet those requirements; and 3) provisions not included in the partially approved portions of the State/Tribal permit program are a clearly identifiable and separable subset of part 258. As provided in the October 9, 1991, municipal landfill rule, EPA's national Subtitle D standards took effect on October 9, 1993. Consequently, any portion of the Federal

Criteria that are not included in an approved State/Tribal program by October 9, 1993 apply directly to the owner/operator without any approved State/Tribal flexibility. On October 1, 1993, the October 9, 1993, effective date was extended for certain smaller landfills and for certain landfills receiving waste from flood disaster areas (58 FR 51536). The effective date is now April 9, 1994, for MSWLFs that accept less than 100 tons of waste per day, are not a Superfund National Priority List site, and are either in a State that has submitted an application to EPA for approval before October 9, 1993, or are located on Tribal lands. The effective date has been extended to October 9, 1995, for very small (less than 20 tons of waste per day), remote landfills in arid climates that lack a practicable alternative for waste disposal or experience significant disruption of surface transportation. Certain large facilities receiving waste from flood disaster areas also are allowed an extension of the compliance date if the State determines that they are needed to dispose of flood debris. The requirements of the STIR, if promulgated, will ensure that any mixture of State/Tribal and Federal rules that take effect will be fully workable and leave no significant gaps in environmental protection. These practical concerns apply to individual partial approvals granted prior to the promulgation of the STIR. Consequently, EPA reviewed the program approved today and concluded that the State/Tribal and Federal requirements mesh reasonably well and

do not leave significant gaps. Partial approval would allow the Agency to approve those provisions of the State/Tribal permit program that meet the requirements and provide the State/Tribe time to make necessary changes to the remaining portions of its program. As a result, owners/operators will be able to work with the State/Tribal permitting agency to take advantage of the flexibility allowed under the federal criteria for approved states for those portions of the State's program that have been approved.

EPA will review State/Tribal requirements to determine whether they are "adequate" under section 4005(c)(1)(C) of RCRA. EPA interprets the requirements for States or Tribes to develop "adequate" programs for permits or other forms of prior approval to impose several minimum requirements. First, each State/Tribe must have enforceable standards for new and existing MSWLFs that are technically comparable to EPA's revised MSWLF criteria. Next, the State/Tribe must have the authority to issue a permit or other notice of prior approval to all new and existing MSWLFs in its jurisdiction. The State/Tribe also must provide for public participation in permit issuance and enforcement as required in section 7004(b) of RCRA. Finally, EPA believes that the State/Tribe must show that it has sufficient compliance monitoring and enforcement authorities to take specific action against any owner or operator that fails to comply with an approved MSWLF program.

EPA Regions will determine whether a State/Tribe has submitted an "adequate" program based on the interpretation outlined above. EPA plans to provide more specific criteria for this evaluation when it proposes the State/Tribal Implementation Rule. EPA expects States/Tribes to meet all of these requirements for all elements of a MSWLF program before it gives full approval to a MSWLF program. EPA also is requesting States/Tribes seeking partial program approval to provide a schedule for the submittal of all remaining portions of their MSWLF permit programs. EPA notes that it intends to propose to make submissions of a schedule mandatory in the STIR.

As a State's/Tribe's regulations and statutes are amended to comply with the federal MSWLF landfill regulations, unapproved portions of a partially approved MSWLF permit program may be approved by the EPA. The State/Tribe may submit an amended application to EPA for review and an adequacy determination will be made using the same criteria as for the initial application. This adequacy determination will become effective sixty (60) days following publication if no adverse comments are received. If EPA receives adverse comments on its adequacy determination, another **Federal Register** notice will be published either affirming or reversing the initial decision while responding to the public comments.

B. State of Alabama

On July 9, 1993, the State of Alabama submitted a final application for partial program adequacy determination for their MSWLF permit program. On December 17, 1993, EPA published a tentative determination of adequacy for all portions of Alabama's program except for the Financial Assurance Criteria set forth in Subpart G. Further background on the tentative determination of adequacy appears at 58 FR 65982, (December 17, 1993).

Along with the tentative determination, EPA announced the availability of the application for public comment and the date of a public hearing on the application. Region IV of EPA held a public hearing on February 10, 1994, at 7 p.m. in Montgomery, Alabama.

The State of Alabama has the authority to issue permits that incorporate all the requirements of the Revised Federal MSWLF Criteria, except Financial Assurance, to all MSWLFs in the State, with the exception of those located on Tribal Lands.

The EPA has determined that the State of Alabama's statutes and administrative regulations provide for a state-wide comprehensive program of solid waste management including specific provisions for public participation, compliance monitoring and enforcement.

The State of Alabama requested approval for all portions of the federal criteria except Subpart G - Financial Assurance

Criteria. The Alabama Department of Environmental Management does not currently have statutory authority to develop and enforce financial assurance regulations for MSWLFs. The schedule that Alabama submitted indicates that the necessary changes to the laws, regulations, and guidance to comply with the remaining part 258 requirements will be completed by January, 1995.

C. Public Comment

One written comment was submitted during the public comment period. The commenter supported the tentative decision to partially approve Alabama's MSWLF permit program. There were no written or oral comments submitted during the public hearing.

D. Decision

After reviewing the public comments submitted in response to the tentative decision, I conclude that Alabama's application for partial program adequacy determination meets all of the statutory and regulatory requirements established by RCRA. Accordingly, Alabama is granted a partial program determination of adequacy for all portions of its MSWLF permit program except Subpart G - Financial Assurance Requirements.

Section 4005(a) of RCRA provides that citizens may use the citizen suit provisions of Section 7002 of RCRA to enforce the Federal MSWLF criteria in 40 CFR Part 258

independent of any State/Tribal enforcement program. As EPA explained in the preamble to the final MSWLF criteria, EPA expects that any owner or operator complying with provisions in a State/Tribal program approved by EPA should be considered to be in compliance with the Federal Criteria. See 56 FR 50978, 50995 (October 9, 1991).

Today's action takes effect on the date of publication. EPA believes it has good cause under section 553(d) of the Administrative Procedure Act, 5 U.S.C 553(d), to put this action into effect less than 30 days after publication in the **Federal Register**. All of the requirements and obligations in the State's program are already in effect as a matter of State law. EPA's action today does not impose any new requirements that the regulated community must begin to comply with. Nor do these requirements become enforceable by EPA as federal law. Consequently, EPA finds that it does not need to give notice prior to making its approval effective.

Compliance with Executive Order 12866

The Office of Management and Budget has exempted this rule from the requirements of Section 3 of Executive Order 12866.

Certification Under the Regulatory Flexibility Act

Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that this approval will not have a significant

economic impact on a substantial number of small entities. It does not impose any new burdens on small entities. This rule, therefore, does not require a regulatory flexibility analysis.

Authority: This notice of final partial program adequacy determination of Alabama's municipal solid waste permit program is issued under the authority of Section 4005 of the Solid Waste Disposal Act as amended; 42 U.S.C. 6946.

John H. Hankinson, Jr.,
Regional Administrator.

Dated: FEB 18 1994

BILLING CODE: 6560-50-P

Vol. 59 No. 41 Wednesday, March 2, 1994 p 9979 (Notice)
áá

[FRL-4843-7]

Alabama: Final Determination of Adequacy of State/Tribal Municipal Solid Waste Permit Program

AGENCY: Environmental Protection Agency.

ACTION: Notice of final partial program determination of adequacy of the State of Alabama's municipal solid waste landfill permit program.

áá
SUMMARY: Section 4005(c)(1)(B) of the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments (HSWA) of 1984, requires States to develop and implement permit programs to ensure that municipal solid waste landfills (MSWLFs) which may receive hazardous household waste or small quantity generator waste will comply with the revised Federal MSWLF Criteria (40 CFR part 258). RCRA section 4005(c)(1)(C) requires the Environmental Protection Agency (EPA) to determine whether States have adequate ``permit'' programs for MSWLFs, but does not mandate issuance of a rule governing such determinations. EPA has drafted and is in the process of proposing a State/Tribal Implementation Rule (STIR) that will provide procedures by which EPA will approve, or partially approve, State/Tribal landfill permit programs. The Agency intends to approve adequate State/Tribal MSWLF permit programs as applications are submitted. Thus, these approvals are not dependent on final promulgation of the STIR. Prior to promulgation of the STIR, adequacy determinations will be made based on the statutory authorities and requirements. In addition, States/Tribes may use the draft STIR as an aid in interpreting these requirements. The Agency believes that early approvals have an important benefit. Approved State/Tribal permit programs provide interaction between the State/Tribe and the owner/operator regarding site-specific permit conditions. Only those owners/operators located in State/Tribes with approved permit programs can use the site-specific flexibility provided by part 258 to the extent the State/Tribal permit program allows such flexibility. EPA notes that regardless of the approval status of a State/Tribe and the permit status of any facility, the Federal landfill criteria will apply to all permitted and unpermitted MSWLF facilities.

Alabama applied for a determination of adequacy under section 4005 of RCRA. EPA Region IV reviewed Alabama's MSWLF application and made a tentative determination of adequacy for those portions of the MSWLF permit program that are adequate to ensure compliance with the revised MSWLF criteria. After reviewing all comments received, EPA today is granting final approval to Alabama's partial program.

EFFECTIVE DATE: The determination of adequacy for the State of Alabama shall be effective on March 2, 1994.

FOR FURTHER INFORMATION CONTACT: EPA Region IV, 345 Courtland Street NE., Atlanta, Georgia 30365, Attn: Ms. Patricia S. Zweig, mail code 4WD-OSW, telephone 404-347-2091.

SUPPLEMENTARY INFORMATION:

A. Background

On October 9, 1991, EPA promulgated revised Criteria for MSWLFs (40 CFR part 258). Subtitle D of RCRA, as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), requires States to develop permitting programs to ensure that facilities comply with the Federal Criteria under part 258. Subtitle D also requires in section 4005 that EPA determine the adequacy of State municipal solid waste landfill permit programs to ensure that facilities comply with the revised Federal Criteria. To fulfill this requirement, the Agency has drafted and is in the process of proposing a State/Tribal Implementation Rule (STIR). The rule will specify the requirements which State/Tribal programs must satisfy to be determined adequate.

EPA intends to propose in STIR to allow partial approval if: (1) The Regional Administrator determines that the State/Tribal permit program largely meets the requirements for ensuring compliance with part 258; (2) changes to a limited narrow part(s) of the State/Tribal permit program are needed to meet those requirements; and (3) provisions not included in the partially approved portions of the State/Tribal permit program are a clearly identifiable and separable subset of part 258. As provided in the October 9, 1991, municipal landfill rule, EPA's national Subtitle D standards took effect on October 9, 1993. Consequently, any portion of the Federal Criteria that are not included in an approved State/Tribal program by October 9, 1993 apply directly to the owner/operator without any approved State/Tribal flexibility. On October 1, 1993, the October 9, 1993, effective date was extended for certain smaller landfills and for certain landfills receiving waste from flood disaster areas (58 FR 51536). The effective date is now April 9, 1994, for MSWLFs that accept less than 100 tons of waste per day, are not a Superfund National Priority List site, and are either in a State that has submitted an application to EPA for approval before October 9, 1993, or are located on Tribal lands. The effective date has been extended to October 9, 1995, for very small (less than 20 tons of waste per day), remote landfills in arid climates that lack a practicable alternative for waste disposal or experience significant disruption of surface transportation. Certain large facilities receiving waste from flood disaster areas also are allowed an extension of the compliance date if the State determines that they are needed to dispose of flood debris. The requirements of the STIR, if promulgated, will ensure that any mixture of State/Tribal and Federal rules that take effect will be fully workable and leave no significant gaps in environmental protection. These practical concerns apply to individual partial approvals granted prior to the promulgation of the STIR. Consequently, EPA reviewed the program approved today and concluded that the State/Tribal and Federal requirements mesh reasonably well and do not leave significant gaps. Partial approval would allow the Agency to approve those provisions of the State/Tribal permit program that meet the requirements and provide the State/Tribe time to make necessary changes to the remaining portions of its program. As a result, owners/operators will be able to work with the State/Tribal permitting agency to take advantage of the flexibility allowed under the Federal criteria for approved states for those portions of the State's program that have been approved.

EPA will review State/Tribal requirements to determine whether they are ``adequate'' under section 4005(c)(1)(C) of RCRA. EPA interprets the requirements for States or Tribes to develop ``adequate'' programs for permits or other forms of prior approval to impose several minimum requirements. First, each State/Tribe must have enforceable standards for new and existing MSWLFs that are technically comparable to EPA's revised MSWLF criteria. Next, the State/Tribe must have the authority to issue a permit or other notice of prior approval to all new and existing MSWLFs in its jurisdiction. The State/Tribe also must provide for public participation in permit issuance and enforcement as required in section 7004(b) of RCRA. Finally, EPA believes that the State/Tribe must show that it has sufficient compliance monitoring and enforcement authorities to take specific action against any owner or operator that fails to comply with an approved MSWLF program.

EPA Regions will determine whether a State/Tribe has submitted an ``adequate'' program based on the interpretation outlined above. EPA plans to provide more specific criteria for this evaluation when it proposes the State/Tribal Implementation Rule. EPA expects States/Tribes to meet all of these requirements for all elements of a MSWLF program before it gives full approval to a MSWLF program. EPA also is requesting States/Tribes seeking partial program approval to provide a schedule for the submittal of all remaining portions of their MSWLF permit programs. EPA notes that it intends to propose to make submissions of a schedule mandatory in the STIR.

As a State's/Tribe's regulations and statutes are amended to comply with the Federal MSWLF landfill regulations, unapproved portions of a partially approved MSWLF permit program may be approved by the EPA. The State/Tribe may submit an amended application to EPA for review and an adequacy determination will be made using the same criteria as for the initial application. This adequacy determination will become effective sixty (60) days following publication if no adverse comments are received. If EPA receives adverse comments on its adequacy determination, another Federal Register notice will be published either affirming or reversing the initial decision while responding to the public comments.

B. State of Alabama

On July 9, 1993, the State of Alabama submitted a final application for partial program adequacy determination for their MSWLF permit program. On December 17, 1993, EPA published a tentative determination of adequacy for all portions of Alabama's program except for the Financial Assurance Criteria set forth in Subpart G. Further background on the tentative determination of adequacy appears at 58 FR 65982, (December 17, 1993).

Along with the tentative determination, EPA announced the availability of the application for public comment and the date of a public hearing on the application. Region IV of EPA held a public hearing on February 10, 1994, at 7 p.m. in Montgomery, Alabama.

The State of Alabama has the authority to issue permits that incorporate all the requirements of the Revised Federal MSWLF Criteria, except Financial Assurance, to all MSWLFs in the State, with the exception of those located on Tribal Lands.

The EPA has determined that the State of Alabama's statutes and administrative regulations provide for a state-wide comprehensive program of solid waste management including specific provisions

for public participation, compliance monitoring and enforcement.

The State of Alabama requested approval for all portions of the Federal criteria except Subpart G-Financial Assurance Criteria. The Alabama Department of Environmental Management does not currently have statutory authority to develop and enforce financial assurance regulations for MSWLFs. The schedule that Alabama submitted indicates that the necessary changes to the laws, regulations, and guidance to comply with the remaining part 258 requirements will be completed by January, 1995.

C. Public Comment

One written comment was submitted during the public comment period. The commenter supported the tentative decision to partially approve Alabama's MSWLF permit program. There were no written or oral comments submitted during the public hearing.

D. Decision

After reviewing the public comments submitted in response to the tentative decision, I conclude that Alabama's application for partial program adequacy determination meets all of the statutory and regulatory requirements established by RCRA. Accordingly, Alabama is granted a partial program determination of adequacy for all portions of its MSWLF permit program except Subpart G-Financial Assurance Requirements.

Section 4005(a) of RCRA provides that citizens may use the citizen suit provisions of section 7002 of RCRA to enforce the Federal MSWLF criteria in 40 CFR part 258 independent of any State/Tribal enforcement program. As EPA explained in the preamble to the final MSWLF criteria, EPA expects that any owner or operator complying with provisions in a State/Tribal program approved by EPA should be considered to be in compliance with the Federal Criteria. See 56 FR 50978, 50995 (October 9, 1991).

This action takes effect on the date of publication. EPA believes it has good cause under section 553(d) of the Administrative Procedure Act, 5 U.S.C 553(d), to put this action into effect less than 30 days after publication in the Federal Register. All of the requirements and obligations in the State's program are already in effect as a matter of State law. EPA's action today does not impose any new requirements that the regulated community must begin to comply with. Nor do these requirements become enforceable by EPA as Federal law. Consequently, EPA finds that it does not need to give notice prior to making its approval effective.

Compliance with Executive Order 12866

The Office of Management and Budget has exempted this action from the requirements of section 6 of Executive Order 12866.

Certification Under the Regulatory Flexibility Act

Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that this approval will not have a significant economic impact on a substantial number of small entities. It does not impose any new burdens on small entities. This action, therefore, does not require a regulatory flexibility analysis.

Authority: This notice of final partial program adequacy

determination of Alabama's municipal solid waste permit program is issued under the authority of section 4005 of the Solid Waste Disposal Act as amended; 42 U.S.C. 6946.

Dated: February 18, 1994.

John H. Hankinson, Jr.,
Regional Administrator.

[FR Doc. 94-4757 Filed 3-1-94; 8:45 am]
BILLING CODE 6560-50-F

áá
The Contents entry for this article reads as follows:

Municipal solid waste landfill permit programs; adequacy determinations:
Alabama, 9979

ORIGINAL

BEFORE THE UNITED STATES

ENVIRONMENTAL PROTECTION AGENCY

REGION IV

ATLANTA, GEORGIA

IN RE: EPA Region IV Tentative Determination of Adequacy for Alabama's MSWLF Permit Program.

* * * * * * * * * * * * *

Proceedings before the United States Environmental Protection Agency, reported by Teresa L. Hollingsworth, Certified Shorthand Reporter and Commissioner for the State of Alabama at Large, at the conference room of Alabama Department of Environmental Management 1751 Congressman W. L. Dickinson Drive, Montgomery, Alabama on February 10, 1994, commencing at approximately 7:00 p.m.

* * * * * * * * * * * * *

AL-017

APPEARANCES

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Montgomery, Alabama 36109

1

2 P R O C E E D I N G S

3

4 MR. EWING: Let the record show that we are
5 beginning at 7:05 p.m.
6 Welcome, I am Kelly Ewing of the Office of
7 Solid Waste in Region IV of the United States
8 Environmental Protection Agency, Atlanta,
9 Georgia, and project officer for the review of
10 Alabama's municipal solid waste landfill permit
11 program. I have with me this evening, Mark Davis
12 from the Region IV Office of Solid Waste, and
13 from the Alabama Department of Environmental
14 Management, Sue Robertson, Chief of the Land
15 Division, Russell Kelly, Chief of the Solid Waste
16 Section, Lynn Garthwright, Chief of the Special
17 Services Unit, and Ron Farley from the Office of
18 General Counsel.
19 The purpose of this hearing is to accept
20 comments on EPA's tentative determination to
21 grant the State of Alabama partial approval of
22 its municipal solid waste landfill permit
23 program. Comments may be presented tonight

1 either in writing or orally. All pertinent
2 comments received will be considered in EPA's
3 final determination of adequacy.
4 I would like to begin with a brief
5 background discussion of the federal program.
6 Section 4005(c)(1)(b) of the Resource
7 Conservation and Recovery Act, better known as
8 RCRA, as amended by the Hazardous and Solid Waste
9 Amendment, better known as HSWA of 1984, required
10 EPA to revise the existing Municipal Solid Waste
11 Landfill criteria of 1979 for facilities which
12 may receive household hazardous waste or small
13 quantity generator waste.
14 On October 9th, 1991, EPA promulgated
15 revised criteria for Municipal Solid Waste
16 Landfills in 40 CFR part 258. Subtitle D of RCRA
17 requires states to develop permitting programs to
18 insure that facilities comply with the federal
19 criteria under part 258. RCRA Section 4005 also
20 directs EPA to determine the adequacy of state
21 municipal solid waste landfill permit programs to
22 insure that facilities comply with the revised
23 federal criteria. To fulfill this requirement,

1 the agency has drafted and is in the process of
2 proposing a State or Tribal Implementation Rule
3 This will also be known as a STIR. This rule
4 will specify the requirements which state or
5 tribal programs must satisfy to be determined
6 adequate.
7 EPA will be approving State or Tribal
8 Municipal Solid Waste Landfill permit programs
9 prior to the promulgation of the STIR. EPA
10 interprets the requirements for states or tribes
11 to develop adequate programs for permits or other
12 forms of prior approval to impose several minimum
13 requirements. First, each state or tribe must
14 have enforceable standards for new and existing
15 Municipal Solid Waste Landfills that are
16 technically comparable to EPA's revised Municipal
17 Solid Waste Landfill criteria. Next, the state
18 or tribe must have the authority to issue a
19 permit or other notice of prior approval to all
20 new and existing Municipal Solid Waste Landfills
21 in its jurisdiction. The state or tribe also
22 must provide for public participation in permit
23 issuance and enforcement as required in section

1 7004(b) of RCRA. Finally, EPA believes that the
2 state or tribe must show that it has sufficient
3 compliance monitoring and enforcement authorities
4 to take specific action against any owner or
5 operator that fails to comply with an approved
6 Municipal Solid Waste Landfill Program.
7 The part 258 criteria are self-implementing
8 on their effective date for all Municipal Solid
9 Waste Landfills in all states. Every standard in
10 part 258 is designed to be implemented by the
11 owner or operator with or without oversight or
12 participation by a state regulatory agency.
13 Under RCRA, EPA's role is limited to
14 establishing technical design and operating
15 criteria for Municipal Solid Waste Landfills, and
16 determining the adequacy of state permit
17 programs. For states deemed inadequate by EPA,
18 RCRA section 4005 gives EPA enforcement authority
19 to insure Municipal Solid Waste Landfill
20 compliance with part 258. Only the EPA
21 determines the state program inadequate.
22 Subtitle D does not provide EPA with enforcement
23 authority in states pending an adequacy

1 determination or in states deemed adequate by
2 EPA. EPA does not have permitting authority in
3 any circumstance. The federal criteria and state
4 requirements operate concurrently regardless of
5 whether a state permit program is deemed adequate
6 or inadequate.
7 Section 4005(a) of RCRA provides that
8 citizens may use the citizen suit provisions of
9 section 7002 of RCRA to enforce the Federal
10 Municipal Solid Waste Landfill criteria in 40 CFR
11 part 258 independent of any State or Tribal
12 enforcement program. The part 258 criteria
13 remain in effect even in those states that are
14 approved by EPA. However, as EPA explained in
15 the preamble to the final Municipal Solid Waste
16 Landfill criteria, EPA expects that any owner or
17 operator complying with the provisions in a State
18 or Tribal program approved by EPA would be
19 considered to be in compliance with the federal
20 criteria. Again, EPA does not have the authority
21 to enforce the federal criteria unless a state's
22 permit program is determined to be inadequate.
23 EPA will not have oversight of a state's permit

1 program once a final determination of adequacy
2 has been made.
3 On July 9, 1993, EPA received a final
4 application for adequacy determination for the
5 State of Alabama's Municipal Solid Waste Landfill
6 permit program. On December 17, 1993, EPA
7 published a tentative determination of adequacy
8 for approval of all portions of Alabama's program
9 except financial assurance. The Alabama
10 Department of Environmental Management does not
11 currently have statutory authority to develop and
12 enforce financial assurance regulations.
13 Included as part of Alabama's application is a
14 schedule indicating that financial assurance
15 regulations will be finalized by January, 1995,
16 before the April 15, 1995, effective date of the
17 financial assurance requirements in the federal
18 criteria. Along with the tentative
19 determination, EPA announced the availability of
20 the application for public comment and the date
21 of the public hearing on the application, which
22 is tonight, at 7:00 p.m., February 10th, 1994, in
23 Montgomery, Alabama.

After EPA has reviewed and considered all public comments received in response to the notice of tentative determination and this hearing, the regional administrator will make a final determination based on whether Alabama's permit program meets all the statutory and regulatory requirements established by RCRA.

And now, Russell Kelly with the Alabama Department of Environmental Management will tell you a little bit about Alabama's program. Russell.

MR. KELLY: I'm Russell Kelly, Chief of the Solid Waste Branch of the Alabama Department of Environmental Management.

Prior to the Solid Waste Disposal Act of 1969, the Alabama Department of Public Health responded to open dumps on a complaint basis. On September 12, 1969, the Solid Waste Disposal Act was passed with an effective date of September 12, 1971. A statewide survey performed by the Health Department personnel, revealed approximately 412 open burning dumps handling all

1 kinds of waste. By September of '71, 30 to 40
2 percent of these burning dumps had been
3 abolished. The remaining were issued Notices of
4 Violation and required to obtain a letter of
5 approval to operate from the Health Department.
6 The remaining approved dumps were required to
7 operate in compliance with the 1969 Solid Waste
8 Disposal Act. In 1980, formal permits to operate
9 were issued to landfills by the Health
10 Department. In 1982, a comprehensive program of
11 environmental management for the State was
12 established with the enactment by the Alabama
13 Legislature of the Alabama Environmental
14 Management Act. The law created the Alabama
15 Environmental Management Commission and
16 established the Alabama Department of
17 Environmental Management, which absorbed several
18 commissions, agencies and programs that had been
19 responsible for implementing environmental laws.
20 Disposal of solid waste was transferred from the
21 Health Department to the Department of
22 Environmental Management. Collection of solid
23 waste remained with the Health Department. ADEM

1 regulations were adopted and the Solid Waste
2 Disposal Act has been amended on several
3 occasions. ADEM has permitted sanitary, inert,
4 and industrial landfills from 1982 until the
5 present. The Division 13 Solid Waste Regulations
6 have also been revised on numerous occasions.
7 Solid Waste Division 13 regulations were revised
8 to meet the minimum Subtitle D requirements and
9 became effective November 2, 1993.
10 The Alabama Department of Environmental
11 Management submitted an application to EPA in
12 July of 1993 seeking to become an approved state.
13 This application did not include financial
14 assurance and the State therefore is being
15 considered for partial approval only. Current
16 proposed legislation, if passed, would put in
17 place the necessary statutes for ADEM to regulate
18 by authority the financial assurance. Upon
19 passage of such legislation, the Department would
20 seek final full state approval from EPA.
21 The Department appreciates the cooperation
22 and patience exhibited by the EPA during this
23 process. And I personally would like to thank

the members of my staff and Land Division for their professionalism and many hours of work put into the regulatory revisions and permit applications.

MR. EWING: Thank you, Russell.

Before we proceed with the oral presentation, I would like to set some general ground rules for this hearing. Only oral comments which are relevant to EPA's tentative determination of adequacy will be accepted. This hearing is not intended for the exchange of information or comments regarding permitting or compliance issues which deal with specific municipal solid waste landfills in Alabama. At this point I would like to ask, on the sign in sheet, I didn't see any indication of people wishing to speak on the sign-up sheet. Are there any individuals who would like to present comments at this time?

Please let the record show that there were no individuals wishing to present comments at this public hearing. If there are no other

comments, this concludes our public hearing.

We would like to thank Alabama for their cooperation. This has been a long process. And it's taken a lot of time and effort from the ADEM staff. And we want that to be known. We hope to make a final determination on Alabama's Municipal Solid Waste Permit Program by February 28th, 1994. Once a final determination has been made, it will be published in the Federal Register.

Thank you very much. This hearing is adjourned.

1 REPORTER'S CERTIFICATE

2 STATE OF ALABAMA,

3 MONTGOMERY COUNTY,

4 I, Teresa L. Hollingsworth, Certified Shorthand
5 Reporter and Commissioner for the State of Alabama at
6 Large, do hereby certify that I reported the proceedings
7 of the:

8

9 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

10

11 In the matter of:

12

13 EPA Region IV Tentative Determination
14 of Adequacy for Alabama's MSWLF
15 Permit Program.

16

17 On February 10th, 1994.

18 The foregoing 13 computer printed pages contain a
19 true and correct transcript of the proceedings of said
20 hearing.

21 I further certify that I am neither of kin nor of
22 counsel to the parties to said cause, nor in any manner
23 interested in the results thereof.

1 This 11th day of February, 1994.

2

3 Teresa L. Hollingsworth,

4 Certified Shorthand Reporter and
Commissioner for the State

5 Of Alabama at Large.

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State of Alabama
Department of Public Health

Normandale Shopping Center
572 E. Patton Avenue
Montgomery, Alabama

Donald E. Williamson, M.D.
State Health Officer

MAILING ADDRESS:
434 Monroe Street
Montgomery, Alabama 36130-3017

October 6, 1993

RECEIVED
OCT 15 1993
OFFICE OF SOLID WASTE

Mr. Kelly Ewing
Office of Solid Waste, Region IV
Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30369

Dear Mr. Ewing:

In response to your telephone conversation with Mr. Wade Pitchford, Director, Division of Community Environmental Protection, on October 5, 1993; the Alabama Department of Public Health historically has been involved with the regulation of both solid waste and sewage.

Through offices located in every county, this Department inspects and permits solid waste collectors and transporters, tire storage facilities, the installation and repair of household onsite sewage systems, the pumping of septic tanks and grease traps, and the manufacture of septic tanks. Local environmentalists also review and approve Certificates of Exception to local mandatory solid waste collection programs, investigate unauthorized dumps, and inspect processing facilities and transfer stations. In addition, local offices are often the first point of communication for the general public on complaints related to other aspects of solid waste and sewage that are regulated by the Alabama Department of Environmental Management.

The Department of Public Health also regulates the land application of septage and grease, which is the only practical disposal method available in this state. When septage is discharged to public sewer systems, such facilities (POTWs) have difficulty meeting discharge requirements. Therefore, an increasing number of POTWs no longer accept such waste. Sanitary landfills no longer engage in septage solidification processes onsite and will not accept the waste due to its liquid state.

Please find attached rules for onsite sewage, Chapter 420-3-1 and solid waste, Chapter 420-3-5. Landfarming is regulated under Section 420-3-5-.13 of the Solid Waste Collection and Disposal Rules. Also attached is Quality Control Criteria used in conjunction with landfarming regulations.

A-007

If you require further information, please contact either Wade Pitchford or me at (205) 613-5373.

Sincerely,

Kimberly R. Rice

Kimberly R. Rice, Director
Solid Waste Branch
Division of Community
Environmental Protection

KR/zr

Attachments

cc: Wade Pitchford

RULES
OF
STATE BOARD OF HEALTH
BUREAU OF ENVIRONMENTAL AND HEALTH
SERVICE STANDARDS
DIVISION OF
COMMUNITY ENVIRONMENTAL PROTECTION

Chapter 420-3-1

ONSITE SEWAGE DISPOSAL
AND
SUBDIVISION-ONSITE SEWAGE SYSTEMS, WATER SUPPLIES AND SOLID WASTE MANAGEMENT

ADOPTED BY THE STATE BOARD OF HEALTH
JULY 20, 1988
EFFECTIVE DATE AUGUST 24, 1988

AMENDED NOVEMBER 20, 1991
EFFECTIVE DECEMBER 24, 1991

AMENDED JUNE 17, 1992
EFFECTIVE JULY 24, 1992

RULES
OF
STATE BOARD OF HEALTH
BUREAU OF ENVIRONMENTAL AND HEALTH SERVICE STANDARDS
DIVISION OF COMMUNITY ENVIRONMENTAL PROTECTION

Chapter 420-3-1

ONSITE SEWAGE DISPOSAL AND SUBDIVISION-ONSITE SEWAGE SYSTEMS, WATER SUPPLIES, AND SOLID WASTE MANAGEMENT

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420-3-1-.01 **Purpose**. The purpose of this Chapter is to establish requirements regarding the permitting, approval, design, installation and use of onsite sewage treatment and disposal systems; to require minimum sanitary facilities; to establish requirements for persons engaged in septic tank manufacturing, installing and in sewage tank pumping; to regulate the development of subdivision-sewage disposal systems, water supplies, and solid waste management to the extent necessary for the protection of the public health through the submittal and approval of required reports, legal documents, plans and specifications, test reports,

and technical data to ensure compliance with all applicable sewage treatment and disposal, water supply, and solid waste management laws of the State, and all applicable rules promulgated under the Alabama Administrative Procedures Act.

420-3-1-.02 **Statutory Authorizations**. The State Board of Health is authorized to promulgate these rules under and by virtue of the authority of Sections 22-2-2(4), 22-2-2(6), 22-10-1, et seq., 22-20-5, 22-26-1, 22-26-2, 22-26-3, 22-26-5, 22-26-7, and 22-27-1, et seq., Code of Ala., 1975.

420-3-1-.03 **Definitions**. When used in this Chapter and for the purposes thereof, the following terms and words shall be construed and have the meaning assigned to them as follows, except where the context prohibits.

(1) **Alternative System**--any tried and proven onsite sewage disposal system that varies from conventional construction and installation procedures as defined in this Chapter and requires an engineer's design for methods of sewage handling, treatment or disposal.

(2) **Board**--the Board of Health of the State of Alabama as defined in Section 22-2-1, Code of Ala., 1975, or the State Health Officer or his/her designee when acting for the Board.

(3) **Blackwater**--that portion of sewage comprised of liquid and solid human body waste and the water generated through toilet usage.

(4) **Building Development**--a change in the characteristics of a lot, tract or parcel of land exhibited by an act other than the mere sale or division of land in such a manner as to encourage human habitation or continuous overnight recreational use by more than one family unit in addition to the sale, lease or rental or offering for sale, lease or rental of any such lots. Such change includes, but is not limited to the following: constructing roads, installing drainage ditches or similar facilities, providing utility services or connections within the subdivision, constructing or siting shelters or dwellings, installing public or private water or sewer systems, recording the plat of the property as a subdivision in the office of the judge of probate, or advertising the lots, tracts or parcels as a residential, overnight recreational or subdivision development.

(5) **Building Drain**--the part of the lowest piping of a drainage system which receives the discharge from soil and waste drainage pipes inside the walls of the building and conveys it to the house sewer, ending not less than three nor more than five feet outside the building wall.

(6) **Cesspool**--an excavation in the ground without a waterproof lining into which untreated sewage is emptied.

(7) **Conventional Onsite Sewage Disposal System**--a conventional onsite sewage disposal system consisting of a septic tank with effluent discharging into an effluent disposal field.

(8) **Covenant Running With The Land**--an agreement between the property owner and another which is recorded in the office of the Probate Judge or other records office, as required by this Chapter, which runs with the land and which cannot be separated from the land, and which is intended to bind successors in title.

(9) **Crossover**--nonperforated rigid or nonperforated flexible pipe used for the purpose of connecting one effluent distribution line to another and installed as specified in Appendix F-2. Overflow pipe or relief line used in these rules shall mean the same as crossover.

(10) **Developer or Sponsor**--any person who creates a subdivision as herein defined.

(11) **Dwelling**--a house, mobile home, shelter or building or portion thereof which is occupied in whole or in part as the home, residence or sleeping place of one or more human beings.

(12) **Effluent**--partially or completely treated sewage flowing out of any sewage treatment device.

(13) **Effluent Disposal Field**--an area consisting of perforated piping placed in trenches which utilizes the soil for absorption and treatment of effluent or drainage from onsite sewage disposal systems, clothes washing machines, grease traps, spas or other waste appurtenances.

(14) **Effluent Distribution Line**--perforated pipe placed in trenches in the effluent disposal field for the purpose of distributing effluent.

(15) **Effluent Line**--a rigid and watertight, nonperforated pipe from the septic tank outlet tee or other onsite sewage treatment device outlet structure to the header line, or to the effluent distribution line if no header line is employed. All connections or joints, if required, shall be watertight.

(16) **Engineer**--a person registered as a professional engineer with the State of Alabama Board of Registration for Professional Engineers and Land Surveyors, practicing under the rules of Professional Conduct (Code of Ethics) and experienced in, and has an understanding of, soil and geological and topographical conditions which may affect the operation of onsite sewage disposal systems.

(17) **Experimental Systems**--any method of onsite sewage treatment and disposal that is neither conventional or alternative as determined by the Board.

(18) **Flood**--the general and temporary condition of partial or complete inundation of land areas caused from the overflow of surface waters, excluding saltwater bays and the Gulf of Mexico.

(19) **Flood Easement**--an entitlement in perpetuity allowing the holder of the easement to back up flood waters in a reservoir and inundate land up to a specified contour elevation above mean sea level.

(20) **Flood Prone Area**--any area which will normally be subject to a flood during some portion of the year. This definition refers to areas that are subject to flooding as observed or as indicated by soil characteristics as defined in the Standards of the National Soils Handbook, United States Department of Agriculture.

(21) **French Drain**--a man-made subsurface drainage structure intended to intercept and divert groundwater.

(22) **Graywater**--that portion of sewage generated by water-using fixtures and appliances, excluding the toilet and possibly the garbage disposal.

(23) **Grease Trap**--a watertight tank or receptacle in which the grease present in sewage is intercepted and congealed, and from which it may be skimmed from the surface of the liquid waste for disposal.

(24) **Header Line**--that part of an onsite sewage disposal system that consists of a rigid or flexible perforated pipe whose purpose and function is to receive effluent from the effluent line and distribute the effluent to an effluent disposal field. The header line shall be considered to begin immediately after the effluent line.

(25) **Health Officer**--the Health Officer for the State of Alabama as provided in Section 22-2-8, Code of Ala., 1975, or his/her designee provided by law.

(26) **Holding Tank**--a watertight receptacle which receives and temporarily retains sewage directly from a dwelling or other building, and is designed and constructed to facilitate removal and ultimate disposal of the sewage at another site.

(27) **House Sewer**--that part of the building drainage system which extends from the end of the building drain, and which receives the discharge of any building drain and conveys it to a sanitary sewer or an onsite sewage disposal system.

(28) **Industrial Wastes**--any liquid or other wastes resulting from any process of industry, manufacture, trade or business, or from the development of natural resources.

(29) **Institutions**--dwellings which are occupied transiently as the temporary abiding place of individuals who are lodged, with or without meals, in individual rooms or in wards. This definition includes hotels, lodging houses, boarding houses, furnished rooming houses, lodgings, club houses, convents, asylums, hospitals, jails and other dwellings similarly occupied, whether specifically enumerated herein or not.

(30) **Land Surveyor**--a person registered as a land surveyor with the State of Alabama Board of Registration for Professional Engineers and Land Surveyors and practicing under the Rules of Professional Conduct (Code of Ethics).

(31) **Laundry Wastes**--the liquid wastes from a clothes washing machine, laundry sink or other receptacle used for laundering purposes.

(32) **Local Health Department**--county, district or regional health department.

(33) **Local Health Officer**--the county, district or regional health officer of a local health department elected in accordance with Sections 22-3-2(5)-(6), Code of Ala., 1975, or his/her designee provided by law.

(34) **Lot**--a part of an approved subdivision or a parcel of land intended for the siting of a single dwelling, building, shelter or other development.

(35) **Mobile Home**--a movable or portable dwelling built on a chassis, connected to utilities, built for use with or without a permanent foundation and designed or used for full-time occupancy.

(36) **Multifamily Dwelling**--a dwelling which is designed to be occupied by more than one family, living as separate family units, and in which the rooms are occupied in apartments, suites or groups, including tenant houses, flats, houses, apartment hotels, condominiums, duplex apartments, kitchenette apartments and all other dwellings similarly occupied, whether specifically enumerated herein or not.

(37) **Onsite Sewage Disposal System**--any system of piping, treatment devices, pumps, alarms, or other facilities or devices that convey, store, treat, or dispose of sewage on the property where it originates or on adjacent or nearby property under the legal ownership or legal easement in perpetuity of the same responsible person, where the system is not connected to a public sewer.

(38) **Onsite Sewage Disposal System Installer**--a person engaged in the business of installing or repairing onsite sewage disposal systems.

(39) **Paralithic**--partially weathered igneous, metamorphic, or sedimentary rock, with characteristics similar to rock, but which is not soft, loose, or friable like saprolite. When evaluated in place, it is compact and grinds when encountered by an auger but may be penetrated with an auger or backhoe.

(40) **Parent Material**--the mineral matter that is in its present position through natural deposition by water, wind, gravity or by decomposition of rock, and is exposed at the land surface or overlain by soil or saprolite.

(41) **Person**--any individual, firm, partnership, corporation, state agency, municipal corporation, party, company, association, or any other public or private legal entity.

(42) **Portable Toilet**--a portable, self-contained sewage tank.

(43) **Private Dwelling**--a dwelling designed for or occupied by only one family.

(44) **Privy or Dry Closet**--a receptacle, place or method used for the purpose of containing or disposing of human excreta other than by use of a water closet and not connected to water under pressure.

(45) **Public Sewer System**--the conduits, sewers, and all devices and appurtenances by means of which sewage is collected, pumped, treated and disposed of, all of which are owned and operated by a municipality, utility or a legally constituted agency of government.

(46) **Rippable**--rock that is sufficiently soft, thinly bedded or fractured so that excavation in it can be made by the conventional operation of trenching machines, backhoes, augers or small rippers and other equipment common to construction of small pipelines, sewer lines, dwellings and the like.

(47) **Rock**--the consolidated or partially consolidated mineral matter or aggregate, including bedrock or weathered rock, which has one or more of the following characteristics: jointing, bedding planes, or strike and dip. Rock does not have the properties or structure of soil, and may be exposed at the land surface or be overlain by soil or saprolite.

(48) **Sanitary Sewer System**--a public sewer system or a private sewer system.

(49) **Saprolite**--material weathered from igneous or metamorphic rock, without soil structure, which is soft, loose, and friable in place and can be penetrated easily with an auger or backhoe.

(50) **Seepage Pit**--a covered or uncovered pit filled with rock or other material and having no lining or an open-jointed lining

through which sewage or effluent seeps or leaches into the surrounding soil.

(51) **Septage**--sewage or a mixture of sewage, sludge, fatty materials, human feces and liquid removed during the pumping of an onsite sewage disposal system.

(52) **Septic Tank**--a horizontal watertight tank or receptacle used as reservoir for the purpose of receiving or depositing the sewage contents or drainage from any or all of the following: water closet, lavatory, shower, bathtub, clothes washing machine, kitchen sink, grease trap, dishwasher, or other household waste appurtenances until anaerobic decomposition is to a considerable extent effected.

(53) **Septic Tank Installer**--a person engaged in the business of installing or repairing septic tank systems.

(54) **Septic Tank Manufacturer**--a person who manufactures, makes or constructs septic tanks.

(55) **Sewage**--any liquid waste containing animal or vegetable matter in suspension or solution, and may include liquids containing chemicals in solution from water closets, urinals, lavatories, bathtubs, showers, laundry tubs or devices, floor drains, drinking fountains, or other sanitary fixtures.

(56) **Sewage Tank**--a watertight tank or receptacle used as a reservoir for the purpose of receiving or depositing sewage. Sewage tanks include, but are not limited to, septic tanks, holding tanks, portable toilets, aerobic sewage tanks or other similar sewage holding appurtenances.

(57) **Sewage Tank Pumping Contractor**--a person engaged in the operation of removing and disposing of the sludge, grease,solid and liquid wastes of sewage tanks.

(58) **Shall**--a mandatory requirement.

(59) **Shelter**--a structure or natural site that provides cover or protection, as from the weather, and utilized as a dwelling. Shelter includes, but is not limited to, tents, sheds, barns and vehicles.

(60) **Sinkhole**--a depression in the topography without a surface outlet for drainage from the low point. Sinkholes are common in areas containing limestone and generally result from the collapse of solution cavities.

(61) **Soil**--the naturally occurring, unconsolidated mineral and organic material of the land surface developed from rock or other parent material, which is less than or equal to 2.0 millimeters in size as measured in place. Soil consists of sands, silts and clays or combinations of these textures and may contain larger aggregate

materials such as rock or paralithic material, as well as variable amounts of naturally occurring organic materials. Soil includes the O, A, E, B and C Horizons, as defined in the National Soils Survey Manual.

(62) **Soil and Waste Drainage Pipe**--any pipe which conveys the discharge of water closets or fixtures having similar function to the building drain.

(63) **Soil Classifier**--a person registered as a professional soil classifier with the State of Alabama State Board of Registration for Professional Soil Classifiers and practicing under the Rules and Regulations and Code of Ethics of such.

(64) **Soil Survey**--the systematic examination of soils in the field or in laboratories, their description and classification, the mapping of kinds of soils and the interpretation of soils according to their adaptability for various land use, conducted according to standards of the National Cooperative Soil Survey.

(65) **Spa**--a unit designed for recreational and therapeutic use which is not normally drained, cleaned or refilled for each user. It may include, but not be limited to, hydrojet circulation, hot water, cold water mineral baths, air induction bubbles, or some combination thereof. Terminology for a spa includes, but is not limited to, "therapeutic pool," "hydrotherapy pool," "whirlpool," "hot spa," "hot tub," etc.

(66) **Standard Plumbing Code**--the latest edition of the Standard Plumbing Code of the Southern Building Code Congress.

(67) **State Department of Public Health**--the Alabama Department of Public Health as defined by Section 22-2-1, Code of Ala., 1975.

(68) **Subdivision**--that portion of a lot, tract or parcel of land which is divided or resubdivided, whether at one time or in stages, into two or more lots, excluding the remnant of the original lot, tract or parcel, for the purpose, whether immediate or future, of building development. This definition includes, but is not limited to, any area to be developed for use as a site for the placement or construction of single family dwellings. The division of land into two or more lots through sale at public or private auction is considered an act of creating a subdivision for the purposes of this Chapter.

(69) **Subdivision Sewer System**--The conduits, sewers, and all devices and appurtenances by which sewage is collected, treated and disposed of, all of which may be owned and operated by a person other than a municipality, a utility or a legally constituted agency of government.

(70) **Surface Waters**--all waters of any bay, river, stream, watercourse, pond, lake, swamp or spring located partially or wholly within the State, including the Gulf of Mexico.

(71) **Vicinity Map**--a map which indicates the region near or about a place and the proximity to prominent, permanent, and established landmarks, and which indicates correct road or street names and/or numbers, and which is sufficiently accurate to locate the property without additional direction or assistance.

(72) **Water Closet**--a type of closet or receptacle normally containing water into which human excreta will, in the course of proper or ordinary use thereof, fall or be deposited, and which closet is connected to water under pressure and so constructed and equipped that such excreta will be washed or carried by water flowing through the same at appropriate intervals into a house sewer or other system of drainage or method used for the disposal of such excreta, sewage or contents in a sanitary manner.

(73) **Water Storage Easement**--an entitlement in perpetuity allowing the holder of the easement to impound water in a reservoir and inundate land up to a specified contour elevation above mean sea level.

(74) **Wet Season**--that portion of the year receiving the highest amount of rainfall that is most unfavorable to the proper functioning of an effluent disposal field because of soil characteristics such as, but not limited to, shrink-swell potential, perched or apparent high water table, or other such conditions. Generally, the wet season is December through April, but it may vary during a year in any one location depending upon soil type and amount of rainfall received during a particular period.

420-3-1-.04 **Penalty For Violations**.

(1) Any person who knowingly violates or refuses to comply with any provision of these rules shall be subject to punishment according to law.

420-3-1-.05 **Appeals**.

(1) Any person who, (a) after proper application, is denied a permit, license, or authorization; or (b) is in possession of a valid permit, license, or authorization, and is notified in writing of the intent to suspend, revoke, or deny renewal of said permit, license or authorization, shall be provided the reasons therefore and may, within seven days following receipt of said notice, apply in writing for an informal hearing to the health officer, or his/her designee, of the county from which said denial(s) or notice of intent was issued, in accordance with the Rules of the State Board of Health governing appeals.

(2) If, after the informal hearing, the matter is not resolved to the satisfaction of the aforesaid person, written appeal in accordance with the Rules of the State Board of Health governing appeals may be made within seven days following said hearing to the State Health Officer. This appeal shall be sent

directly to the **State Health Officer, State Department of Health, 434 Monroe Street, Room 381, Montgomery, Alabama 36130-1701** with a copy furnished to the Health Officer of the County from which said denial or notice of intent was issued.

420-3-1-.06 **Variances**.

(1) In order to avoid undue hardships and promote the effective and reasonable application and enforcement of these rules, the Board may grant variances from requirements of these rules in accordance with such procedures and conditions as it may prescribe. Variances shall not be granted at the local level. A variance shall be granted upon finding that strict application of the rules in question would cause the applicant undue hardship which results from conditions peculiar to the site or situation under consideration, which conditions could not reasonably have been anticipated in the writing of the rule(s). Variable factors such as seasonal loadings, nature of wastes, water table conditions, topography, soil, geology, land use and any other factors impacting upon the situation may be taken into account in determining the degree of variance, if any, which may be allowed. Variances may be granted under the following procedures:

(a) Any person may request a variance from specific provisions of these rules by submitting a written application to the Board. The person shall state the reasons and circumstances which support the request and shall submit any other pertinent data to support the request.

(b) Any variance not granted within 60 days is deemed denied. If approved, any conditions or time limitations needed to comply with all applicable state laws, or to protect public health or the environment, shall be specified by the Board. A date upon which the variance will no longer be valid shall be prescribed in the decision.

(c) Any person may submit a request in writing to extend a prior or existing variance. The person shall demonstrate need for continuation of the variance. The variance may be reissued or extended for another period upon finding by the Board that the reissuance or extension of the variance would not endanger public health or the environment.

(d) Any variance may be revoked if the Board finds that:

1. The person is in violation of any requirement, condition, schedule or limitation of the variance.

2. Operation under the variance is threatening public health or the environment. Written notice of revocation shall be provided to the person granted the variance.

(e) If, in the case of a man-made or natural disaster, the Board finds that certain requirements cannot be complied with and

that the public health is better served by not fully complying with these rules, the Board may authorize the suspension of the application of the rules for a specifically affected person(s) or site and institute a provisional regulatory plan until the disaster is abated.

(f) The denial or revocation of a variance in whole or in part may be appealed to the Board in accordance with the Board's hearing procedures.

(g) The granting of a variance in whole or in part may likewise be appealed by any affected person.

(2) A variance, if granted, is not transferable from one person to another or from one site to another.

420-3-1-.07 **Other Approvals Not Implied**.

(1) Approval of any subdivision or lot by the local health department or the state Health Department, when required, does not constitute or imply approval by any county, municipality or other agency having planning, zoning or other legal jurisdictions. Similarly, approval of development plans by other agencies does not negate the required approval by the Health Department for onsite sewage systems in accordance with this Chapter.

420-3-1-.08 **General Provisions For Toilet And Plumbing Facilities And Sanitary Systems**.

(1) Every single or multifamily dwelling, establishment, business, office, or place of assembly where persons reside, assemble or are employed, whether publicly or privately owned, shall be provided with toilet facilities and a sanitary system of sewage or excreta disposal which complies with the following provisions:

(a) It shall be the duty of the owner of such single or multifamily dwelling, establishment, business, office, place of employment, or place of assembly to provide toilet facilities of such form and number as are prescribed by this Chapter, and a sanitary system of sewage or excreta disposal that is in compliance with this Chapter.

(b) No person shall occupy, rent, lease, sell, possess, or allow a building to be occupied as a single or multifamily dwelling, establishment, business, office, place of employment, or place of assembly unless the said building is provided with an approved sewage disposal system and the appropriate toilet facilities.

(c) All sewage or effluent not discharged into a sanitary sewer system shall be treated and disposed of by a method as provided in this Chapter.

(d) No person shall discharge, or permit or cause to be discharged, untreated sewage, effluent from onsite sewage disposal systems, excreta, or other putrescible or offensive wastes onto the surface of the floor, ground or into any street, road, alley, open excavation, storm sewer, ditch, adjoining property, mine shaft, surface water, or into a used, unused or abandoned well, spring, cistern, sinkhole, crevice, or other opening extending into a water table or directly into limestone, nonrippable sandstone, or other rock or shale formation.

(2) Required Plumbing Facilities. When local plumbing codes are in effect, the plumbing facilities shall be in accordance with such plumbing codes. Where local plumbing codes are not in effect, in new construction or building additions and changes of use, at least the minimum facilities provided and the minimum number of each type of fixture shall be in accordance with the Standard Plumbing Code, which is incorporated herein by reference except where specifically removed.

(3) Building Drains--Where local plumbing codes are not in effect, building drains shall meet the requirements of the Standard Plumbing Code.

(4) House Sewer--Where local plumbing codes are not in effect, the house sewer shall meet the requirements of the Standard Plumbing Code.

(5) Water Saving Devices or Fixtures--The Board encourages the conservation of water by use of low flow or low water usage devices, especially when the sewage generated is to be treated and disposed of by an onsite sewage disposal system.

420-3-1-.09 **General Requirements For Onsite Sewage Disposal Systems.**

(1) All onsite sewage disposal systems shall be sited, designed, constructed, installed, maintained and operated in such a manner that the sewage or the effluent contained therein or discharged from such facility:

(a) Does not create a potential or actual public health hazard or nuisance.

(b) Does not give rise to nuisances due to flies, mosquitoes, rats, or other wild or domestic animals.

(c) Does not endanger or contaminate any surface or subsurface water that is used as an individual or public water supply or for recreational purposes.

(d) Does not give rise to nuisance due to odor or unsightly appearance.

(e) Will not violate any federal or state laws or regulations governing water pollution or sewage disposal.

(2) It shall be the duty of the owner of any subdivision, lot, single or multifamily dwelling, establishment, business, office, place of employment, or place of assembly to obtain any approvals or permits which may be required by this Chapter or by other state, federal or local agencies.

(3) When a sanitary sewer system is not available, an approved onsite sewage disposal system may be utilized until such system malfunctions and cannot be repaired to meet the requirements of this Chapter.

(4) Where a sanitary sewer system is not available, and where permitted by this Chapter, the house sewer may be connected to an onsite sewage disposal system complying with the provisions of this Chapter.

(5) The acceptability of a lot or site to support an onsite sewage disposal system of the type and size as required by this Chapter shall be determined on the basis of professionally certified soil test data, site conditions and daily sewage flow quantity and characteristics. Site conditions include, but are not limited to, lot size, slope, restrictive soil layer elevation, rock outcroppings, bedrock elevation, seasonal groundwater elevation, sinkholes, surface drainage, or flood prone areas. In counties with a Site Evaluation Program approved by the Board, the local public health environmentalist certified under the program by the Board and known as a site evaluator, may conduct a site evaluation, prepare a report of findings and prescribe the size and location of a conventional onsite sewage disposal system or repair of such system. Under the site evaluation program, certified soil tests results are generally not required.

(6) The onsite sewage disposal system or systems shall be designed to receive all sewage from the dwelling, building or other establishment or gathering place served. Nothing in this Chapter shall prevent the use of properly designed graywater and blackwater onsite sewage disposal systems.

(7) No property shall be improved or developed in excess of its capacity to properly absorb sewage effluent in the quantities and by the means provided by this Chapter.

(8) When there is insufficient lot area or improper soil conditions for adequate sewage disposal for the building or land use proposed, no permit shall be issued and no onsite sewage disposal shall be permitted. Where space or soil conditions are critical, no permit shall be issued until certified engineering data, design and test reports have been submitted to the local health department and evaluated.

(9) The use of an onsite sewage disposal system by more than one dwelling is prohibited except as provided in Chapter 420-3-1-.46.

(10) No lot shall be altered in such a manner that the existing onsite sewage disposal system or expansion area would be adversely affected, or in a manner that will make the lot smaller than the stated accepted minimum size.

(11) Nonbiodegradable wastes, hazardous waste, or any waste containing high levels of any metals or chemicals from industrial, agricultural, or commercial establishments shall not be combined with sewage when the sewage or effluent is to be treated and disposed of under these rules.

(12) The use of a cesspool or a seepage pit is prohibited.

(13) The use of metal tanks, drums, barrels or pipes as sewage tanks is prohibited for use with onsite sewage disposal systems.

420-3-1-.10 **Prohibited Use Of Onsite Sewage Disposal Systems**.

(1) Under these rules, onsite sewage disposal systems shall not be used to treat and dispose of the following:

(a) Commercial laundry wastes;

(b) Car or vehicle washwater from car wash or vehicle wash bays;

(c) Embalming wastes from funeral homes;

(d) Slaughterhouse wastes;

(e) Nonbiodegradable wastes, hazardous wastes, or any waste from industrial, agricultural or commercial establishments other than sewage as defined by this Chapter;

(f) Any waste containing high levels of any metals, organic, or inorganic compounds that might pollute groundwater or endanger drinking water supplies; or

(g) Other wastes as determined by the Board.

420-3-1-.11 **Connection to Sanitary Sewer**.

(1) Whenever any onsite sewage disposal system malfunctions so as to create a potential or actual public health hazard or nuisance and cannot be repaired, the owner shall be required to connect to a sanitary sewer system when any portion of the lot or parcel of land in question is within a distance of 100 feet of a sanitary sewer existing within any public street, alley or right-of-way which abuts or joins the lot or parcel of land.

(2) It shall be unlawful for any person to maintain or use, or cause or allow to be maintained or used upon any lot or parcel of land, any receptacle for disposal of human waste other than facilities approved by these rules.

420-3-1-.12 **Sewage Flows.**

(1) For purposes of this Chapter, the volume of sewage for commercial, institutional and recreational establishments shall be computed as determined from Appendix A, provided that the effective liquid capacity of the associated septic tank shall be no less than 750 gallons. Actual metered water usage data from similar facilities may be used in lieu of Appendix A if properly documented records are provided by an engineer.

(2) The volume of sewage for multi-family dwellings shall be based on sewage flow determined from Appendix A, or from the maximum number of persons to occupy the building, using 75 gallons per person per day, whichever is greater.

(3) The use of water saving plumbing devices are encouraged to lengthen the life of the effluent disposal field. Only permanent water saving plumbing devices such as low flush toilets shall be considered in reducing the size of the onsite sewage disposal system. Devices such as inserts in showers or water faucets are considered temporary.

(4) Low flush toilets are considered to be toilets which utilize 2.5 gallons or less of water per flush. Manufacturer's data sheets must be presented with the Application For A Permit To Install An Onsite Sewage Disposal System on all low flush toilets and water saving plumbing devices proposed for use with onsite sewage disposal systems.

420-3-1-.13 **Minimum Soil Test Requirements.**

(1) The following requirements shall be observed in performing soil percolation tests and soil borings or soil observation pits:

(a) The minimum number of percolation tests required shall be one per private dwelling, and/or one for each 500 gallons of daily sewage flow located in the primary area of the proposed effluent disposal field; however, the professional certifying the tests shall use his/her judgement in determining the need for more tests to establish the acceptability of the site. The percolation test hole shall be dug or bored to the depth of the proposed installation of the effluent distribution trenches as determined from results of the soil boring or soil observation pit. Except for shallow placement and gravel-less seepage systems, the depth of the percolation test hole shall not be less than 22 inches or greater than 42 inches. For shallow placement and gravel-less seepage systems, the range of depth from original grade shall be from 12 to 22 inches for shallow placement and 18 to 42 inches for

gravel-less seepage. The location, identification, date tests were made, depth of hole, and test results of each percolation test shall be certified by an engineer, land surveyor, or soil classifier responsible for said test in accordance with standards for percolation test procedure in Appendix B. All known percolation test results, dates and locations shall also be reported in the Application For A Permit To Install An Onsite Sewage Disposal System.

(b) The percolation rate shall be reported as the number of minutes required for the water surface to drop one inch in the test hole after the rate is stabilized. The percolation rate shall be reported in units of minutes per inch.

(c) The percolation test hole or holes shall be flagged for easy location.

(d) Percolation tests shall be termed invalid when the percolation test is not performed in accordance with the standards in Appendix B. An engineer may vary the depth of the percolation test hole in order to acquire data for an alternative onsite sewage disposal system design.

(e) The minimum number of soil borings or soil observation pits shall be at least one per private dwelling or one per 500 gallons of daily sewage flow. The soil boring or observation pit shall be located in the primary area of the proposed effluent disposal field and no closer than five feet or farther than 15 feet from the determining percolation test hole. The location, depth, reported soil data, depth to water, and date soil boring or observation pit was made shall be certified by an engineer, land surveyor, or soil classifier responsible for said test in accordance with the Soil Boring and Soil Observation Pit Procedure in Appendix B. All known soil boring or observation pit data, dates and locations shall also be reported in the Application For A Permit To Install An Onsite Sewage Disposal System.

(f) Soil borings and observation pits shall be performed and reported in accordance with standards in Appendix B.

1. When applicable, reports shall include comments regarding the presence of any site or soil conditions that could have a negative impact on the operation of the proposed onsite sewage system, such as scattered lenses of impermeable soils, pans, or evidence of the possibility of wet weather springs.

(g) The soil boring or borings and observation pit or pits shall be flagged for easy location.

(h) Soil borings or observation pits shall be termed invalid when not performed in accordance with the standards in Appendix B.

(2) Where the engineer, land surveyor or soil classifier has an indication by soil characteristics, experience, testing,

previous tests, reports, or other information that certain soils on a lot may be subject to percolation rates slower than 60 minutes per inch or seasonal high groundwater, all percolation tests and soil borings or observation pits shall be performed in the wet season; or

(a) When the problem encountered is percolation, the engineer may perform percolation tests under a simulated wet season environment of the engineer's professional design and carried out under the engineer's direct supervision. The engineered percolation test shall be in the proposed effluent disposal field and the test result shall be certified by the test designing engineer.

(b) When the problem encountered is seasonal high groundwater, a soil classifier may perform a detailed and technical soil evaluation in the proposed effluent disposal field and certify the depth to the seasonal high groundwater.

(3) If percolation test results or soil borings, whether on file or currently being submitted, are found to be incomplete, in obvious error, nonrepresentative of conditions at the site, or in conflict with other applications in the immediate area, the local health department may request that the site be reevaluated by an engineer, land surveyor, or soil classifier, as applicable.

420-3-1-.14 **Standards For Lots And Sites Utilizing Onsite Sewage Disposal System.**

(1) For single family dwellings, the lot size shall be large enough to construct the original onsite sewage disposal system as required by these rules and to provide an area for duplication of that system. When an approved public water supply is proposed as the source of water for a lot, the minimum lot size shall be 15,000 square feet of land area per dwelling unit. When an individual well is proposed as the source of water for a lot, the minimum lot size shall be 20,000 square feet of land area per dwelling unit. The size, topography and other characteristics of the lot may limit the location of the structure which can be built on the lot. An exemption from the lot size requirements to this rule shall be granted for lots recorded prior to the March 18, 1982 effective date of previous onsite sewage disposal system rules, Chapter 420-3-1, provided that all other requirements of these rules are met.

(2) For establishments other than single family dwellings, the lot size shall be large enough to construct an onsite sewage disposal system as provided by this Chapter, provide for an area for duplication of that system, and meet the location requirements established in Chapter 420-3-1-.22.

(3) Sites for effluent disposal fields with percolation rates greater than 60 minutes per inch or less than five minutes per inch

shall require the use of an alternative system as provided in Chapter 420-3-1-.31.

Where percolation rates are less than five minutes per inch and the required 18-inch separation distance from groundwater or other limiting factor can be met, a gravel-less seepage system, as described in Appendix K, can be utilized as a conventional system as outlined in Chapter 420-3-1-.29.

Where percolation rates are less than five minutes per inch and the required 18-inch separation distance from groundwater or other limiting factor cannot be met, various alternative systems may be selected per Chapter 420-3-1-.31 and Appendix H.

(4) Sites for effluent disposal fields shall not have groundwater or seasonal groundwater elevations within 18 inches of the effluent distribution trench bottom.

(5) Sites for effluent disposal fields shall not have bedrock or any impervious layer such as certain clays and clay intermixed with broken shale within 18 inches of the effluent distribution trench bottom. Boulders and soft sandstone which are capable of being removed or ripped with conventional septic tank installation equipment will not be considered as being bedrock.

(6) Sites with a slope in excess of 25 percent shall not be considered usable for the installation of the effluent disposal field or the area of duplication, except as provided in Chapter 420-3-1-.31, Alternative Systems, and Appendix I. Forty percent slope shall be considered the maximum for any effluent disposal field design or the area of duplication.

(7) Easements or right-of-way areas for underground utilities or surface or subsurface drainage shall not be used in computing lot sizes or as a location for individual water supplies or onsite sewage disposal systems. Easements for right-of-way for overhead utilities may be used in computing lot sizes or as the location of individual water supplies or onsite sewage disposal system if the holder of such easements or rights-of-way areas specifically grants such usage in writing, a copy of which shall be included with the application. Easements or rights-of-way for roads or streets or thoroughfares shall not be used in computing lot sizes. Other easements, such as reservoir easements, shall not be used in determining the minimum lot size unless this meets the requirements established by the holder of that easement; however, the onsite sewage disposal system must meet all requirements of this Chapter.

(8) Where all or part of the onsite sewage disposal system, including the required area for duplication, is proposed to be installed on property other than the owner's, an easement in perpetuity shall be legally recorded in the office of probate in the proper county. The easement shall be of sufficient area to permit access, construction, and maintenance of the onsite sewage disposal system.

(9) No site for an effluent disposal field or expansion area shall be approved which is located wholly within a flood prone area, swamp, marsh, or wetlands.

(10) Wells used as the source of water supply for individual lots shall not be located in a flood prone area.

(11) When a proposed lot is located partially within a flood prone area, that portion of said lot not within the flood prone area may be considered for approval for the effluent disposal field. In cases where flood prone information is not available or is too general, a soils classifier may be retained to determine this information from a combination of indicators such as landscape features, vegetation, soil profile characteristics, and records. When a more precise evaluation of flood prone areas is needed, an engineering study based on hydrology and hydraulics is required.

Authors: Wade Pitchford, Samuel Robertson
Statutory Authority: Code of Ala. 1975, § 22-2-2(6), 22-26-1, 22-26-3.
History: Filed November 20, 1991. Amendment of 420-3-1-.14 and Appendix H, Paragraph 5.

420-3-1-.15 **Permit Required To Install Onsite Sewage Disposal System.**

(1) No person shall begin the installation or construction of any new onsite sewage disposal system until the owner or the owner's agent possesses a valid Permit To Install Onsite Sewage Disposal System issued by the local health department. This requirement applies to all development, including lots in approved subdivisions which will utilize onsite sewage disposal systems.

(2) All persons building or constructing a structure requiring an onsite sewage disposal system shall, during all phases of system construction, possess onsite a copy of a valid permit to install such onsite sewage disposal system issued by the local health department. The local health department may assess a fee for both the permit and the installation, where fee authorization exists.

(3) In counties with a site evaluation program approved by the Board, an individual lot owner, excluding subdivision developments, may make application for an onsite sewage disposal system permit under rules in Appendix O in lieu of procedure in 420-3-1-.16(1), including soil tests. Application For A Permit To Install Onsite Sewage Disposal System shall be on a form provided by the Board.

(4) It shall be the duty and responsibility of the onsite sewage system installer to install each new onsite sewage disposal system in accordance with all health department rules and the special conditions found in the Permit To Install Onsite Sewage

Disposal System issued. The installer shall assure that the sewage tank, including lids, is installed so as to be watertight.

(5) Onsite sewage disposal systems where the total sewage flow is greater than 5,000 gallons per day shall be designed by an engineer. Approval by the local health department is required.

(6) Plans for all onsite sewage disposal systems for schools and public buildings that require review by the State Building Commission shall be approved by the local health department.

420-3-1-.16 **Application To Install And Accompanying Material**.

(1) When submitting an Application For A Permit To Install An Onsite Sewage Disposal System, the owner shall submit a completed application on a form provided by the Board, and the following items:

(a) A vicinity map if said property is other than a lot located in an approved subdivision.

(b) A legal description (a certified copy of Deed is acceptable).

(c) A plot plan drawn to scale and containing the following:

1. Lot dimensions.

2. Location of proposed dwelling and driveway.

3. Any existing or proposed cut or fill areas.

4. Proposed location of sewage tank.

5. Proposed location of the effluent disposal field and layout.

6. Proposed location of an alternate area for the duplication of the effluent disposal field.

7. Relative elevations of the lot and direction(s) of slope.

8. Location of drainage features and direction of flow.

9. The results, locations and certification of soil tests performed in accordance with Chapter 420-3-1-.13.

10. Location of all existing or proposed underground utility lines such as gas, water, telephone, electric, cable television, and any other similar lines.

11. Location of any other structures or proposed structures including, but not limited to, decks, patios, garages, barns,

swimming pools (above or below grade), gazebos, car sheds or any other similar structures.

12. The location of all surface waters, water storage or flood easements, existing or proposed wells, sinkholes, caves, landfills, open or covered dump areas, springs, wet weather springs, flood prone areas and surface mining operations on the lot, and the location of all wells within 100 feet of the proposed effluent disposal field.

(d) A construction plan, except when excluded by Chapter 420-3-1-.16(1)(e), to include the following:

1. A profile and sectional drawing of the onsite sewage disposal system. The depth, length and width, effluent distribution line and trench construction details, and specification for materials to be used in the effluent disposal field.

2. Plans for diversion of surface water around septic tank and effluent disposal field.

3. Plan view drawing showing the layout of the onsite sewage disposal system, type of effluent disposal field, and parking areas.

4. Identification of type of sewage tank proposed.

5. The construction plan shall be certified by an engineer or land surveyor. All construction plans for alternative systems shall be certified by an engineer.

(e) A construction plan is not required for a single family dwelling or a business generating 500 gallons or less of sewage a day proposing to use a conventional onsite sewage disposal system with the effluent distribution trenches at 22 inches to 42 inches deep (12 to 22 inches for shallow placement and 18 to 42 inches for gravel-less seepage systems), and the following conditions exist:

1. The percolation rate in the primary effluent disposal field area is not less than five minutes per inch and not greater than 60 minutes per inch, and

2. The groundwater or seasonal groundwater elevation is not within 18 inches of the proposed effluent distribution trench bottom, and

3. The bedrock or any impervious layer such as certain clays and clay intermixed with broken shale is not within 18 inches of the proposed effluent distribution trench bottom, and

4. The slope in the primary and alternate effluent disposal field is 25 percent or less.

(f) When applicable, information in Chapter 420-3-1-.17 and Chapter 420-3-1-.31.

(2) The proposed location for the effluent disposal field shall give proper consideration to easements, utilities, drainage, topography, rock, groundwater, lot improvements, soil and other existing or anticipated characteristics.

420-3-1-.17 **Additional Information Requirements For Buildings Other Than Single Family Dwellings.**

(1) The owner shall provide in writing to the local health department that the proposed onsite sewage disposal system will receive only sewage or effluent as defined in this Chapter.

(2) When the proposed onsite sewage disposal system is for a building other than a single family dwelling, the following additional information shall be submitted with the application and accompanying materials of 420-3-1-.16:

(a) Size and proposed use of building(s).

(b) The location of all existing or proposed buildings, structures and parking areas.

(c) Water distribution, soil and waste drainage pipes, building drain, and house sewer layout plan.

(d) Maximum and average number of persons per shift that will occupy or use the building.

(e) Estimated peak and average daily sewage flow rate.

(f) Plans indicating in detail the floor plans and occupancy types and use.

(g) Low water usage fixtures should be specified; see Chapter 420-3-1-.12 (3) and (4).

(h) Any other information that may be necessary in evaluating the proposed onsite sewage disposal system.

(3) Other information as may be required in Chapter 420-3-1-.46 or Chapter 420-3-1-.47.

420-3-1-.18 **Permitting Actions Of The Local Health Department.**

(1) Upon receipt of an Application For A Permit To Install An Onsite Sewage Disposal System, the local health department shall:

(a) Within ten working days perform a completeness review of the application as submitted. The completeness review is not intended as a technical review, but as an administrative review for inclusion of all items, including signatures, as required in this Chapter. Upon completion of the application review, the local health department shall take one of the following actions:

1. If the application is incomplete, notify, preferably by telephone, the person submitting the application or the owner of items or information missing. The notification or telephone conversation must be documented by memorandum or by use of the telephone conversation form and placed in the local health department file with the application.

a. If the missing items or information are not provided within five working days of the notification or telephone conversation, the application shall be returned by mail to the person submitting the application, with written explanation of why the application was not processed, or

b. Upon written request by the owner or the person submitting the application, the health department may hold the application until the required items or information are provided.

2. If the application is administratively complete, the application may be acted on as provided in Chapter 420-3-1-.18(1)(b).

(b) An Application For A Permit To Install An Onsite Sewage Disposal System which is administratively complete should be acted on by the local health department within ten working days, including any necessary field investigations. Written notice shall be provided to the person making the application and to the owner as follows:

1. Approve the application as submitted by issuing the Permit To Install Onsite Sewage Disposal System on the form provided by the Board for said lot or lots; or

2. Approve the application with necessary terms or conditions by issuing the Permit To Install Onsite Sewage Disposal System for said lot or lots; or

3. Advise in writing that final approval or disapproval of the application is withheld pending specified required actions, such as additional tests or changes needed to the plot plan or construction plan; or

4. Issue the Permit To Install Onsite Sewage Disposal System as "Not Approved." Reasons, with applicable rules of this Chapter, shall be cited as to why the application is not acceptable. When possible, the local health department may make recommendations for resubmittal of the application.

(2) The local health department shall provide on all "Not Approved" Permits To Install Onsite Sewage Disposal Systems, the appeals procedure in Chapter 420-3-1-.05.

(3) An application not acted on by the local health department within ten working days shall be considered as not approved.

420-3-1-.19 **Time Limitation On Approved Permits To Install Onsite Sewage Disposal Systems.**

(1) Health Department San-3 or CEP-3 Forms (Permits To Install) properly documented, signed, approved on or after March 18, 1982, the effective date of the previous Onsite Sewage Disposal System rules, Chapter 420-3-1, and on file with the Health Department, will be honored providing that initial lot conditions and other factors affecting the approval have not changed, such that the installed system could become a menace to public health. Possible conditions include, but are not limited to, regulatory agency rules, statutory provisions, acts of eminent domain, natural changes, or reservoir development.

420-3-1-.20 **Inspections And Approval For Use Of Onsite Sewage Disposal System.**

(1) Upon satisfactory completion of the requirements of this Chapter, the local health department shall issue to the owner an Approval For Use Of Onsite Sewage Disposal System on a form provided by the Board. The following shall be provided to the local health department prior to issuance of any Approval For Use Of Onsite Sewage Disposal System:

(a) The opportunity to inspect the installation. No part of any installation shall be covered with earth or used until the local health department is afforded an opportunity to inspect, corrections are made if necessary, and use is authorized by the local health department. Any part of an onsite sewage disposal system which has been covered prior to inspection or authorization by the local health department shall be uncovered upon direction of the local health department.

(b) A signed statement from the onsite sewage disposal system installer. Upon completion of the construction and installation of the onsite sewage disposal system, the installer shall submit to the local health department a signed statement provided in Appendix N, certifying that the onsite sewage disposal system was installed in accordance with:

1. The approved plot plan, construction plan when required, and conditions found in the Permit To Install Onsite Sewage Disposal System;

2. When appropriate, the engineer's plans and specifications approved for the project; and

3. The requirements of this Chapter.

(c) A signed statement from the engineer. Upon completion of an alternative onsite sewage disposal system or other onsite sewage disposal system which is under the supervision of an engineer, the engineer shall submit to the local health department a statement that the onsite sewage disposal system was constructed in accordance with approved plans and specifications.

(d) Assurance On Individual or Private Water Supply. The local health department shall be provided with minimum assurances that the private or individual water supply has been located to meet the setback distances of Chapter 420-3-1-.22.

(2) Additionally, it is the property owner's responsibility to assure that the private or individual water supply has:

(a) Been constructed in accordance with requirements established by the agency assigned with the responsibility of regulating water well drillers, and

(b) Been tested in a timely manner by an accredited laboratory and has received a bacteria count and other test results which place it within established safe drinking water limits.

(3) The issuance of an Approval For Use Of Onsite Sewage Disposal System does not imply any guarantee by the local health department that the onsite sewage disposal system will function for any specified period of time.

(4) Once an onsite sewage disposal system has been built, but prior to use, the local health department may make additional inspections to assure that the onsite sewage disposal system is not damaged by grading or other construction activities.

(5) Onsite sewage disposal systems not having an Approval For Use issued by the health department shall be considered as not being in compliance with this Chapter.

420-3-1-.21 **Revocation Of Lot Approval.**

(1) When any lot has been approved by the local health department, such approval may be revoked when:

(a) The conditions relative to any lot have so changed that the use of such lot could become a menace to public health. Possible conditions include, but are not limited to, regulatory agency rules, statutory provisions, acts of eminent domain, natural changes, or reservoir development.

(b) The subject lot is not being developed in accordance with provisions of this Chapter.

(c) Information submitted for approval was erroneous or was falsified by the owner, the applicant, the engineer, the land surveyor, the soil classifier or their respective agents.

420-3-1-.22 **Location Of Onsite Sewage Disposal Systems.**

(1) All components of the onsite sewage disposal system shall be located a minimum of:

(a) Five feet from any dwelling.

(b) Five feet from any property line.

(c) Five feet from any potable water line.

(d) Ten feet from any swimming pool constructed in the ground.

(e) Twenty-five feet from any natural or man-made drainage feature, embankment, or cut unless sufficient information is submitted with the application to show that the natural or man-made drainage course will not adversely affect the functioning of the effluent disposal field.

(f) Fifty feet from surface waters, lakes, creeks and rivers.

(g) Fifty feet from the sewage tank, grease trap, or septic tank to any public, private or individual potable water source.

(h) One hundred feet from the effluent disposal field to any source of potable water.

(i) Three hundred feet from a sink hole unless the owner submits a signed and dated report by a qualified geologist which indicates no danger of contamination of groundwater aquifers. The geologist shall attach, or have on file with the local health department, evidence of a degree in geology and a statement of relevant experience in onsite sewage systems and groundwater protection.

(2) No underground potable water lines or public utility cable, pipes, or lines shall be installed across or through the septic tank, grease trap or effluent disposal field.

(3) Sewage tanks or effluent disposal fields shall not be located under dwellings, buildings or other permanent structures.

(4) Effluent disposal fields shall not be located in depressed areas where surface water will accumulate. Provision shall be made to minimize the flow of surface water over an effluent disposal field.

(5) Effluent disposal fields shall not be located under driveways and parking areas unless all factors affecting the proper

functioning of the effluent disposal field are considered and resolved in the design by an engineer. Additional precautions shall be taken in the design of effluent disposal fields proposed to be installed under designated playgrounds and athletic fields.

420-3-1-.23 **Minimum Capacity, Design And Construction Of Septic Tanks.**

(1) All septic tanks shall be sized, designed, and constructed in accordance with the minimum standards as follows:

(a) The minimum hydraulic detention time shall be two days (48 hours) based on daily sewage flows. In no case shall the septic tank effective liquid capacity be less than 750 gallons.

(b) The effective liquid capacity of septic tanks for dwellings shall be based on the number of bedrooms proposed or that can be anticipated, and shall as a minimum comply with the following:

Number of Bedrooms	Effective Liquid Capacity (gallons)
2 or less	750
3 or 4	1,000
Each additional bedroom, add----------	250

Note: See Chapter 420-3-1-.27(2)(a) for residential spa or hot tub.

Capacities listed provide for a single system to serve combined household wastes from standard plumbing fixtures and appliances commonly used in residences, including garbage grinder, dishwasher, shower, bathtub, and automatic clothes washer. See Chapter 420-3-1-.27 for effluent disposal from clothes washing machines, residential spas, hot tubs or similar high water use fixtures.

(c) The effective liquid capacities for septic tanks to serve buildings other than dwellings shall be determined in accordance with sewage flows in Chapter 420-3-1-.12. In no case shall the septic tank effective liquid capacity be less than 750 gallons.

(d) Septic tanks shall have at least two compartments. The baffle wall forming the two compartments shall be so located that the inlet compartment shall comprise two-thirds of the effective liquid capacity of the septic tank.

(e) The inside length of the septic tank shall be one and one-half to two times the width. The minimum inside width of a septic tank shall not be less than three feet.

(f) The minimum effective liquid depth of a septic tank shall be three feet and the maximum effective liquid depth shall be six feet. Greater liquid depths require special consideration by the Board.

(g) A minimum air space of eight inches shall be provided between the effective liquid surface and the underside of the lid of the septic tank.

(h) Inlets to septic tanks shall be in accordance with requirements of local plumbing codes. When local plumbing codes do not exist, inlets may be in accordance with the Standard Plumbing Code or an ell extending below the liquid level. The invert of the outlet tee shall be at least three inches below the invert of the inlet. A tee shall be used for the outlet of the septic tanks, and the tee shall extend at least six inches above and 18 inches below the water level. Special outlet structures may be proposed by an engineer to the Board for consideration on special projects or for standard usage by the septic tank manufacturer or installer.

(i) The baffle wall forming the two compartments shall be as follows:

1. Type 1, a baffle wall, Appendix E, with an opening four inches wide extending the width of the baffle and located 12 inches below the water level measured to the top of the opening. Allowance will be made for adequate support of the upper portion of the baffle. A space of two inches shall be provided between the top of the baffle and the underside of the tank cover. Four-inch by six-inch openings may be provided in the bottom corners of the baffle wall; or

2. Type 2, a baffle wall, Appendix E-1, allowing a space of two inches between the top of the baffle and the underside of the tank cover and extending to a depth equal to one-half of the liquid level of the tank; or

3. Type 3, a baffle wall designed by an engineer.

(j) Baffle walls shall be securely and permanently fastened to the septic tank. All fasteners shall be of sound and durable material not subject to corrosion or decay.

(k) The construction of the septic tank shall be such as to assure it being watertight. The septic tank shall be constructed of sound and durable material not subject to corrosion or decay.

(l) Lids for septic tanks shall be watertight. Access inspection holes shall be provided over the inlet structure and outlet tee with a minimum 18-inch diameter or equivalent area opening. Access inspection holes in septic tanks for commercial, school and institutional use shall be brought to finished grade to enable effective removal of solids from all parts of the septic tank and shall be provided with a tight, secure, and watertight cover.

(m) The septic tank manufacturer shall design and construct all septic tanks, including the lids, to withstand the lateral and bearing loads to which the septic tank is expected to be subjected.

(n) The septic tank manufacturer shall provide all septic tanks and lids with adequate reinforcing to facilitate handling and to maintain structural integrity.

(2) Minimum Standards For Concrete Septic Tanks--Pending final development of American Society for Testing and Materials (ASTM) standards, concrete septic tanks shall meet the additional following requirements:

(a) Concrete septic tanks shall be precast or poured in place, designed by mix and water-cement ratio for minimum compressive strength of 3,000 pounds per square inch, and shall be free of voids or pits, with walls reasonably straight and plumb. Reinforcing steel shall not be exposed at any point or area on the septic tank.

(b) Lids for residential septic tanks shall be of one or more sections. In no case shall it be necessary to remove a lid or lids in order to gain access to the septic tank for inspection or maintenance purposes, and in no case shall inspection holes in Chapter 420-3-1-.23(1)(l) be omitted. Refer to Appendix E and E-1.

(c) All openings and lids shall be capable of being sealed in a manner that will prevent entrance of surface water and groundwater.

(d) Individual dwelling septic tanks shall have a minimum 6 x 6 x 10 (6-inch on centers of number 10 gauge) welded steel reinforcement in walls, bottoms and lids.

(e) Septic tanks shall be constructed in accordance with good construction practices.

(f) Poured in place septic tanks shall have minimum wall, bottom and lid thickness of four inches.

(g) Precast septic tanks with capacities of less than 1,200 gallons shall have minimum wall and bottom thickness of two inches and minimum lid thickness of three inches.

(h) Precast septic tanks with capacities of 1,200 gallons or more shall have minimum wall and bottom thickness of three inches and minimum lid thickness of four inches.

(3) Minimum Standards For Fiberglass and Plastic Septic Tanks--Fiberglass or plastic septic tanks shall meet Chapter 420-3-1-.23(1) and the following additional requirements:

(a) All plans, drawings, design standards and specifications shall be certified by an engineer with knowledge and experience with fiberglass and plastics.

(b) Septic tanks shall be of uniform thickness and free from defects that may affect their watertightness, serviceability or

durability. Completed septic tanks are to present a smooth finish both inside and outside, free of spalls, pits and honeycombs.

(c) Shell components for septic tanks may be welded together with an appropriate bonding material at the septic tank installation site.

(d) Test reports from an independent testing laboratory may be required by the Board to substantiate a manufacturer's tank design.

(e) All fiberglass and plastic tanks must be accompanied by clear and concise instructions from the manufacturer for the proper installation of the tank.

(f) Septic tanks shall be constructed in accordance with good construction practices.

(4) When two septic tanks are connected in series (Appendix C) to obtain the required capacity, the baffle wall shall not be used in the inlet tank, and the baffle wall shall remain in the second tank. No more than two septic tanks may be connected in series to obtain the required effective liquid capacity.

420-3-1-.24 **Minimum Requirements For Grease Traps**.

(1) Grease traps are not recommended for use in conjunction with individual dwelling septic tank systems. Commercial food preparation establishments shall install a grease trap on the kitchen and food preparation area waste line. Those establishments which, by the nature of their operations or the product proposed, produce little grease waste may be excluded from this requirement, as determined by the local health department.

(2) Grease traps, except as specifically detailed in this Chapter, shall be designed in accordance with current engineering standards or criteria published by the U. S. Environmental Protection Agency.

(3) Grease traps and effluent disposal fields shall be located in accordance with:

(a) Chapter 420-3-1-.22, and

(b) Grease traps shall be located at an accessible location outside the building where they may be easily inspected, pumped, and maintained.

(4) Grease traps shall be sized, designed, and constructed according to the following minimum requirements:

(a) The minimum effective liquid capacity of grease traps shall provide for no less than a two-day (48 hours) hydraulic

detention time for grease-laden waste generated in the kitchen or food preparation area.

(b) The minimum effective liquid capacity for grease traps shall be 1,000 gallons.

(c) The grease trap shall be provided with a "tee" on the outlet. The outlet "tee" shall extend at least six inches above and 18 inches below the liquid surface.

(d) The invert of the outlet shall be at least three inches below the invert of the inlet.

(e) Grease traps may have more than one compartment.

(f) Concrete grease traps shall meet the minimum requirements of Chapter 420-3-1-.23(1)(c), (e), (f), (g), (k), (m), (n), and Chapter 420-3-1-.23(2).

(g) Grease traps for commercial, institutional, school or similar establishments shall have inspection holes with covers, of sufficient design to prevent unauthorized entry, and extended to finished grade, over the inlet fixture and outlet tee.

(5) Effluent from grease traps may be disposed of as follows:

(a) The effluent from a grease trap may be connected to an effluent disposal field serving only the grease trap. The amount of effluent disposal field for the grease trap shall be determined from Appendix D, or

(b) The grease trap effluent may be connected to the house sewer.

420-3-1-.25 **Prefabricated Septic Tank And Grease Trap Permit.**

(1) No prefabricated septic tank or grease trap shall be installed other than a tank which has been permitted jointly by the Board and the local health department having jurisdiction in the county where the manufacturer is located. The permit number, issued by the Board for the specified tank, and the effective liquid capacity of the tank, shall be permanently engraved on the tank sidewall at the inlet end so that they are readily visible after installation and prior to covering.

(2) The following items pertain to the requirements for septic tank and grease trap manufacturers:

(a) Manufacturers of prefabricated tanks shall submit company name, owner's name, mailing address and telephone number and plans for each size and configuration of tank through the local health department to the Board. Such plans shall show all dimensions,

baffle walls, access inspection holes, inlet and outlet holes, and material specifications, including reinforcement material.

(b) Upon documented review by both the Board and local health department having jurisdiction, if the plans indicate that the tanks comply with the requirements of this Chapter, a permit number shall be issued by the Board for each series of approved septic tanks or grease traps.

(c) The Board shall maintain a current listing of manufacturers holding permits for approved tank series. The local health department shall maintain a current listing of permits issued within its jurisdiction, including issue and anniversary dates, and shall assure that current information is provided to the Board.

(d) The local health department shall be authorized to make periodic inspections to determine if the tanks or tank forms comply with the requirements of these rules.

(e) The local health department shall conduct at least two inspections of its tank manufacturers each calendar year.

(f) Any violations of the rules discovered by the local health department(s) or the Board may result in the revocation of the permit for a specified tank series. Permits are not transferable from one person to another, from one tank form or tank series to another, or from one site to another.

(3) The health department may require the manufacturer to demonstrate and certify, or have an engineer to certify, the watertightness, capacity, or structural integrity of any proposed or permitted septic tank or grease trap for compliance with the provisions of this Chapter.

(4) Permits shall be renewed annually during the anniversary month of initial issuance. The manufacturer shall submit to the local health department an application for renewal on a form provided by the Board. The local health department shall conduct an inspection of the tank manufacturer and act on the application for renewal within 30 days of receipt. This inspection qualifies as one of the inspections required by Chapter 420-3-1-.25(2)(e). In the presence of compliance with other provisions of these rules, this renewal procedure shall in no way restrict the continued manufacture of tanks while awaiting permit renewal.

(5) All prefabricated septic tank and grease trap manufacturers shall keep a record of all sewage tanks sold, and shall make such records available to the health department, when requested. Records shall include the following:

(a) Name and address of the person to whom the tank(s) was/were sold.

(b) Date of sale of the tank(s).

(c) Size of the tank(s), permit number(s) and number of tanks sold.

(d) The location of the buyer or place of installation if other than source provided in Chapter 420-3-1-.25(5)(a).

(6) No poured in place or otherwise constructed septic tank or grease trap shall be installed or constructed without prior review of design and construction plans by the local health department and Board, and subsequent permitting by the Board.

(7) The issuance by the Board or the local health department of an initial or renewal permit for an approved tank series shall in no way imply any guarantee of the onsite acceptability or approval of an individual tank.

420-3-1-.26 **Requirements For Aerobic Sewage Tanks**.

(1) The use of an approved aerobic sewage tank may be allowed on any lot or parcel where a septic tank is allowed by this Chapter.

(2) All aerobic sewage tanks to be used in Alabama must be approved by the Board. The Board will only consider approving those aerobic sewage tanks that meet the following:

(a) Currently listed by the National Sanitation Foundation (NSF) as having met the criteria established by NSF Standard 40; or

(b) Currently listed by other nationally recognized testing organizations as having been tested in accordance with and meeting National Sanitation Foundation Standard 40. Such listing would include developed criteria and procedures for periodic quality assurance inspection of the listed manufacturer's plant(s) and unit(s) equivalent to NSF.

(c) Aerobic sewage tanks which, by design and construction, can be equipped with the required visual or audible alarm system to respond to any electrical or mechanical failure or malfunction of the unit, or any component thereof. The alarm shall be capable of being placed in a location of easy recognition and shall be labeled "Alarm-Aerobic Sewage Tank Malfunction".

(3) Each person proposing to market aerobic sewage tanks within Alabama shall submit an application each year to the Board for each model to be marketed. The application shall include the following information:

(a) Model name and number, and the names, mailing addresses and telephone numbers of the manufacturer, authorized state dealer(s) and provider(s) of warranty and maintenance.

(b) NSF test report or equivalent, identifying unit tested, with any added devices, and results and conclusions of tests conducted.

(c) Evidence of authorization for use of NSF seal as a result of performance evaluation.

(d) Design hydraulic loading capacity (gallons per day) and organic loading rate or capacity.

(e) Copies of Limited Warranty, Initial Service Policy, and available Continued Service Policy.

(4) The dealer of any aerobic sewage tank installed within the State of Alabama shall provide to the owner the following:

(a) Name, address and telephone number of dealer selling the aerobic treatment tank and providing the warranty and maintenance.

(b) A written warranty.

(c) The necessary initial installation start-up and maintenance service.

(d) The availability of a continuing maintenance contract for the aerobic sewage tank.

(e) The requirements of paragraphs (a), (b), (c), and (d) of Chapter 420-3-1-.26(4) shall also apply to the auxiliary or peripheral equipment of the treatment and disposal system.

(5) Organic loading rates for aerobic sewage tanks shall be computed based on loading rates as specified in Appendix J.

(6) Aerobic sewage tanks having Board approval on the effective date of this Chapter shall be considered approved for one year from the effective date of this Chapter, providing that the initial conditions of approval have not, or do not, change(d).

420-3-1-.27 **Effluent From Clothes Washing Machine And Residential Spa.**

(1) Clothes Washing Machine Effluent--The effluent from a clothes washing machine for a single family dwelling shall be disposed of by one of the following methods:

(a) Discharge into the building drain or house sewer; or

(b) Discharge into a separate effluent disposal field. The amount of field line for a separate effluent disposal field for the washing machine shall be no less than one-fifth of the effluent disposal field, as determined from Appendix D. The primary effluent disposal field may be reduced by the amount used for the

washer line, not to exceed one-fifth of the total required for the primary effluent disposal field.

(2) Residential Spa, Hot Tub and Other Similar Fixture--The effluent from a residential spa, hot tub and other similar fixture for a private dwelling shall be disposed of by one of the following methods:

(a) Discharge into the building drain or house sewer. The septic tank effective liquid capacity in Chapter 420-3-1-.23 shall be enlarged by a minimum of 500 gallons to accommodate each specific spa or hot tub proposed for use. The effluent disposal field as required by this Chapter shall be increased by 50 percent to accommodate such fixtures; or

(b) Discharge into a separate effluent disposal field. The amount of field line for a separate effluent disposal field to serve such fixtures shall be determined by multiplying the actual flow data based on design capacity by the factor from the column in Appendix D labeled "square feet per gallons per day". Where actual flow data is not known, the minimum amount of disposal field shall not be less than one-half of the primary effluent disposal field, as determined from Appendix D. These effluent disposal fields are to be in addition to all other disposal fields serving the private dwelling.

420-3-1-.28 **Amount Of Effluent Disposal Fields.**

(1) The minimum amount of the effluent disposal field shall be determined by using Appendix D, which provides the minimum requirements for single family dwellings and other establishments based on percolation rates.

(2) The minimum total length of the effluent distribution line for single family dwellings shall be calculated by multiplying the number of bedrooms by the factor from the column labeled "linear feet per bedroom" for various trench widths, which is based on the column labeled "square feet per bedroom".

(3) The minimum total square feet of effluent disposal field for establishments other than single family dwellings shall be calculated by multiplying the established maximum daily sewage flow by the factor from the column labeled "square feet per gallons per day."

(4) Except for separate effluent disposal fields for clothes washing machines from single family dwellings, all effluent disposal fields shall have a minimum of 125 square feet of effluent disposal field, regardless of sewage flow or percolation rates.

(5) The eight-inch and ten-inch diameter gravel-less effluent distribution lines are equivalent to 24-inch- and 36-inch-wide gravel trenches, respectively.

420-3-1-.29 **Requirements For Effluent Disposal Field Layout And Construction.**

(1) The effluent disposal field shall be of the level header system or the serial distribution system, depending on the topographic characteristics of the site, as follows:

(a) Level Header System. On relatively flat terrain where minimum and maximum effluent distribution trench depths can be maintained on the same elevations, all effluent distribution trench bottoms shall be installed at the same elevation and on a level grade as shown in Appendix G.

1. The header shall be installed level and at the same elevation as the effluent distribution line.

2. The maximum length of an effluent distribution line and trench is 100 feet.

(b) Serial Distribution System. When a level header system cannot be installed, a system of serial distribution following land contours shall be used, with each trench or set of trenches and distribution pipe constructed level, but at different elevations after each spillover, as shown in Appendix F.

1. Effluent shall enter the uppermost effluent distribution line through a watertight effluent line, terminated at any point in the trench with a tee laid level.

2. Adjacent effluent distribution lines shall be connected by means of crossover lines, constructed in such a manner that each trench is filled with effluent to the full depth of gravel before effluent flows through the crossover line to the next lower trench.

3. The invert of any crossover line must be at least four inches lower than the invert of the septic tank effluent line.

4. At the point where a crossover line leaves a lateral, the trench for the crossover line shall be dug no deeper than the top of the gravel in the preceding trench, so that an undisturbed block of earth will remain in place for the full depth of the gravel. Crossover lines shall be laid on undisturbed earth and shall be separated as far apart as possible to prevent short-circuiting of effluent. Crossovers shall be constructed as shown in Appendix F-2.

5. The maximum length of an effluent distribution line and trench is 100 feet when measured from crossover. A minimum of one crossover from each effluent distribution line and trench is required for a distribution line and trench less than 100 feet in length, and at least two crossovers for an effluent distribution line and trench 100 feet in length or longer.

(2) Header Line--A header line may be used to connect the effluent line to the required effluent distribution lines in the effluent disposal field, except in instances where serial distribution is to be used. A header line shall comply with the following:

(a) The invert of the header shall be at least four inches below the invert of the septic tank outlet.

(b) The header line shall be level.

(c) Chapter 420-3-1-.29(3).

(d) Chapter 420-3-1-.29(4), except .29(4)(c).

(e) The header line shall be counted as part of the required effluent disposal field.

(f) Distribution boxes may be used to connect the effluent line to the effluent distribution lines. Nonperforated rigid pipe shall exit the distribution box for a minimum of five feet on level grade or equal grade before the effluent distribution line (perforations) begins, as shown in Appendix M.

(3) Effluent Distribution Trenches--The effluent distribution trenches which accept the effluent from the effluent distribution lines shall meet the following:

(a) The width of the bottom of the trench shall not be less than 18 inches nor more than 36 inches. The local health department may approve wider trenches in special circumstances, such as available area, when repairing an existing onsite sewage disposal system.

(b) The minimum distance between effluent distribution trenches shall be five feet (measured from closest trench side wall to side wall of adjacent trench).

(c) The effluent distribution trench bottom shall be level.

(d) For conventional systems other than shallow placement and gravel-less seepage, the effluent distribution trench minimum depth shall be 22 inches, including a minimum soil backfill of 12 inches over the pipe in the effluent distribution trench. The maximum effluent distribution trench depth shall be 42 inches. Shallow placement and gravel-less seepage system criteria shall be as prescribed in Appendices G-2 and K, respectively.

(e) The maximum length of an effluent distribution trench in an effluent disposal field shall be 100 feet, except as provided in serial distribution systems Chapter 420-3-1-.29(1)(b).

(4) Effluent Distribution Lines--The effluent distribution lines shall meet the following:

(a) The pipe shall conform to applicable ASTM standards and must be marked with ASTM specification numbers which it meets.

(b) Minimum grade of effluent distribution lines--level grade.

(c) Maximum grade of effluent distribution lines--two inches per 100 feet.

(d) Minimum size of effluent distribution lines--four inches, inside diameter.

(e) Effluent distribution lines shall be, but are not limited to, rigid or semirigid perforated plastic pipe with a minimum exfiltration area of 2.2 square inches per foot of pipe. The exfiltration area shall consist of openings located uniformly on one-half the circumference of the pipe. The opening shall be of such size, shape and uniformity as to preclude sealing by solids or entrance of stones surrounding the pipe. Pipes with slits, such as agricultural drain pipe, are not approved for use as effluent distribution lines.

(f) Perforated pipe in the effluent distribution trenches shall be installed with the perforations turned down.

(g) The effluent distribution lines shall be installed in clean, coarse gravel or stone free from fines, dust, sand, or clay and ranging in size from 1/4 to 2 1/2 inches. The gravel or stone shall extend at least six inches below the lowest point of the effluent distribution lines and at least level with the top of the effluent distribution lines.

(h) The gravel or stone surrounding the effluent distribution lines shall be covered with untreated building paper, heavy kraft paper, geotechnical fabric, or other material approved by the Board, and then backfilled with at least 12 inches of earth cover.

(i) The use of materials impervious to air and water, such as plastic sheeting, polyethylene or similar materials, is prohibited as a cover material over the stone in the effluent distribution trench.

(j) Standard manufactured fittings compatible with the pipe shall be used to connect all pipes within an effluent disposal field.

(k) Gravel-less seepage systems may be used as effluent distribution lines, provided that the system distribution trench and hardware construction conforms to requirements found in Appendix K and to the manufacturer's recommendations for usage. When these systems are used, they shall include the manufacturer's fittings and end caps.

(5) Effluent Disposal Field Dosing Requirements--Effluent disposal fields requiring more than 1,000 linear feet of effluent distribution line shall be divided into separate and equal effluent disposal fields containing not more than 1,000 linear feet of effluent distribution line trench in each field, in accordance with the following:

(a) Each effluent disposal field shall be dosed not more than four times per day.

(b) Each dose shall not be greater than 70 percent of the volume of the perforated pipe in the section or sections of the effluent disposal field into which the pumping tank is to discharge.

(c) Dosing shall be accomplished through the use of effluent pumps from a properly sized and designed pumping tank separate from the septic tank.

(d) The use of low pressure effluent distribution lines, placed in minimum 12-inch-wide trenches with a minimum of six inches of gravel, are encouraged as a means of equalizing the distribution of effluent over the effluent disposal field. The use of low pressure effluent distribution lines requires design by an engineer, using a nationally recognized method.

(6) Shallow Placement--Where there is suitable soil and the limiting zone (such as water table or bedrock) is less than the minimum requirements of this Chapter, a shallow placement system may be approved. A shallow placement system shall meet the profile specifications of Appendix G-2, and the following:

(a) The effluent disposal field trench bottoms shall be constructed at a uniform depth of no less than 12 inches and no more than 22 inches from original grade.

(b) The minimum depth from a trench bottom to the limiting zone shall be 18 inches.

(c) The effluent disposal field shall be covered above original grade by a minimum of 12 inches of suitable soil, which shall overlap the entire effluent disposal field by at least three feet on all sides. The base-to-height ratio of the overlap shall be 3:1, and the slope shall be stabilized against erosion with sod, grass, berm netting, or similar biodegradable material.

420-3-1-.30 **Engineer Required For Certain Onsite Sewage Disposal Systems**.

(1) The method of sewage treatment and the design of the onsite sewage disposal system shall be determined by an engineer for the following:

(a) All alternative onsite sewage disposal systems, Chapter 420-3-1-.31;

(b) Onsite sewage disposal systems with design sewage flow of more than 1,200 gallons per day per system;

(c) Any onsite sewage disposal system utilizing complex mechanical, electrical or electronic devices;

(d) Low pressure effluent distribution lines that provide uniform distribution over an effluent disposal field, including but not limited to Chapter 420-3-1-.29(5)(d);

(e) Septic tank baffle wall design as described in Chapter 420-3-1-.23(1)(i)3;

(f) Fiberglass and plastic septic tanks as described in Chapter 420-3-1-.23(3);

(g) Effluent disposal fields to be located under driveways and parking areas as described in Chapter 420-3-1-.22(5);

(h) Determining effective liquid capacities for septic tanks documented from actual meter flows, Chapter 420-3-1-.12(1);

(i) Effluent disposal fields requiring more than 1,000 linear feet of effluent distribution line as described in Chapter 420-3-1-.29(5);

(j) Wet season soil testing as described in Chapter 420-3-1-.13(2);

(k) Connection of more than one dwelling to an onsite sewage disposal system as described in Chapter 420-3-1-.46;

(l) Recreational campgrounds and similar projects as described in Chapter 420-3-1-.47;

(m) Systems as outlined in Chapter 420-3-1-.20(1)(c);

(n) Special septic tank outlet structures as provided in Chapter 420-3-1-.23(1)(h);

(o) Curtain or French drain systems that use drain tile or other material to lower a high groundwater under the effluent disposal field; and

(p) Other provisions of this Chapter.

420-3-1-.31 **Alternative Onsite Sewage Disposal Systems**.

(1) Proposals for alternative systems as defined in Chapter 420-3-1-.03(1) of these rules may be considered by the local health department, and as provided herein by the Board, when the success

of the system would provide satisfactory treatment and disposal of sewage or effluent, or solve existing sewage problems.

(2) An Application For A Permit To Install An (alternative) Onsite Sewage Disposal System shall be prepared and certified in writing by an engineer to the local health department, and shall include the following:

(a) The application, plot plan, construction plan and information required in Chapter 420-3-1-.16 and Chapter 420-3-1-.17 when applicable; and

(b) The standard for approval by these rules, if any, that cannot be met and the reasons therefore; and

(c) All other details pertinent to the design, construction, installation, operation, restrictions, conditions, use and maintenance of the alternative system as deemed necessary by the design engineer; and

(d) Written assurance from the owner that the alternative system will be installed, and the completed installation will be certified by an engineer; and

(e) Written assurance from the owner that adequate maintenance will be provided for any alternative system installed.

(3) In considering, designing or installing an alternative system, the owner and the engineer may be guided by, but not limited to, the methods outlined in Appendix H. Proposals varying the criteria and design of published and generally accepted alternatives shall be submitted as experimental systems per Chapter 420-3-1-.32.

(4) Proposals for alternative systems not outlined in Appendix H shall be submitted through the local health department to the Board for consideration. The local health department shall provide written comments of its review and any recommendations it may have to the Board.

(5) No alternative system shall be installed without written approval from the local health department, and when specified by the Board. Permitting actions of the local health department shall be as provided in Chapter 420-3-1-.18.

(6) The alternative system shall not be installed or used until:

(a) The "Covenant(s) Running With The Land" or the equivalent as determined by the local health department is/are signed and recorded in the office of the Probate Judge; and

(b) The Approval For Use Of Onsite Sewage Disposal System, in accordance with Chapter 420-3-1-.20, is issued to the owner by the local health department or the Board, where applicable.

420-3-1-.32 **Experimental Systems.**

(1) Any experimental system which the Board may consider shall be used only on a lot which will support a conventional onsite sewage disposal system. Such submittals shall include research data, approvals by other agencies or states, and designs to support such systems, along with proposals for the evaluation of such systems after installation.

420-3-1-.33 **Abandonment Of Septic Tanks, Aerobic Sewage Tanks And Sewage Pumping Tanks.**

(1) Abandonment of Septic Tanks--When use of a septic tank is discontinued following connection to a sanitary sewer or the condemnation of property, or when the septic tank system cannot be made to comply with these rules, the septic tank shall be abandoned and its further use prohibited. An abandoned septic tank shall be pumped out, and the tank shall be filled with sand or soil.

(2) Abandonment of Aerobic Sewage Tanks or Sewage Pumping Tanks--When use of an aerobic sewage tank or sewage pumping tank is discontinued, the aerobic sewage tank or sewage pumping tank shall be abandoned as follows:

(a) In accordance with 420-3-1-.33(1), as for septic tanks; or

(b) The aerobic sewage tank or sewage pumping tank shall be pumped by a permitted sewage tank pumper and the unit(s) removed from the premises. The hole left by the removal of an aerobic sewage tank or sewage pumping tank shall be filled with sand or soil.

420-3-1-.34 **Repair Of Onsite Sewage Disposal System.**

(1) Before any repairs to an existing conventional, alternative or experimental onsite sewage disposal system may be undertaken, the person requesting or engaged in the repairing of onsite sewage disposal systems must possess a valid Permit To Install (Repair) An Onsite Sewage Disposal System, issued by the local health department. Verbal authorization by the local health department specifying that repair work may be performed shall be considered as a permit, providing that proper documentation is on file with said health department regarding repair work to be performed. Verbal authorization shall be documented in the file.

(2) It shall be the duty and responsibility of the onsite sewage system installer to repair each onsite sewage disposal system in accordance with all health department rules.

(3) After repairs to any onsite sewage disposal system have been completed, the repaired portion of any onsite sewage disposal system shall not be covered without authorization by the local health department.

(4) A percolation test is not required for repair of an onsite sewage disposal system. Soil borings may be used to determine the best area for the repair work.

(5) In addition to the provisions of paragraphs (1) through (4) immediately preceding, before final repairs to an existing alternative or experimental system may be undertaken, the system repairer shall provide a statement as to any factors contributing to the system failure, and shall submit a repair plan to address the cause of failure. The local health department may require certification of the plans and drawings by an engineer, as necessary. Subsequent to repair, the system repairer shall provide a certification by a plumber, electrician, engineer, or other professional, as appropriate, that the final repairs were completed in accordance with the approved repair plan and the applicable portions of the onsite sewage rules.

(6) Nothing in this rule shall prevent or hinder the owner or user from taking prompt and recurring action to have the affected sewage tank pumped by a permitted pumper while repairs are being made or a repair plan is being developed and acted on.

420-3-1-.35 **Non-Waterborne Systems: Pit Privies And Portable Toilets; And Holding Tanks.**

(1) In remote areas of the State or certain transient or temporary locations, the use of non-waterborne systems such as sanitary pit privies, portable toilets and related sewage disposal systems may be approved. Due to their limited capacities, these systems are restricted to receive excreta only. Since such systems require regular service and maintenance to prevent their malfunction and overflow, they shall only be used where the local health department approves such use. Typical locations of non-waterborne systems are rural camps, seasonal recreation areas, construction sites, public gatherings and similar transient or temporary locations. Conditions which may justify consideration of these systems include, but are not limited to, the following:

(a) Soil and site conditions are unsuitable for conventional or alternative sewage disposal systems.

(b) Water under pressure is not available.

(2) Sanitary Pit Privies--Pit privy installation may be permitted only in remote locations, but in no case shall such installations be permitted for buildings with indoor plumbing and where water under pressure is located in the structure.

(a) Sanitary pit privies shall be located in accordance with the requirements of Chapter 420-3-1-.22.

(b) The excavation or pit shall be at least 3 1/2 feet square, five feet deep below ground surface, fitted with restraining curb to prevent caving, and containing adequate openings to allow liquids to seep into surrounding soil.

(c) The pit shall be located or constructed on a mound to provide drainage of roof water away from the pit to prevent erosion or caving.

(d) The floor shall cover the pit tightly to prevent entrance of flies.

(e) The floor shall rest on a suitable foundation to prevent settling, sagging, erosion or caving.

(f) The seat riser shall be joined to the floor to form a watertight and insect-tight joint.

(g) The foundation, floor and seat riser shall be of concrete or other impervious materials that will not warp, crack or develop openings sufficiently large for the entrance of insects or leakage of excreta.

(h) The floors and seat risers shall not be constructed of wood.

(i) The riser shall be fitted with a seat and a self-closing cover to effectively prevent the entrance of flies when the privy is not in use.

(j) In the absence of water under pressure, graywater shall be disposed by an effluent distribution line of 50 linear feet per dwelling.

(k) Sanitary pit privies are onsite sewage disposal systems as defined in Chapter 420-3-1-.03(37), and shall not be constructed or used without a permit, the limiting terms, conditions and effective period of which shall be clearly defined.

(3) Portable Toilets--Local health departments may approve portable toilets for construction sites, revivals, encampments and other transient locations where numbers of people congregate for periods of short duration for a specified length of time, provided that construction, maintenance, and utilization conform to requirements of this part.

(a) Portable toilets shall be portable and self-contained.

(b) The waste receptacle shall be of non-absorbent, acid resistant, noncorrosive, easily cleanable material, watertight, and fly-tight.

(c) Floors and interior walls shall have a non-absorbent finish and be easily cleanable.

(d) The number of toilet seats provided shall be in compliance with the Standard Plumbing Code.

(e) The units shall be provided with toilet tissue, and units for male use provided with urinals.

(f) A contract for pumping shall be provided with a firm permitted under Chapter 420-3-1-.36. Pumping shall be at such frequency so as to prevent public nuisances or hazards. The local health department may specify the frequency of pumping.

(g) The units shall be placed on a firm base to prevent tilting.

(h) The units shall be kept clean and deodorized to prevent a nuisance due to odor, flies, mosquitoes or rats.

(i) The units shall be provided with a self closing door and a privacy latch.

(4) Holding Tanks--Holding tanks to be used with dwellings shall be administered in accordance with Chapter 420-3-1-.06, and, if granted, shall comply with the design and criteria of Chapter 420-3-1-.35. Local health departments may permit holding tanks to be used with buildings other than occupied dwellings. When permitted, holding tanks shall be used on a temporary basis with or without available water under pressure. The term temporary is understood to mean any period of time, so long as no other reasonable solution exists. The term reasonable refers to economic and technical feasibility, and sole discretion in the final determination of what is reasonable shall rest with the health department.

(a) Holding tanks are onsite sewage disposal systems as defined in Chapter 420-3-1-.03(37), and shall not be installed or used without a permit, the terms, conditions and effective period of which shall be limited solely to the temporary use of the holding tank.

(b) Since holding tanks are temporary, all permanent options shall be evaluated and found to be not reasonable before a holding tank can be approved. The health department may reassess all available options from time to time. If a permanent system is determined to be reasonable, then a permit shall not be approved or continued for a holding tank.

(c) All holding tanks shall be constructed in accordance with good construction practices and the provisions of Chapter 420-3-1-.23 which apply to the material used for construction, and shall be obtained from a manufacturer holding a permit issued under Chapter 420-3-1-.25.

(d) Holding tank capacity shall be calculated using the sewage flows table in Appendix A of these rules. The tank shall be sized to incorporate a 25 percent addition of projected sewage flows as a buffer in case of weather conditions, temporary unavailability of a sewage tank pumper, and other adverse conditions. Tanks at 75 percent of overflow capacity shall be considered to be full.

(e) Tanks shall be fitted with easily accessible inspection holes for maintenance and pumpage. The inlet fixture and all openings shall be properly sealed to assure water tightness of the tank. Baffle walls are not required in holding tanks.

(f) All holding tanks shall be equipped with a visual or audible alarm for high water alert, and the alarm point shall be no higher than two-thirds (67%) of tank overflow capacity. The alarm shall be placed in a location of easy recognition and shall be labeled "Alarm-Sewage Holding Tank."

(g) Where water under pressure is present, low flow water fixtures shall be used in connection with a holding tank.

(h) Holding tanks shall be maintained and pumped at such frequency so as to prevent public nuisances or hazards. The minimum frequency for pumping shall be weekly; sewage flow and capacity of the tank may dictate more frequent pumping.

(i) The conditions of use which may be prescribed by the local health department on the Permit To Install And Approval For Use shall include, but not be limited to, the requirement that the owner/user:

1. Contract with a sewage tank pumper permitted under Chapter 420-3-1-.36. The contract shall provide that the pumper maintain and make available to the health department a record of all pumping activities at the site, as set forth in Chapter 420-3-1-.36(1)(g).

2. Deliver to the local health department on a monthly basis copies of the sewage tank pumper's weekly bills, statements, or invoices.

3. Provide written authorization to allow the health department to initiate required maintenance at the owner/user's expense if noncompliance with these rules or legal notices results in an imminent or existing health hazard.

420-3-1-.36 **Sewage Tank Pumping Permit**.

(1) Any person proposing to engage in sewage tank pumping shall obtain a permit or permits issued by the local health department(s) in accordance with the requirements listed below. Local health departments may honor a permit issued by another local health department.

(a) An application on forms provided by the Board shall be submitted to the local health department(s) and shall state the business name and address; the name, address and telephone number of the applicant; the manner in which the contents are to be collected, transported and disposed of; the type of waste to be hauled; the location of all disposal points and the type of waste disposal at each point; and the tag number, state of registration and sewage tank capacity (gallons) of each vehicle.

(b) All vehicles used in the collection, removal, transportation or disposal of septage shall display in at least two-inch high letters in a conspicuous place on both sides of the truck cab the name and address of the firm under which the business is conducted, and the permit number(s) and county(ies) of issuance.

(c) Carrier tanks used for the collection, removal, transportation, or disposal of sewage tank contents shall be fully enclosed, leakproof, flyproof, and so operated as to prevent spillage or leakage during collection, removal, transportation and disposal. The carrier tank, when used for holding septage, shall have a minimum effective holding capacity of 1,250 gallons.

(d) The carrier tank aboard the vehicle and used for collecting, removing and transporting the contents of sewage tanks shall be conspicuously and permanently labeled "FOR SEWAGE ONLY" at or near the inlet and outlet valves of the tank. The use of the carrier tank for any other purpose is prohibited. All required lettering shall be a minimum of three inches high.

(e) The equipment, implements, containers or other devices used for the collection, removal, transporting or disposal of sewage tank contents shall be maintained and operated at all times so as to prevent insanitary or obnoxious conditions.

(f) Each person engaged in sewage tank pumping shall have facilities available for the flushing, cleaning and deodorizing of sewage tanks, carrier tanks and the required cleaning implements and equipment. In these operations, the following practices shall be observed.

1. Wastewater resulting from the flushing and cleaning shall be disposed of by an onsite sewage disposal system designed for such activity or by a sanitary sewer system when available.

2. Odor controlling substances may be left in the sewage tank, carrier tank or other sewage tank cleaning implement or equipment, but in no case shall such substances be used in lieu of proper cleaning.

(g) All sewage tank pumping contractors shall keep a record of all facilities pumped or cleaned and shall make such records available to the local health department(s) when requested. Records shall specify the following:

1. Name and address of the person for whom the wastes were removed.

2. Date of completion of the operation.

3. Size of the tank and the amount, in gallons, of the waste removed.

4. The location of the disposal site.

5. The method of final disposal.

(h) The septage shall be disposed of in a manner that will protect the public health and avoid nuisance conditions. Raw sewage, such as that removed from holding tanks and portable toilets, shall be disposed of only by an approved sanitary sewer system; however, septage may be disposed of by any of the following approved methods:

1. Discharging the contents into a public sewer inspection hole or at an acceptable point in a sewage treatment plant, provided that the written approval of the responsible official of the governmental entity or other entity owning or operating the public sewer system or sewage treatment plant is received by the pumper prior to the use of such disposal facilities. A copy of such approval must be provided to the local health department with the sewage tank pumping permit application.

2. Surface discharge following adequate treatment, provided that a discharge permit is received from the Alabama Department of Environmental Management. A copy of such approval must be provided to the local health department with the sewage tank pumping permit application.

3. Land application of septage may be considered by the Board, when proper application for permit is made by the owner. Such applications shall be submitted through the local health department to the Board under the provisions of the Solid Waste Collection and Disposal Rules, Alabama Department of Public Health, Chapter 420-3-5.

(i) The local health department shall submit to the Board a copy of each pumping permit and land application permit issued.

(2) The local health department(s) shall, prior to the issuance of a permit(s) to pump sewage tanks and as often as necessary thereafter, inspect, or cause to be inspected, all sewage tank cleaning equipment, implements, containers or other devices used in the collection, removal, transportation or disposal of septage, as well as septage disposal sites and methods, to ensure that the above mentioned items are used, maintained and operated in compliance with all applicable provisions of these rules and do not create a condition that is, or is likely to become, a nuisance or threat to public health. Where more than one local health

department is affected, cooperative understandings on the inspection process may be mutually honored.

(3) If the application is approved, a permit on a form provided by the Board, with identifying number, shall be issued by the local health department(s) having jurisdiction over the county where the sewage tank pumper pumps and discharges.

(a) Permits shall not be transferable, and shall become invalid upon a change of ownership or upon suspension or revocation.

(b) A permit may be denied, suspended or revoked when the local health department determines that the operation is not being conducted in accordance with these rules or conditions of the permit.

(c) The local health department shall not issue a Sewage Tank Pumping Permit under this Chapter unless an approved source and method of septage disposal is provided.

(4) Permit renewal is required each year between November 1 and December 31. Application for permit renewal shall be in accordance with Chapter 420-3-1-.36.

(a) The local health department shall submit to the Board a copy of each renewal permit issued under this rule.

420-3-1-.37 **General Provisions For Subdivisions**.

(1) Any person proposing to develop a subdivision or an addition to a subdivision utilizing onsite sewage disposal systems shall submit both a "Preliminary Subdivision-Water Supply, Onsite Sewage Disposal and Solid Waste Management Report" and a "Final Subdivision-Water Supply, Onsite Sewage Disposal and Solid Waste Management Report", hereinafter referred to as the Preliminary Report and Final Report, respectively, on forms provided by the Board for review by the local health department and subdivision program supervisor.

(2) No Final Report shall be reviewed by the local health department prior to the review of the Preliminary Report by the local health department. The subdivision program supervisor may waive the requirement for a Preliminary Report when a valid Preliminary Report covering the proposed property, properly acted upon by the health department, is on file with the local health department.

(a) The local health department shall submit to the Board a copy of each subdivision Final Report.

(3) Reports shall be signed in all appropriate places by the sponsor, developer, engineer, land surveyor, and soil classifier.

A representative may sign for the sponsor provided a power of attorney authorizing such representations is filed with the report.

420-3-1-.38 **Exception To The Subdivision Rule.**

(1) For the purposes of these rules, the following activities shall not be considered as creating a subdivision:

(a) Dividing a parcel of land for the purpose of a bona fide gift.

(b) Dividing a parcel of land under the provisions of a will or under the laws of intestate succession.

(c) The mere sale, lease or rental of land, providing that the sale, lease or rental does not take place in conjunction with building development.

(d) Dividing parcels of land under an exemption found in Code of Ala., 1975, Sec. 22-26-7.

(e) The division of parcels of land into lots or tracts greater than five acres in size.

420-3-1-.39 **Subdivision Approval Required.**

(1) No person shall commence any act which would constitute building development on any subdivision utilizing onsite sewage disposal systems prior to receiving the required approval. Nothing in this Chapter shall be construed to prevent the making of soil test borings or any other preliminary testing and inspection.

420-3-1-.40 **Individual Onsite, Public and Subdivision Sewage Disposal Systems And Solid Waste Management Policies.**

(1) It is the policy of the Board that connection to a public sewer system or subdivision sewer system is recommended when a proposed subdivision is accessible to such existing sewer system.

(2) It is the policy of the Board that connection to a public water system is recommended when a proposed subdivision is accessible to such public water system.

(3) It is the policy of the Board that all subdivisions shall plan for and have a solid waste management methodology approved by the local health department prior to any act constituting building development or otherwise creating a subdivision.

420-3-1-.41 **Preliminary Subdivision Submittal.**

(1) Preliminary Subdivision Submittal. The Preliminary Report and all accompanying materials shall be submitted in duplicate to the local health department and then to the subdivision program supervisor for review. At least one complete

submittal must contain all original signatures and seals. If all required information is not provided with the submittal, the applicant shall be notified in writing and review withheld until the complete information is received.

(2) Engineer. The developer shall employ an engineer to determine the proper and adequate method of water supply, sewage disposal and solid waste management for the proposed subdivision.

(3) Engineering Information. The engineer shall complete Part II of the Preliminary Report and shall specify and certify the best method of sewage disposal, water supply and solid waste management for the proposed subdivision.

(4) Accompanying Materials. The Preliminary Report shall be accompanied by the following:

(a) A vicinity map.

(b) A soil survey or soils map conducted according to the National Cooperative Soil Survey, which includes the procedures set forth in U.S. Department of Agriculture Handbooks 436 (Soil Taxonomy), Title 430 Soil Survey Manual and the National Soils Handbook, and a map designating the general location of each kind of soil recognized and a rating of each kind of soil in terms of its limitations for use as a septic tank effluent disposal field. The terms slight, moderate and severe are to be used for rating the soils. For those soils with moderate or severe ratings, major soil factors limiting their use shall be stated.

1. Sponsors and developers are encouraged to have a soils map, by actual site investigation, prepared of the property proposed for development where onsite sewage disposal systems are planned. When a modern published Soil Survey does not exist, a soils map is required.

(c) A boundary plat certified by a land surveyor of the area proposed to be developed which includes a legal description and shows appropriate drainage patterns or contours. The plat shall have inscribed upon it the following:

1. The soil boundaries and soil type(s) as described in the soil survey or soils map;

2. Any structures, wells, or any other improvements existing in the proposed subdivision;

3. The identity of all abutters;

4. All adjoining subdivisions; and

5. The location of all surface waters, water storage easements, flood easements, wells, sinkholes, caves, landfills, open or covered dump areas, springs, wet weather springs, flood

prone areas and surface mining operations on the property being subdivided, and location of those within 100 feet of the subdivision.

(5) Notice of Recommendations. After all necessary information has been submitted and reviewed, Part III of the Preliminary Report shall be prepared by the local health department and the subdivision program supervisor, giving recommendations regarding the planned methods of sewage disposal, water supply and solid waste management selected by the engineer. Following review, the local health department shall use the Preliminary Report form to notify the applicant of recommendations regarding the proposed subdivision.

420-3-1-.42 **Final Subdivision Submittal.**

(1) Final Subdivision Submittal. The Final Report and all accompanying materials shall be submitted in duplicate to the local health department and then to the subdivision program supervisor for review. At least one complete submittal must contain all original signatures and seals. The Final Report should be submitted well in advance of the anticipated construction date, since any lack of necessary information could cause additional delays. If all required information is not provided with the submittal, the applicant shall be notified in writing and review withheld until the complete information is received.

(2) Attachments. The Final Report shall be accompanied by the following:

(a) A vicinity map.

(b) A subdivision plat showing:

1. The name of the subdivision.

2. A layout drawn to scale of proposed lots, streets and easements which shows the location of all existing and proposed wells. The scale of all plats shall be adequate to provide all information in a clear and legible manner. The suggested scale range lies between 1 inch = 50 feet and 1 inch = 150 feet.

3. Actual lot sizes and lot sizes excluding easements, rights of way and other similar areas.

4. Phases, sectors, block and lot numbers and street names or identification.

5. Topography of the area with contour intervals sufficient to show existing and proposed drainage, existing grades and finished grades where changes are anticipated.

6. An adequate plan showing flood prone areas, existing and proposed drainage, and easements for surface or subsurface

drainage. Normal and flood elevations of lakes shall be clearly and accurately shown.

7. All percolation tests and soil borings performed in the subdivision, located accurately and properly identified.

8. Stabilized percolation rates given in minutes per inch, date of tests and depth of holes.

9. A specific description of soils taken from soil borings.

10. Certification of all soil tests by the engineer, land surveyor or soil classifier.

11. Layout of the water distribution system, when proposed.

12. When a subdivision includes land within a water storage easement or flood easement, a letter shall be required from the easement holder addressing the proposed development's compliance with any rules or guidelines of the easement holder.

(3) Public Water Systems. The following information shall be furnished when a subdivision is to be submitted for approval where the proposed source of water supply will be taken from an approved public water system:

(a) Layout of the water distribution system showing the size of all lines within the subdivision. The distribution system plan shall be certified by an engineer.

(b) A letter from the public water system or their consulting engineer indicating approval of the water distribution system and future acceptance of the project when completed.

(c) A letter from the public water system supplying the water or from their engineer showing proof that a satisfactory amount of water pressure will be available to this subdivision.

(d) The local health department shall not approve or disapprove the engineer's layout of the water distribution system. Rather, the intent is to assure that all areas of the subdivision are served by the source of water as proposed.

(4) Solid Waste. All proposed subdivisions must include certification in writing from the agency having jurisdiction over solid waste collection and the approved solid waste contractor, where applicable, stating that the proposed subdivision will be served by a permitted scheduled solid waste service. Proposed use of individual exception certificates for solid waste management for the proposed subdivision shall not be acceptable when a solid waste collection service is available as determined by the local health department.

(5) Approval or Disapproval of Subdivisions. After all necessary information has been submitted and reviewed, Part III of the Final Report shall be completed by the local health department and the subdivision program supervisor. The Final Report shall be returned to the applicant with written notice of actions taken, as follows:

(a) Approve the Subdivision Final Report as submitted and with conditions as needed;

(b) Approve the Subdivision Final Report, with exceptions to specified lot(s). Lot(s) not being approved or withheld pending a specified action must be clearly identified in writing as to specific conditions cited in this Chapter causing such action to be taken.

(c) Disapprove the Subdivision Final Report, giving specific conditions and citing applicable provisions of this Chapter.

(d) Local health departments may formulate agreements with various local governmental agencies with regard to coordinating efforts for subdivision review and approval.

(e) When an indication of local health department approval is required prior to the subdivision being recorded in the office of the Judge of Probate, a statement similar to the following is recommended to be affixed to the plat prior to signing:

> "This subdivision meets the approval of the (Name of County) County Health Department subject to certain conditions of approval and/or lot deletions on file with the said health department, which conditions are made a part of this approval as if set out hereon."

(f) The local health department shall submit to the Board a copy of each Subdivision Final Report which has been acted upon.

420-3-1-.43 **Subdivision Pit Privies Or Holding Tanks.**

(1) Pit privies are not an acceptable means of sewage disposal in a subdivision development.

(2) Holding tanks are not an acceptable means of sewage disposal in a subdivision development.

420-3-1-.44 **Subdivision In Flood Prone Area.**

(1) All subdivisions to be developed utilizing onsite sewage disposal systems wholly or partially within a flood prone area as defined in this Chapter shall, in addition to the other requirements of this Chapter, comply with the following requirements:

(a) No approval shall be given to any such subdivision which lies wholly within a flood prone area.

(b) Where a proposed subdivision is located partially within a flood prone area, that portion of the subdivision not within the flood prone area may be considered for approval.

420-3-1-.45 **Revocation, Resubmission, Time Limitations And Exemptions For Subdivisions.**

(1) Revocation of Final Approval. Where a subdivision has received final approval, such approval may be revoked as to any or all lots previously approved but undeveloped or unsold when:

(a) Conditions arise or are discovered which are in violation of minimum rules as set forth in the Chapter which could cause the development of the undeveloped lot or lots to become a menace to the public health.

(b) The subject subdivision is not being developed in accordance with this Chapter or with the conditions of approval of the subject subdivision.

(c) Information submitted for approval was erroneous or was falsified by the sponsor or by the sponsor's engineer, land surveyor or soil classifier.

(2) Disapprovals. When a subdivision or a portion thereof is disapproved, the exact lots or areas disapproved and the specific reasons therefore must be stated as provided in Chapter 420-3-1-.42(5)(c).

(3) Resubmission of Proposal for Disapproved Subdivision. A proposal for a subdivision or any portion thereof which has been disapproved may be resubmitted for consideration of approval when the sponsor notifies the local health department in writing that the conditions which were cited as reasons for disapproval have been corrected in such a manner that the area under consideration will be in compliance with the provisions of this Chapter.

(4) Exemptions. Subdivisions which were approved as required by the previous health department Subdivision Criteria or Rules shall be exempt from all subdivision requirements of this Chapter. A Permit To Install Onsite Sewage Disposal System is required prior to installing or constructing any new onsite sewage disposal system, and individual applications shall include the provisions of Chapter 420-3-1-.15(1), Chapter 420-3-1-.16 and Chapter 420-3-1-.19(1).

420-3-1-.46 **More Than One Dwelling Connected To An Onsite Sewage Disposal System.**

(1) More than one commercial dwelling, campground site, mobile home or multifamily dwelling may be connected to a single

onsite sewage disposal system, provided that one person is accountable for the onsite sewage disposal system in accordance with these rules for all dwellings involved. The onsite sewage disposal system shall be designed by an engineer, in compliance with the provisions of this Chapter.

(a) Multifamily Dwellings, Campgrounds and Mobile Home Parks. Where the connection of more than one dwelling to an onsite sewage disposal system is proposed, the Application For A Permit To Install Onsite Sewage Disposal System shall include all information in Chapter 420-3-1-.16, Chapter 420-3-1-.17 and the following additional information:

1. A layout of all streets, parking areas, onsite sewage disposal systems, sewer lines, water lines, easements, underground utilities and all dwelling locations;

2. Total acreage or square footage of the proposed property.

3. A notarized statement signed by the property owner stating that the property will not be subdivided or lots sold, and that all onsite sewage disposal systems will be under the responsibility of one person, and giving the name of that person, with address and telephone number.

4. For multifamily dwellings, each building plan shall show the number of dwelling units and number of bedrooms.

(b) The number of commercial dwellings, multifamily dwellings, camp sites and mobile homes allowed on the property shall be determined by the lot size requirements of Chapter 420-3-1-.14(1), unless the project is a commercial development and an engineer can design an onsite sewage disposal system or systems that will accommodate all sewage generated and will meet all the requirements of this Chapter.

(c) The planned sewage flow for each homesite in a mobile home park shall be 450 gallons per day.

(2) Where a published soil survey does not exist, the owner shall provide a soil map as stipulated in Chapter 420-3-1-.41(4)(b) and Chapter 420-3-1-.41(4)(b)1.

(3) The property involved shall not be developed in excess of its capacity to assimilate sewage flows generated by the project.

420-3-1-.47 **Recreational Campgrounds Or Similar Projects**.

(1) When more than one camp site or other facility service is proposed to be served by an onsite sewage disposal system or systems, the Application For Permit To Install Onsite Sewage Disposal System shall include all information in Chapter 420-3-1-.16, Chapter 420-3-1-.17 and the following additional information:

(a) The facility and onsite sewage disposal systems shall be designed by an engineer and drawn to scale on the property plat. All sewage service points (sanitary service connections), water connections, roads, drives, tent sites, camp sites or similar sites, recreational areas, overhead and underground utilities, and drainage structures shall be shown.

(2) The property involved shall not be developed in excess of its capacity to assimilate sewage flows generated by the project.

(3) Where a published soil survey does not exist, the owner shall provide a soil map as stipulated in Chapter 420-3-1-.41(4)(b) and Chapter 420-3-1-.41(4)(b)1.

420-3-1-.48 <u>Certification Of Existing Onsite Sewage Disposal Systems</u>.

(1) When requested in writing by the owner or lending agency, the local health department may certify the existence and adequacy of an onsite sewage disposal system as follows:

(a) If the local health department has evidence that the onsite sewage disposal system was approved by the local health department, a simple site inspection to determine the location of the system and prove that no visible evidence of failure exists and to verify the well location, if applicable, shall be satisfactory evidence for certifying the existing onsite sewage disposal system.

(b) When the local health department has no evidence showing that the onsite sewage disposal system ever received health department approval, no certification shall be issued until such onsite sewage disposal system is shown to be in compliance with current rules. As a minimum, the onsite sewage disposal system shall be uncovered to identify the following:

1. Size, construction material and condition of the septic tank or aerobic sewage tank including inlet and outlet fixtures and the existence and location of a baffle wall.

2. Size and construction detail of the effluent disposal field including number, length and width of each trench, depth of gravel under effluent distribution lines, existence and size of perforated distribution pipe, depth of cover over gravel; and relative elevations of the header line or distribution boxes or, on serial distribution systems, the adequacy and elevations of the spillovers.

3. For electrical and mechanical equipment such as aerobic sewage tanks, a knowledgeable service person shall check out components of the system prior to the local health department issuing a certificate of acceptance.

4. For alternative systems, an engineer shall evaluate the onsite sewage disposal system prior to the local health department issuing a certificate of acceptance.

(2) Individual or Private Water Supply. The local health department shall be provided with minimum assurances that the private or individual water supply has (a) been tested in a timely manner by an accredited laboratory and has received a bacteria count and other test results which place it within established safe drinking water limits; and (b) has been located to meet the setback distances of Chapter 420-3-1-.22.

(3) The certification of an existing onsite sewage disposal system by the local health department does not imply any guarantee that the onsite sewage disposal system will function for any specified period of time.

(4) It shall be the responsibility of the owner or lending agency requesting the certification of an existing onsite sewage disposal system to provide for samples, excavation work, inspections by an engineer, plumber or electrician, or other information and data as may be requested by the local health department.

420-3-1-.49 **Severability**. The parts, sections, paragraphs and provisions of this Chapter are severable. Should any portion thereof be ruled unconstitutional or unenforceable by any court, the said ruling shall not affect any other provisions of this Chapter not ruled upon.

420-3-1-.50 **Repealer**. All rules promulgated and adopted by the Board which are in conflict with this Chapter or any provisions thereof are hereby expressly repealed.

420-3-1-.51 **Effective Date**. This Chapter shall be in full force and effect 35 days after promulgation and adoption as required by Law.

Authors: Wade Pitchford, Samuel Robertson, George Allison.

Authority Code of Ala. 1975, Sections 22-2-2(4), 22-2-2(6), 22-10-1, et seq., 22-20-5, 22-26-1, 22-26-2, 22-26-3, 22-26-5, 22-26-7, and 22-27-1, et seq.

History: Ed Note: Previous Chapters: 420-3-1 "Onsite Sewage Disposal"; 420-3-2 "Subdivision Sewer Systems and Water Supplies"; 420-3-3 "Delegation of Subdivision Primary Enforcement Responsibilities"; 420-3-4 "Information Submittals for Property Divided Into Lots Not Less Than Three Acres in Size" repealed and replaced by this Chapter. Filed July 20, 1988.
History: Ed Note: Previous Chapter 420-3-1 "Onsite Sewage Disposal and Subdivision-Onsite Sewage Systems, Water Supplies and Solid Waste Management" repealed and replaced by this Chapter. Filed June 17, 1992.

APPENDIX A

SEWAGE FLOWS

Type of Establishment

Facility Type	Gallons/Person/Day (Unless Otherwise Noted)
Residential	
Single family dwellings, multifamily dwellings or apartments (per unit) (2 bedrooms or less)	300
(3 bedrooms or more) (gal/bedroom/day)	150
Institutional	
Churches (per auditorium seat-not including food)	5
(additional per meal served)	1
Domiciliaries (per bed space)	125
Institutions other than hospitals (per bed space)	125
Laundry Non-commercial (per machine per day)	580
(Per load)	50
Schools, boarding	75
Schools	15
Schools (with cafeterias)	20
Schools (with cafeteria, gym and showers)	25
Commercial	
Airline catering (per meal served)	3
Airports (per passenger-not including food)	5
Airport (per employee)	10
Auto Service Station (per public rest room)	630
Barber Shops (per chair)	80
Beauty Shops (per station)	300
Bus Service areas not including food	5
Country clubs not including food (per member)	30
Day workers at offices	20
Drive-in theaters (not including food-per space per day)	10
Factories and plants (exclusive of industrial wastes) per shift	20
Factories and plants (with showers) per shift	30
Hotels, motels and rooming houses	50
Movie theaters (per auditorium seat-not including food)	5
Stores (per public toilet)	400
Work or construction camps	50
Eating and Drinking Establishments	
Bars/lounges (per seat)	40

(continued)

Bars/lounges (per customer)	6
Restaurants (toilet and kitchen wastes per patron)	10
(additional for bars and cocktail lounges)	2
Restaurants (kitchen wastes per meal served)	3
Restaurants (with paper service per meal served)	1.5

Recreational

Camps, day (no meals served)	10
Camps, RV, trailer or campground	
with individual sewer hookup-no central toilet/ showers (per space)	100
with central bathhouse-toilets and showers (per space)	75
with toilets only (per space)	50
Dump station (per RV/trailer space)	50
Fairground and parks, picnic-with bathhouses, showers and flush toilets	15
Fairground and parks, picnic (toilet wastes only)	5
Marinas (toilet wastes only, per boat slip)	10
with bathhouse (per boat slip)	30
Swimming pools and bathhouses	10

References:

Onsite Wastewater Treatment and Disposal Systems Design Manual, U. S. EPA, October 1980.

Forecasting Municipal Water Requirements, Vols. I and II, U. S. Department of Commerce, September 1969.

APPENDIX B

STANDARD
PROCEDURE FOR PERFORMING SOIL PERCOLATION TESTS
AND
SOIL BORINGS OR SOIL OBSERVATION PITS

PERCOLATION TEST PROCEDURE

Procedure for Performing Soil Percolation Tests - Soil percolation tests shall be performed in accordance with the following procedures:

(a) Using soil data from the soil boring or soil observation pit, dig or bore the percolation test hole to the depth of the proposed effluent distribution trenches, not less than 22 inches or greater than 42 inches (not less than 12 or greater than 22 inches for shallow placement; not less than 18 or greater than 42 inches for gravel-less seepage systems), with a diameter of eight to 12 inches. In order to remove any glazed or burnished spots on the walls of the test hole, the walls shall be scratched or made rough so as to provide a natural soil interface for absorption. All loose materials shall be removed from the hole. A two-inch layer of coarse sand or fine gravel shall be added to the hole to protect the bottom from scouring and sediment.

(b) Percolation test holes shall be filled with clear water to a minimum depth of 12 inches over the sand or gravel. Water shall be added to the test hole as often as necessary to maintain the 12 inch depth for a minimum of four hours, in order to saturate the surrounding soil.

(c) Percolation test measurements shall be made no later than eight hours following the saturation process. The drop of the water surface at 30 minute intervals over a four-hour period shall be measured from a fixed referenced point outside the test hole.

(d) After the saturation process, the test shall be performed by adjusting the water level to a depth of six inches over the sand or gravel. From a fixed reference point outside the test hole, the depth to water shall be measured at 30-minute intervals for a period of not less than four hours. Water shall be added as necessary to maintain the water surface above the sand or gravel. The percolation rate will be determined by the drop of water surface which occurs in the last 30-minute intervals, provided that the absorption rate has stabilized. If there is an appreciable difference in the last two readings of the four-hour interval, the test will continue to be made at additional 30-minute intervals until the rate stabilizes. The rate shall be considered to be stabilized when the last two readings are approximately the same.

(e) For soils which absorb the first six inches of water in less than 30 minutes following saturation, measurements on the water surface shall be made at ten-minute intervals over a period of one hour. The drop of water surface which occurs in the final ten minutes shall be used to compute the percolation rate.

(f) The percolation rate shall be reported as the number of minutes required for the water surface to drop one inch in the test hole after the rate is stabilized.

Percolation Test Data APPENDIX B

Alabama
Department of Public Health

Owner/Agent _____

Address _____

Phone _____

_____ Sheet ____ of ____

Health Department Identification Number

_____ Health Department

Property Identification

Subdivision Name _____

Subdivision _____
Lot Section Block

Subdivision File # _____

Other _____

Weather _____ Temp. _____

	Required Test	Time (HRS.)
Saturation = ST	____	_____
Shrink Swell = SS	____	_____
Percolation = P	____	_____

Date of Test _____

Date of Saturation _____

Certifying Professional:

Name _____

Address _____

Phone _____

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
HOLE DIA. IN INCHES	HOLE DEPTH	TYPE TEST	HOLE NO.	TIME BEGUN / DEPTH TO WATER	TIME / DEPTH TO WATER	TIME / DEPTH TO WATER	TIME / DEPTH TO WATER	TIME / DEPTH TO WATER	TIME / DEPTH TO WATER	TIME / DEPTH TO WATER	TIME / DEPTH TO WATER	TIME / DEPTH TO WATER	TIME / DEPTH TO WATER	TIME / DEPTH TO WATER	RATE MIN. PER INCH	REMARKS*
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -		
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -		
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				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -		
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -		

*Specify if water added

Use back of form for layout, lot lines and hole locations

☐ Percolation tests were performed under Engineer's Specified Simulated Wet Season Testing Procedure.

☐ A certified copy by the engineer of the simulated wet season testing procedure is attached.

STATEMENT: These percolation tests were conducted as specified in Chapter 420-3-1, Alabama Administrative Code, Onsite Sewage Disposal Systems and Subdivision, Alabama Department of Public Health, and are true and correct as presented.

_____
Signature of tester ( )P.E.
( )Soil Classifier

APPENDIX B

SOIL BORING AND SOIL OBSERVATION PIT PROCEDURE

Procedure for Performing Soil Borings - Soil borings shall be performed and reported in accordance with the following:

(a) Soil borings shall be a minimum of five feet deep and have a minimum diameter of eight inches. Soil borings may be made with a backhoe.

(b) Soil borings shall not be closer than five feet nor farther than 15 feet from the percolation test hole.

(c) Soil from a boring shall be laid out clockwise around the hole with no overlap except where bores are made with a backhoe.

(d) Report the thickness and character of each soil layer as follows:

1. Color -Color is a key indication of the suitability of a soil.

   -Use red, yellow, brown, gray or olive or a combination of any of these.
   Munsel Color Chart for Soils shall be used as a guide.
   Grays are indicators of wetness, seasonal high groundwater.

2. Texture -Such as clay, silt or sandy loam.
   Recommend using United States Department of Agriculture texture groups. See Appendix B-1.

(e) Report the depth to groundwater, or saturated soil or wetness indicators such as gray soils or gray mottles and bedrock, if indicated.

(f) Report the depth to groundwater (with date) after 24 hours.

(g) Soil observation pits are preferred to soil borings, since the observation pit is excavated to a minimum depth of five feet and is wide enough (usually 24 to 36 inches) for entrance by the engineer, land surveyor or soil classifier. The pit is excavated by backhoe with steps, or an incline left in place at one end for ease of ingress and egress. The soil layers, colors and texture are much easier to observe in a soil observation pit. Information to be reported is the same as required with a soil boring.

(h) Devices utilizing the Archimedes screw principle should not be used because they blend and mask the true soil characteristics.

APPENDIX B - 1

Field Guide To Soil Texture Classes (USDA)

Introduction - The purpose of this test is to provide a standard procedure for estimating soil texture in the field. The texture is estimated by the "feel" of the moist soil. The texture of a soil cannot be estimated by "feel" if it is either dry or wet.

Definitions

Particle Size Classes

-**Sand** - Sand has a particle size ranging from 0.05 millimeters (mm) to 2.0 mm in diameter. Sand imparts a gritty feel to soil due to the shape of the individual particles.

-**Silt** - Silt has a particle size ranging from 0.002 mm to 0.05 mm in diameter. When moist, silt has a floury feel and does not ribbon when pressed between the thumb and forefinger due to the shape of the individual particles. When placed between the teeth, silt has a gritty feeling.

-**Clay** - Clay has a particle size less than 0.002 mm in diameter. Clay exhibits collodial properties, has a negative charge, and is flat and platelike in shape. Moist clay is sticky and will ribbon readily when pressed between the thumb and forefinger. When placed between the teeth, clay has a smooth, slick feeling.

-**Soil Texture** - Soil texture refers to the relative proportions of sand, silt and clay particles in a soil material that has a particle size less than two (2) mm in diameter. Soil texture is an indicator of infiltration capacity, permeability, degree of aeration and drainage, as well as other physical characteristics of a soil material.

-**Soil Texture Classes** - The United States Department of Agriculture (USDA) has identified 12 soil texture classes as follows: sand, loamy sand, sandy loam, sandy clay loam, loam, silt loam, silt, silty clay loam, clay, clay loam, sandy clay and silty clay. Each texture class has a distinctive characteristic(s) which can be estimated in the field by trained personnel.

Distinguishing Characteristics - The following characteristics are based on moist soil:

-**Sand** - Sand has a gritty feel, does not stain the fingers and does not form a ball when moist.

-**Loamy Sand** - Loamy sand has a gritty feel, stains the fingers (silt and clay) and forms a weak ball, but cannot be handled without breaking.

-Sandy Loam - Sandy loam has a gritty feel, and forms a ball that can be picked up with the fingers and handled with care without breaking.

-Loam - Loam may have a slightly gritty feel, but does not show a finger print and forms only short ribbons of from 0.25 inch to 0.50 inch in length. Loam will form a ball that can be handled without breaking.

-Silt Loam - Silt loam has a floury feel when moist and will show a finger print, but will not ribbon and forms only a weak ball.

-Silt - Silt has a floury feel when moist and sticky when wet, but will not ribbon and forms a ball that will tolerate some handling.

-Sandy Clay Loam - Sandy clay loam has a gritty feel, but contains enough clay to form a firm ball and may ribbon to form 0.75 inch to one-inch pieces.

-Silty Clay Loam - Silty clay loam is sticky when moist and will ribbon from one (1) to two (2) inches. Rubbing silty clay loam with the thumb nail produces a moderate sheen. Silty clay loam produces a distinct finger print.

-Clay Loam - Clay loam is sticky when moist. Clay loam forms a thin ribbon of one (1) or two (2) inches in length and produces a slight sheen when rubbed with the thumb nail. Clay loam produces a nondistinct finger print.

-Sandy Clay - Sandy clay is plastic, gritty and sticky when moist, and both forms a firm ball and produces a thin ribbon to over two (2) inches in length.

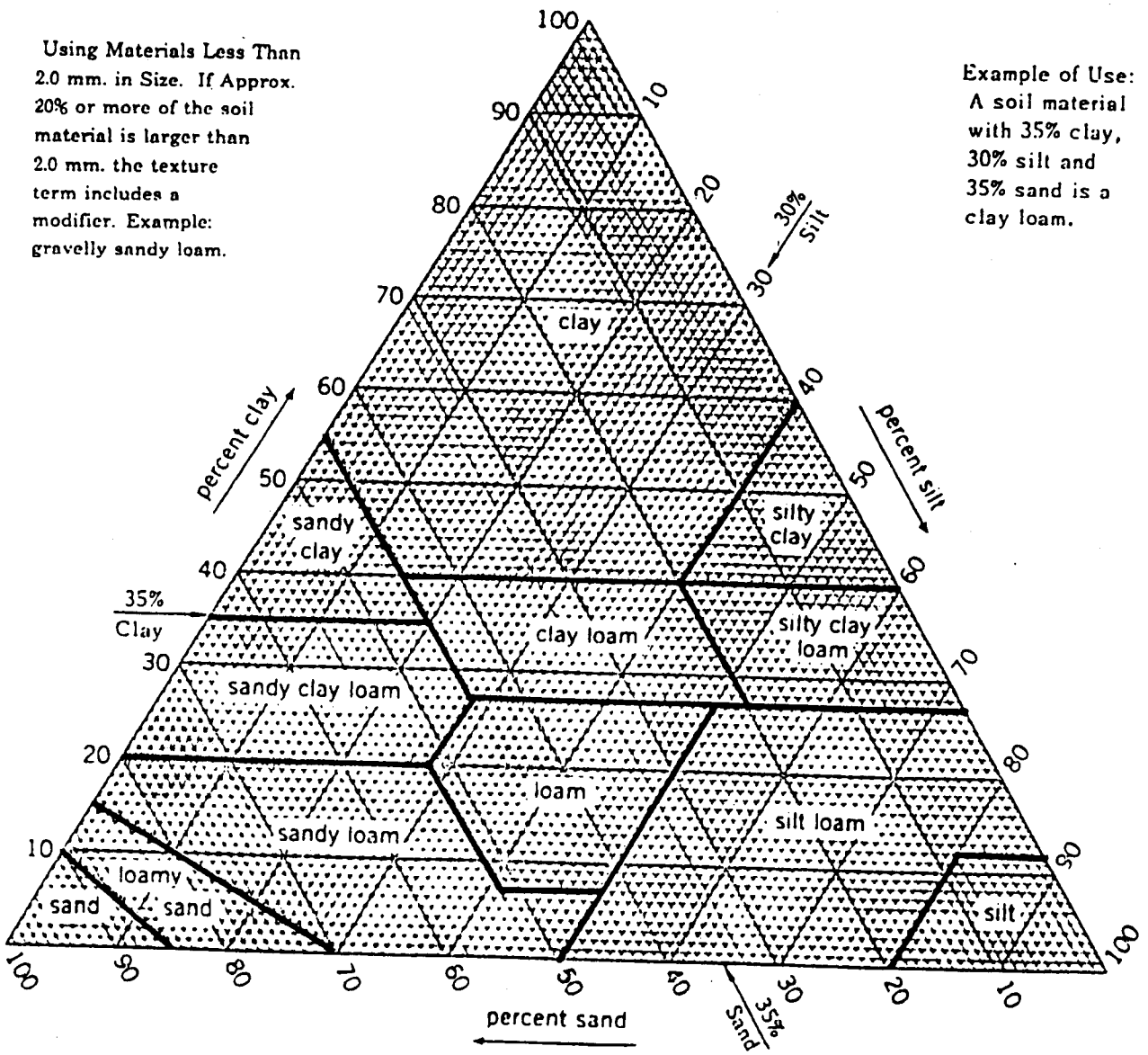
-Silty Clay - Silty clay is both plastic and sticky when moist and lacks any gritty feeling. Silty clay forms a firm ball and readily ribbons to over two (2) inches in length.

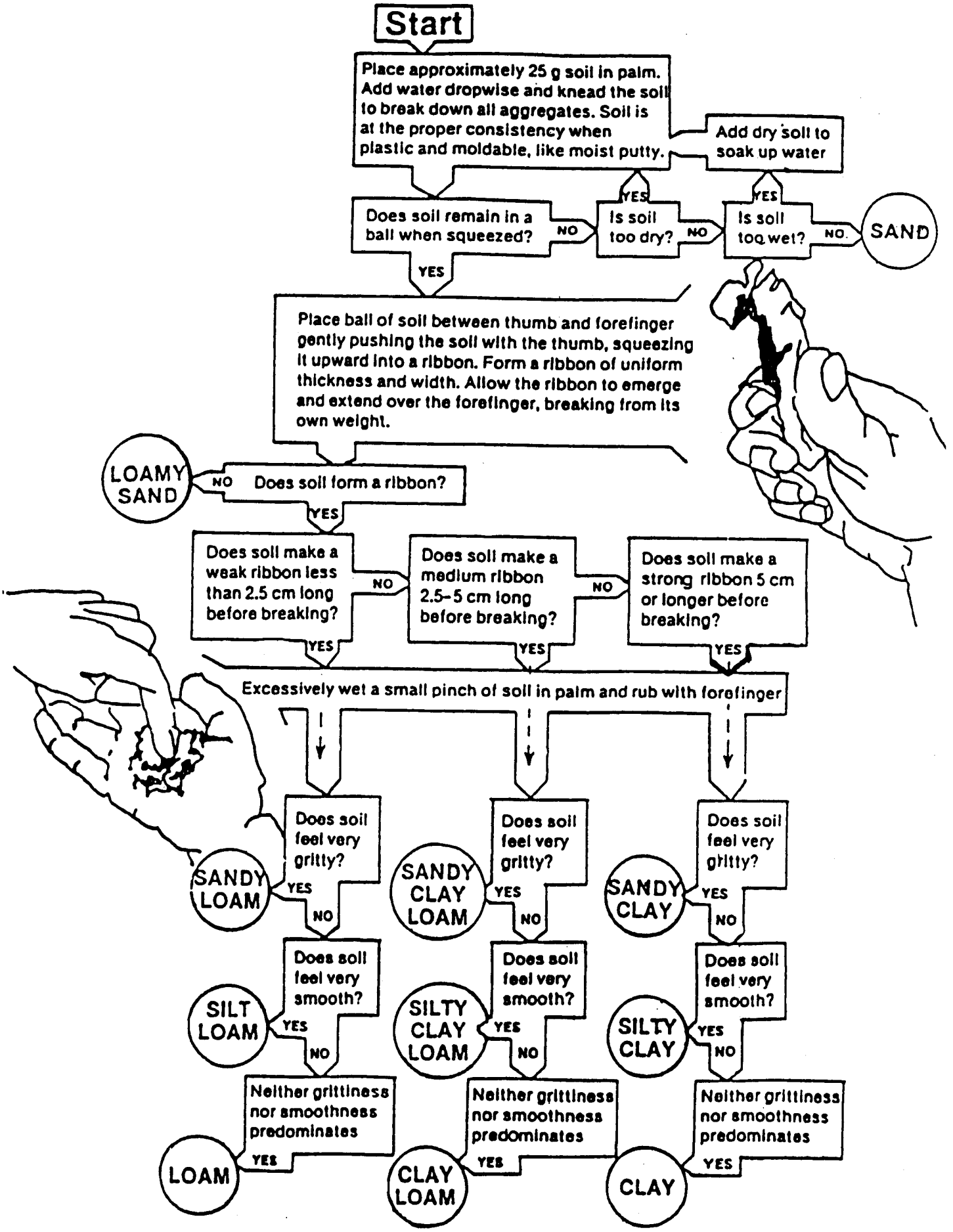
-Clay - Clay is both sticky and plastic when moist, produces a thin ribbon over two (2) inches in length, produces a high sheen when rubbed with the thumb nail, and forms a strong ball resistant to breaking.

GUIDE FOR USDA SOIL TEXTURAL CLASSIFICATION

Using Materials Less Than 2.0 mm. in Size. If Approx. 20% or more of the soil material is larger than 2.0 mm. the texture term includes a modifier. Example: gravelly sandy loam.

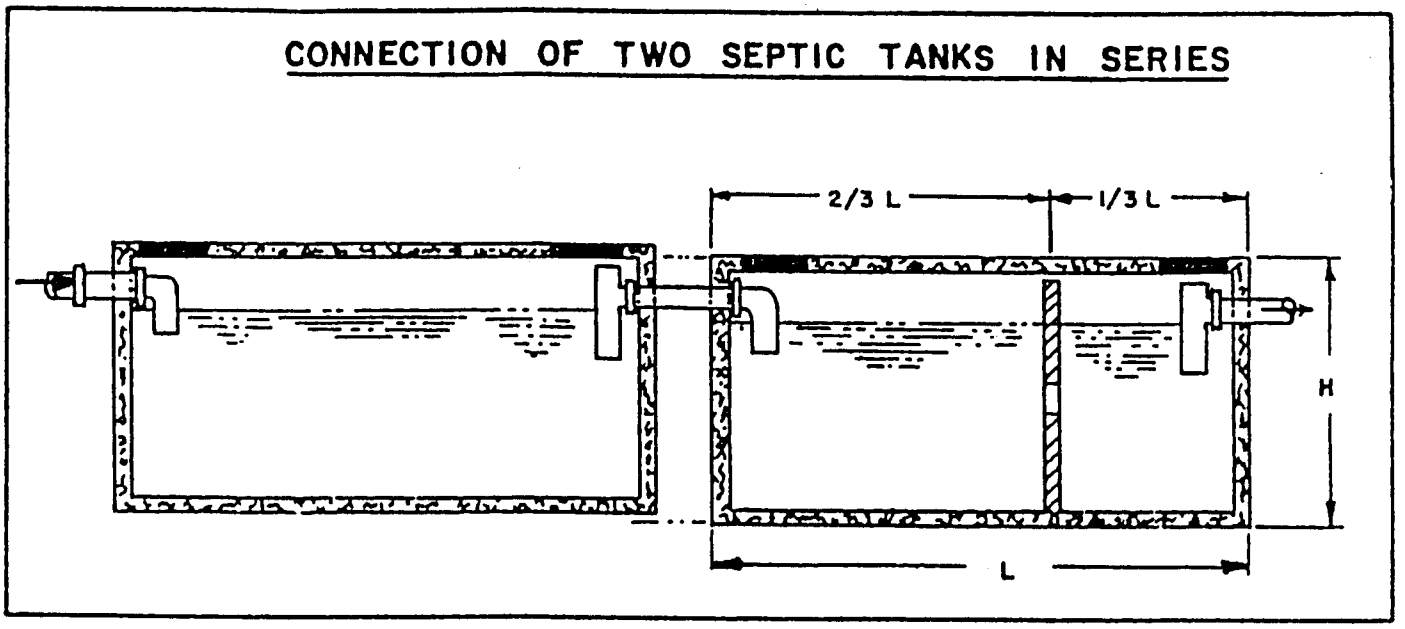
Example of Use: A soil material with 35% clay, 30% silt and 35% sand is a clay loam.





Instructional diagram for determining soil texture by feel.

APPENDIX C



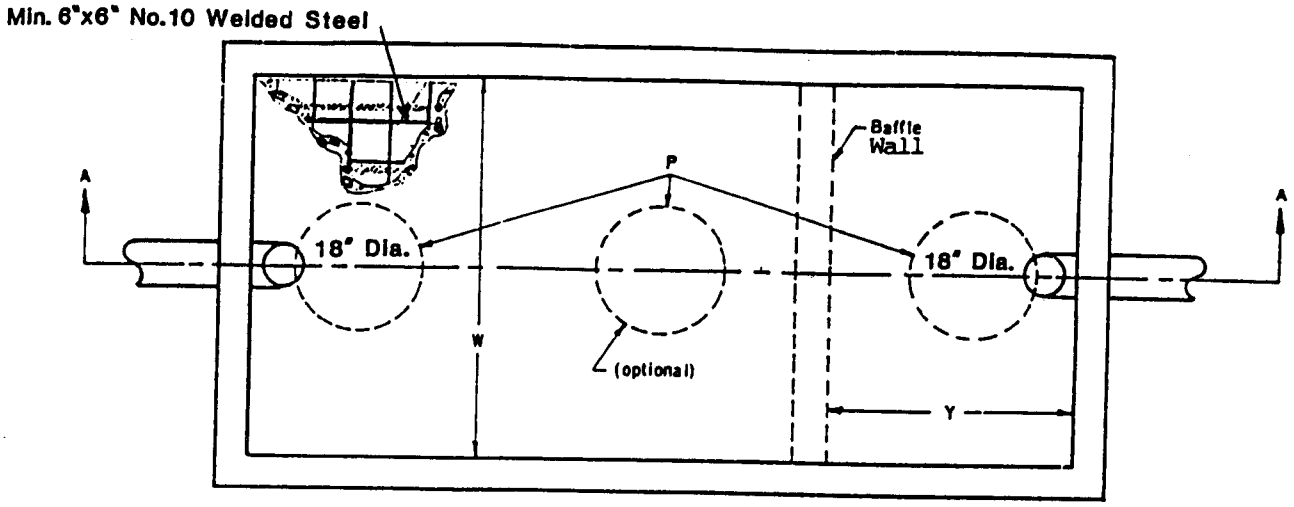
APPENDIX D

SIZING THE EFFLUENT DISPOSAL FIELD

Percolation Rate (minutes/in.)	Single Family Dwellings								Other Establishment (square feet per gallon per day)
	Primary Disposal Fields				Separate Washer Line (1)				
	Square feet per bedroom	linear feet/bedroom			square feet per bedroom	linear feet/bedroom			
		18" width	24" width	36" width		18" width	24" width	36" width	
5-10	125	83.3	62.5	41.7	25	16.7	12.5	8.3	.83
11-15	170	113.3	85.0	56.7	34	22.7	17.0	11.3	1.13
16-20	194	129.3	97.0	64.7	39	26.0	19.5	13.0	1.29
21-25	222	148.0	111.0	74.0	44	29.3	22.0	14.7	1.48
26-30	242	161.3	121.0	80.7	48	32.0	24.0	16.0	1.61
31-35	260	173.3	130.0	86.7	52	34.7	26.0	17.3	1.73
36-40	276	184.0	138.0	92.0	55	36.7	27.5	18.3	1.84
41-45	300	200.0	150.0	100.0	60	40.0	30.0	20.0	2.00
46-50	310	206.7	155.0	103.3	62	41.3	31.0	20.7	2.07
51-55	320	213.3	160.0	106.7	64	42.7	32.0	21.3	2.13
56-60	330	220.0	165.0	110.0	66	44.0	33.0	22.0	2.2

(1) Primary disposal Field may be reduced by amount used for washer line, not to exceed one-fifth.
(2) For residential hot tubs, and spas, see Rule 420-3-1-.27(2).
(3) For gravel-less effluent distribution line, see Rule 420-3-1-.28(5).

SEPTIC TANK DETAILS
TYPICAL SINGLE FAMILY DWELLING SEPTIC TANK
TYPE 1 - BAFFLE WALL



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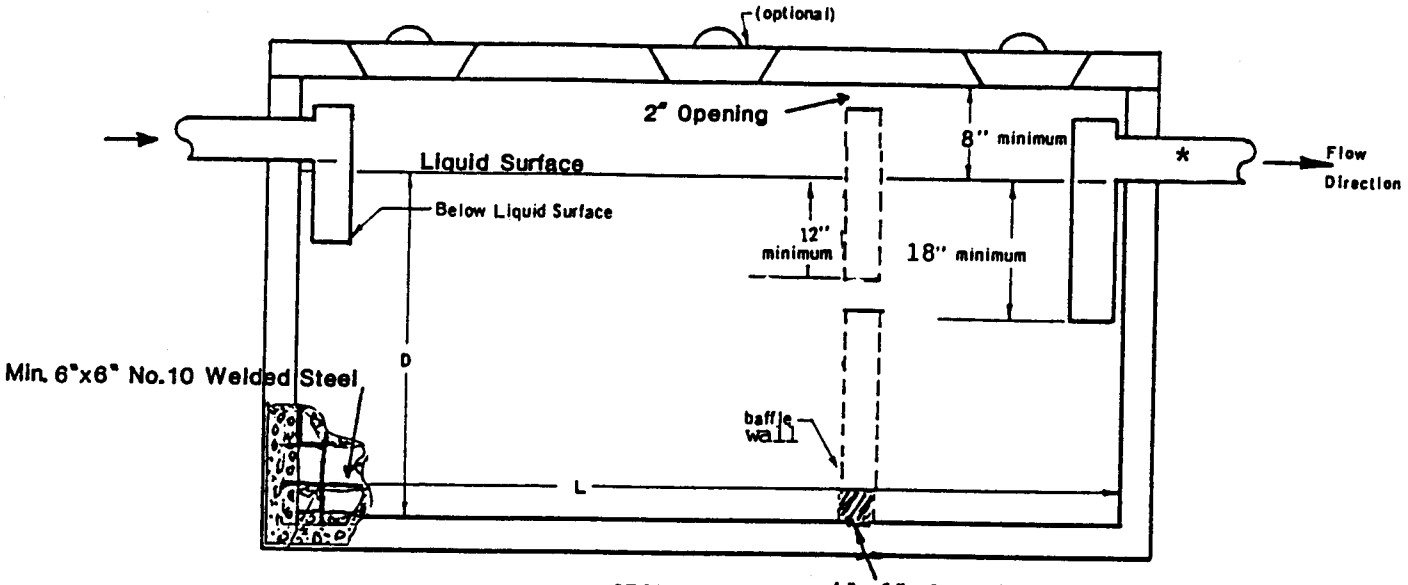
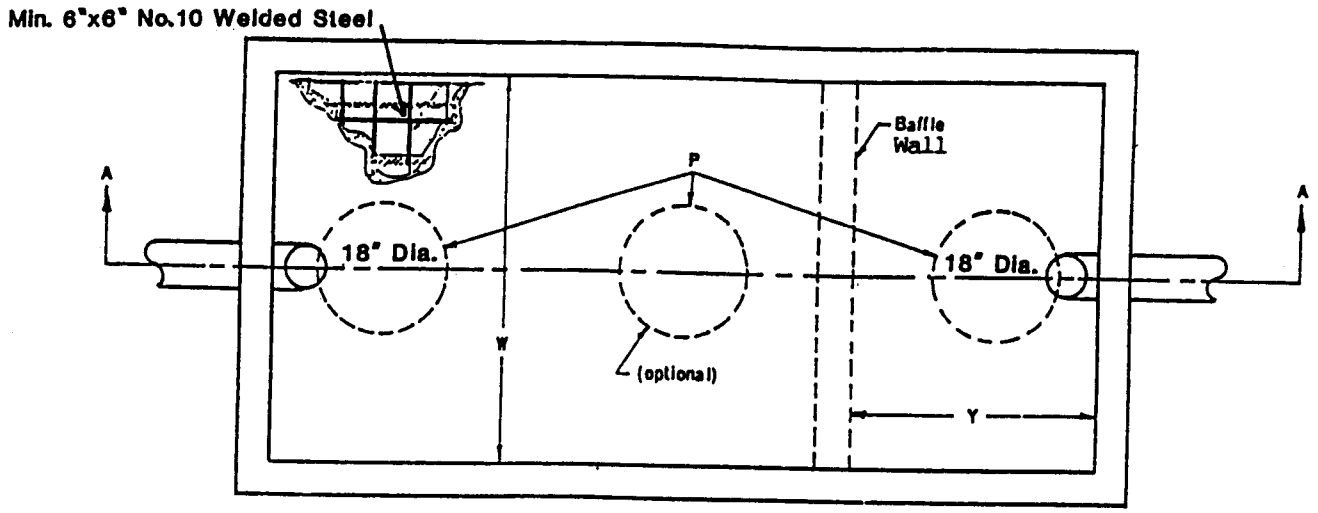


SECTION A-A 4"x6" Opening-Bottom Corners of baffle

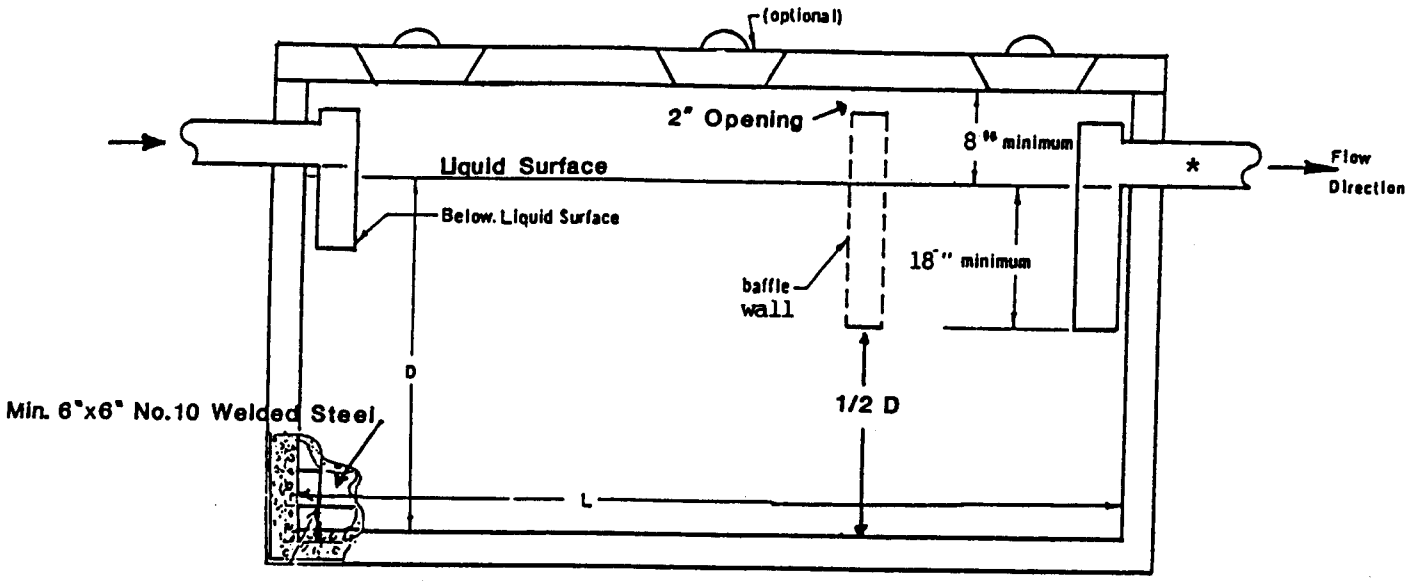
D-Liquid Depth, not less than 3 feet nor greater than 6 feet.
L-Tank Length, at least 1 1/2 times but not more than 2 times the width.
P-Position of inspection holes, minimum of 2 inspection holes, 18 inches in diameter.
W-Tank width, not less than 3 feet.
Y-Position of baffle wall, 1/3 of tank length (L).

*Note-invert of outlet tee 3 inches below the invert of the inlet.

SEPTIC TANK DETAILS
TYPICAL SINGLE FAMILY DWELLING
SEPTIC TANK
TYPE 2 - BAFFLE WALL



PLAN (Cover Removed)



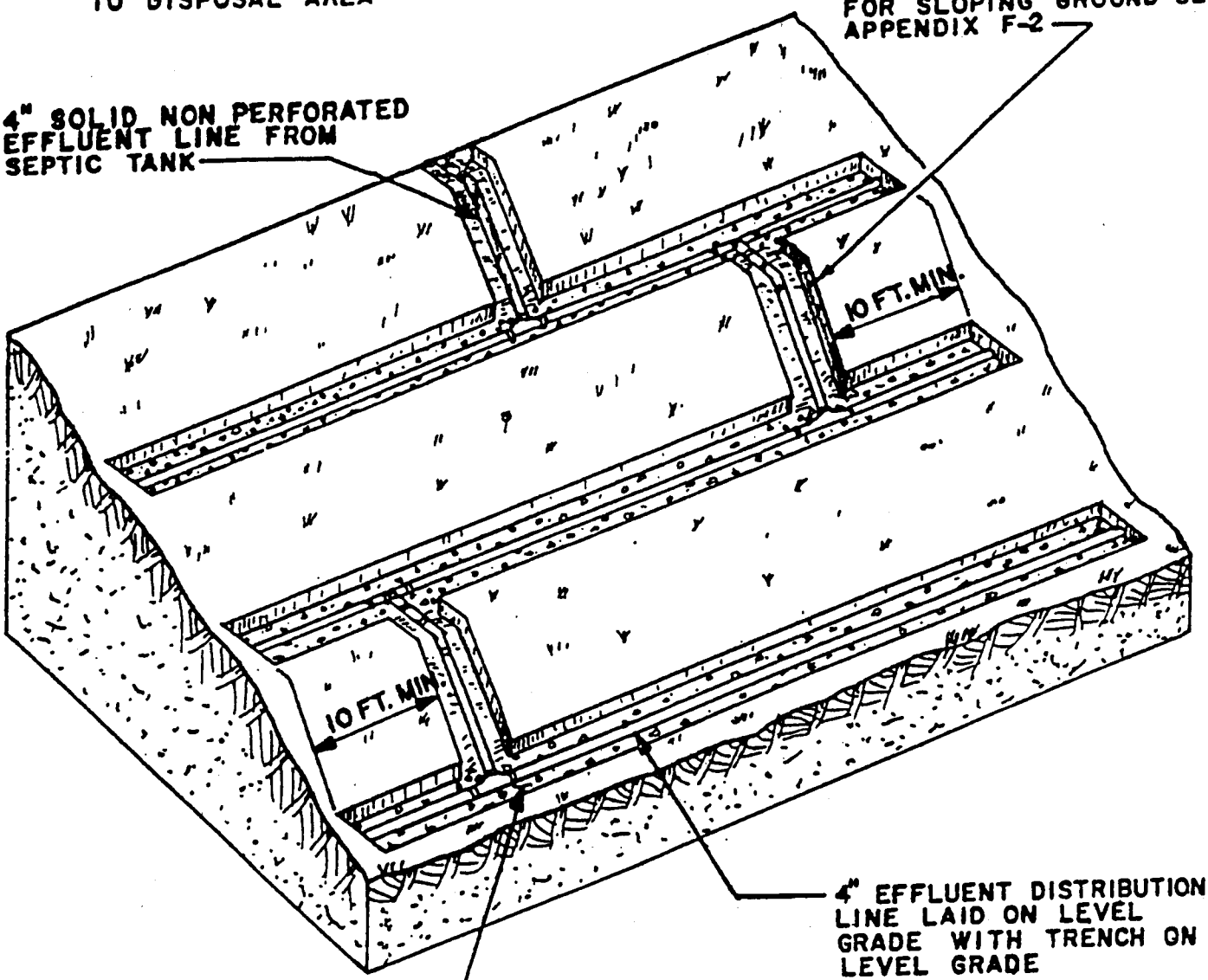
SECTION A-A

D-Liquid Depth, not less than 3 feet nor greater than 6 feet.
L-Tank Length, at least 1 1/2 times but not more than 2 times the width.
P-Position of inspection holes, minimum of 2 inspection holes, 18 inches in diameter.
W-Tank width, not less than 3 feet.
Y-Position of baffle wall, 1/3 of tank length (L).

*Note-invert of outlet tee 3 inches below the invert of the inlet.

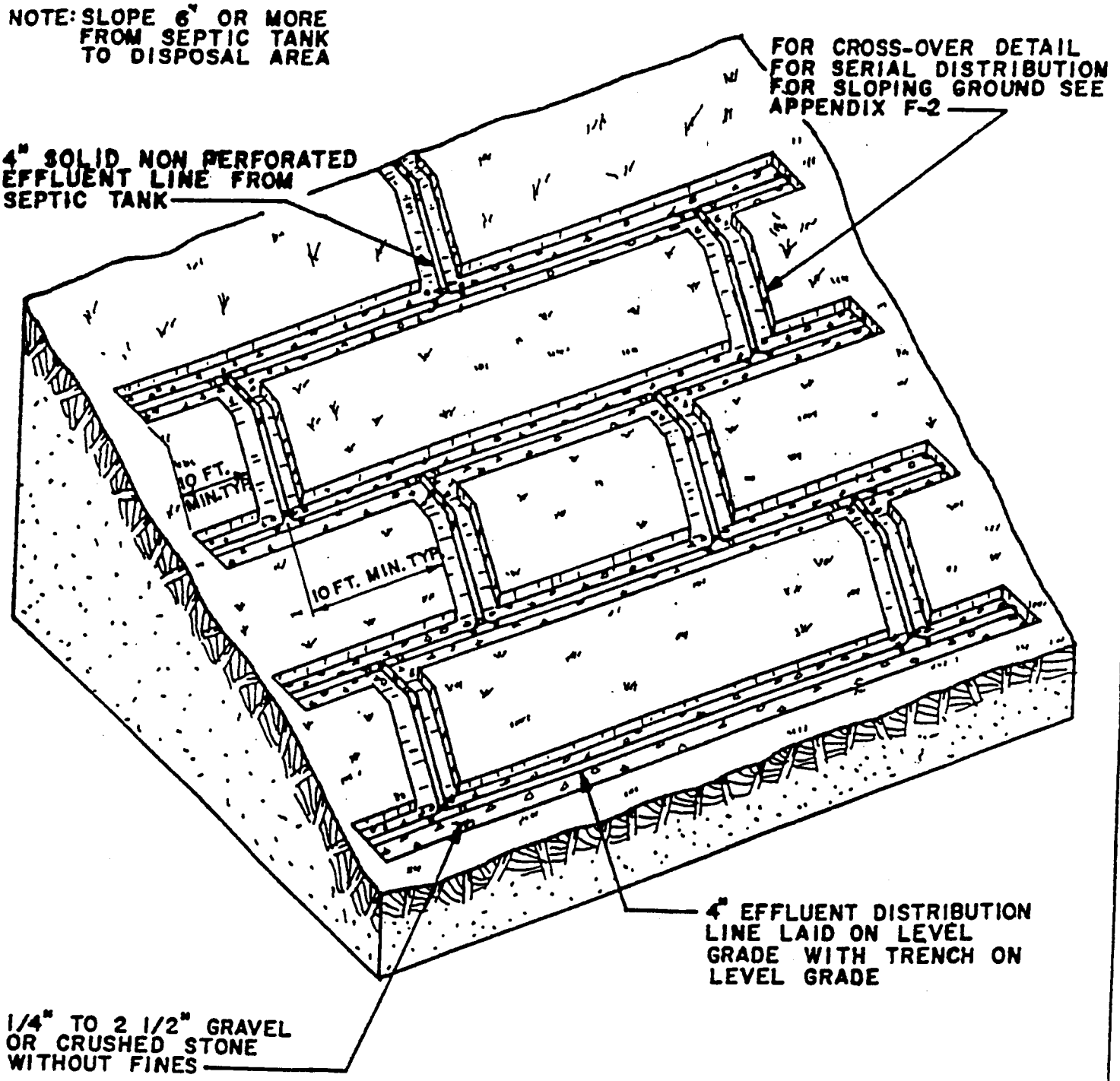
LINE 100 FT. OR LESS IN LENGTH
ONE CROSS-OVER REQUIRED

NOT TO SCALE



LINE OVER 100 FT. IN LENGTH
TWO CROSS-OVERS REQUIRED PER 100 FEET

NOT TO SCALE



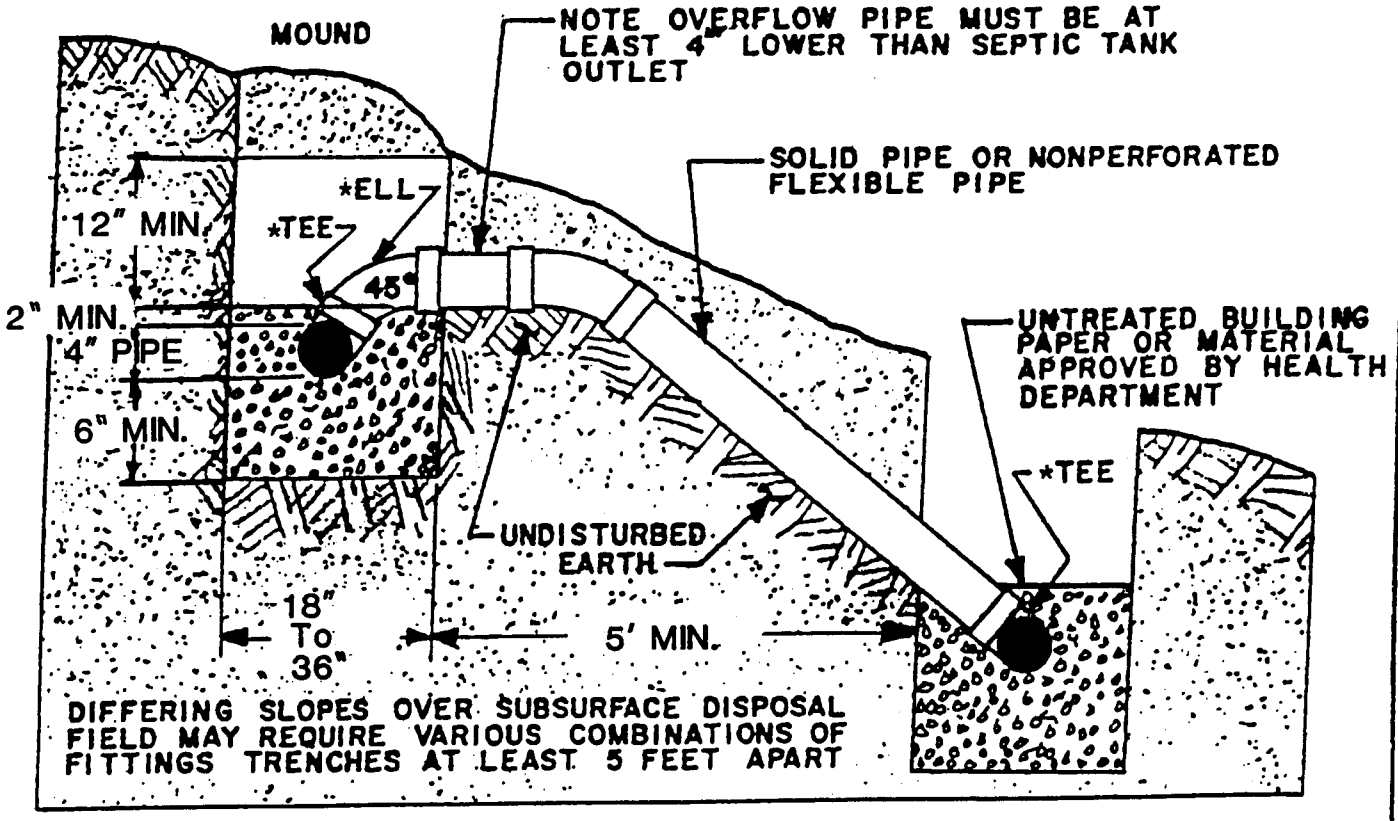
NOTE: LINES LESS THAN 40 FEET LONG IN THE DISPOSAL SYSTEM WILL REQUIRE ONLY ONE CROSSOVER TO AND FROM FIELD LINES

APPENDIX F-2

ABSORPTION FIELD SERIAL DISTRIBUTION FOR SLOPING GROUND

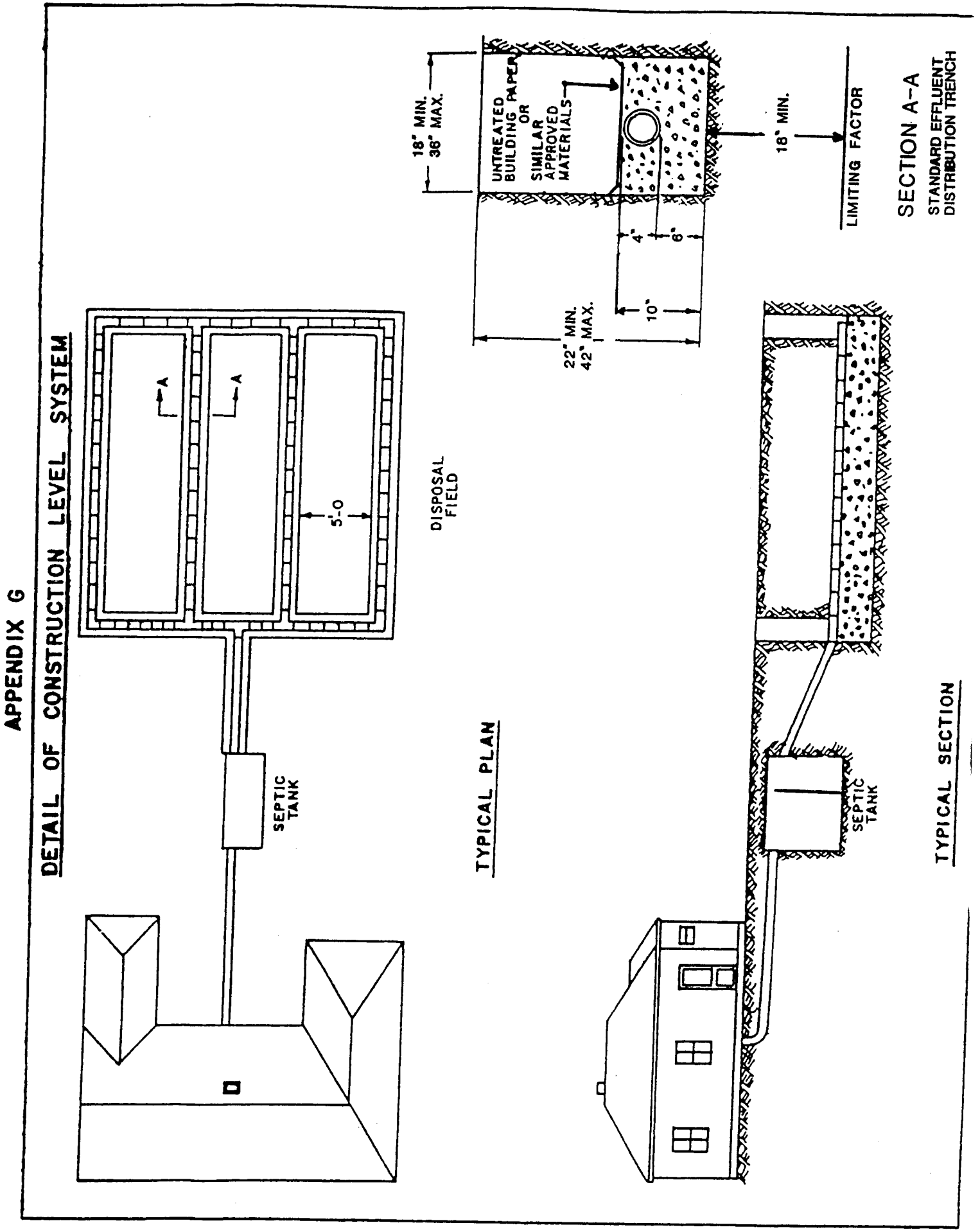
LINES 100 FT. OR LESS IN LENGTH SEE APPENDIX F-1A

LINES OVER 100 FT. IN LENGTH SEE APPENDIX F-1B



*MINIMUM REQUIRED FITTINGS

CROSS-OVER DETAIL


APPENDIX G
DETAIL OF CONSTRUCTION LEVEL SYSTEM
A
A
5'-0
DISPOSAL FIELD
SEPTIC TANK
TYPICAL PLAN
18" MIN.
36" MAX.
UNTREATED BUILDING PAPER OR SIMILAR APPROVED MATERIALS
4"
6"
10"
22" MIN.
42" MAX.
18" MIN.
LIMITING FACTOR
SECTION A-A
STANDARD EFFLUENT DISTRIBUTION TRENCH
SEPTIC TANK
TYPICAL SECTION

APPENDIX G-2

SHALLOW PLACEMENT AREAS

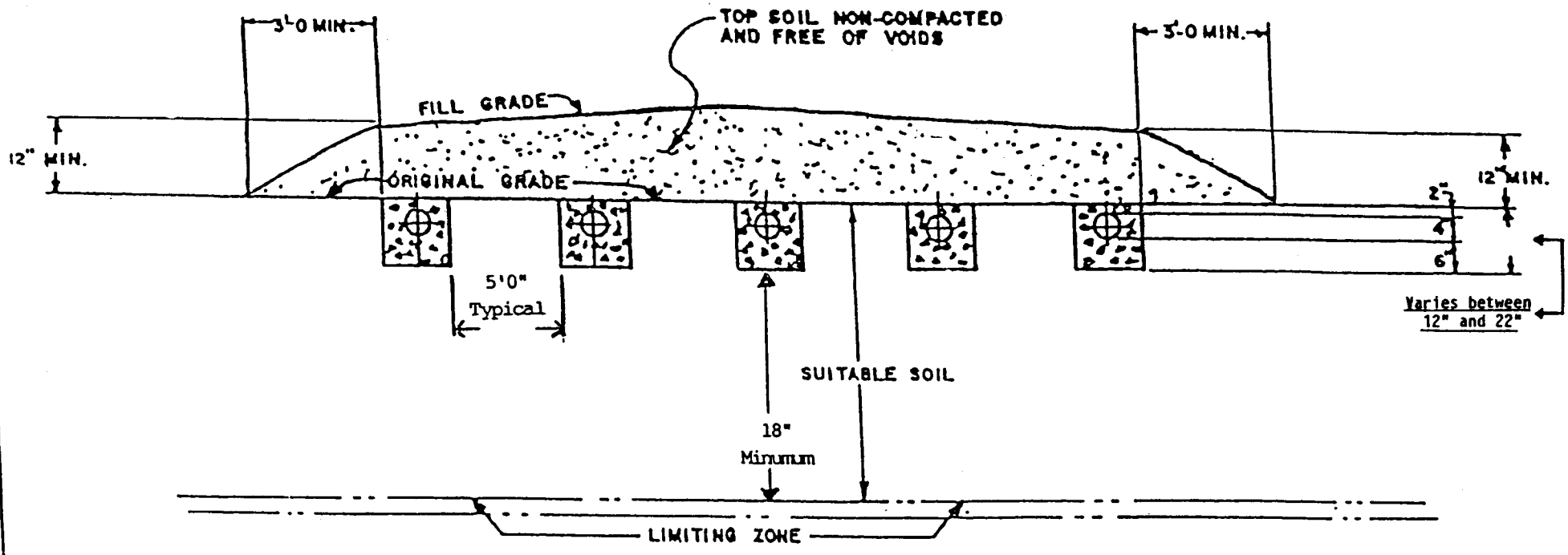


FIG. G-2

APPENDIX H

GUIDELINES FOR ALTERNATIVE ONSITE SEWAGE DISPOSAL SYSTEMS

As indicated in this Chapter, alternative systems may be considered for approval under certain circumstances. This Appendix is to assist persons interested in applying for approval to install an alternative system, but is not intended to be a complete manual on alternative systems. Also, there may be designs or variations other than the ones presented herein, and the Health Department shall consider each submittal on a case-by-case basis. It should be kept in mind, however, that there are many sites where no onsite sewage disposal system may be acceptable.

1) Alternating Effluent Disposal Field System

This system simply provides two complete soil and equivalent disposal fields, separated by a valving system so that each system can alternately be used and rested. This "resting" has shown to be useful in regenerating the soil's capability for absorbing the effluent. Alternating fields can sometimes be used where the percolation rate is extremely slow. These alternate fields can be either interlaced or each field can occupy a separate area. The length of time each field will be used and then rested shall be determined on a case-by-case basis.

2) Elevated Mound System (Wisconsin Design or University of North Carolina Design)

The elevated mound system can sometimes be used in the presence of a soil of poor permeability, with a percolation test of 60-120 minutes per inch, or where groundwater or an impervious rock stratum occurs at shallow depths. The elevated mound system is simply a mound of sandy fill material placed on the surface of the ground. This sandy material serves as a physical and biological medium in which the sewage effluent is filtered and treated before being absorbed into the natural soil. Figure H-1 shows some of the construction detail of the Wisconsin Mound.

3) Controlled Fill System

Controlled Fill Systems can sometimes be used where groundwater or an impervious rock stratum occur at shallow depths. The fill material shall be chosen to be compatible with the original soil. The fill material will serve as a physical and biological medium in which the sewage effluent is filtered before being absorbed into the natural soil.

The fill material shall be installed in eight-inch lifts and compacted in a manner which will promote stability of the

soil, but will still allow adequate percolation of the effluent.

Figures H-2 and H-3 show some of the construction details of this system.

4) Aerobic Treatment

Any of the above soil disposal fields can be used in conjunction with any Board-approved aerobic treatment tank instead of the standard septic tank.

APPENDIX H

ELEVATED MOUND (WISCONSIN DESIGN)

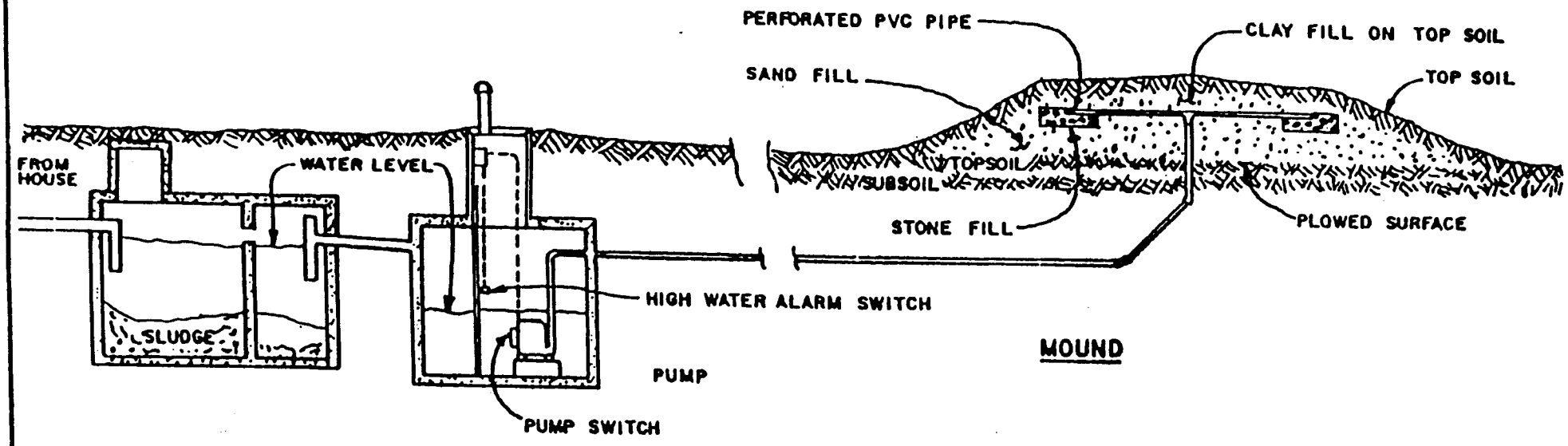


FIG. H-1

TYPICAL DISPOSAL AREA IN CONTROLLED FILL

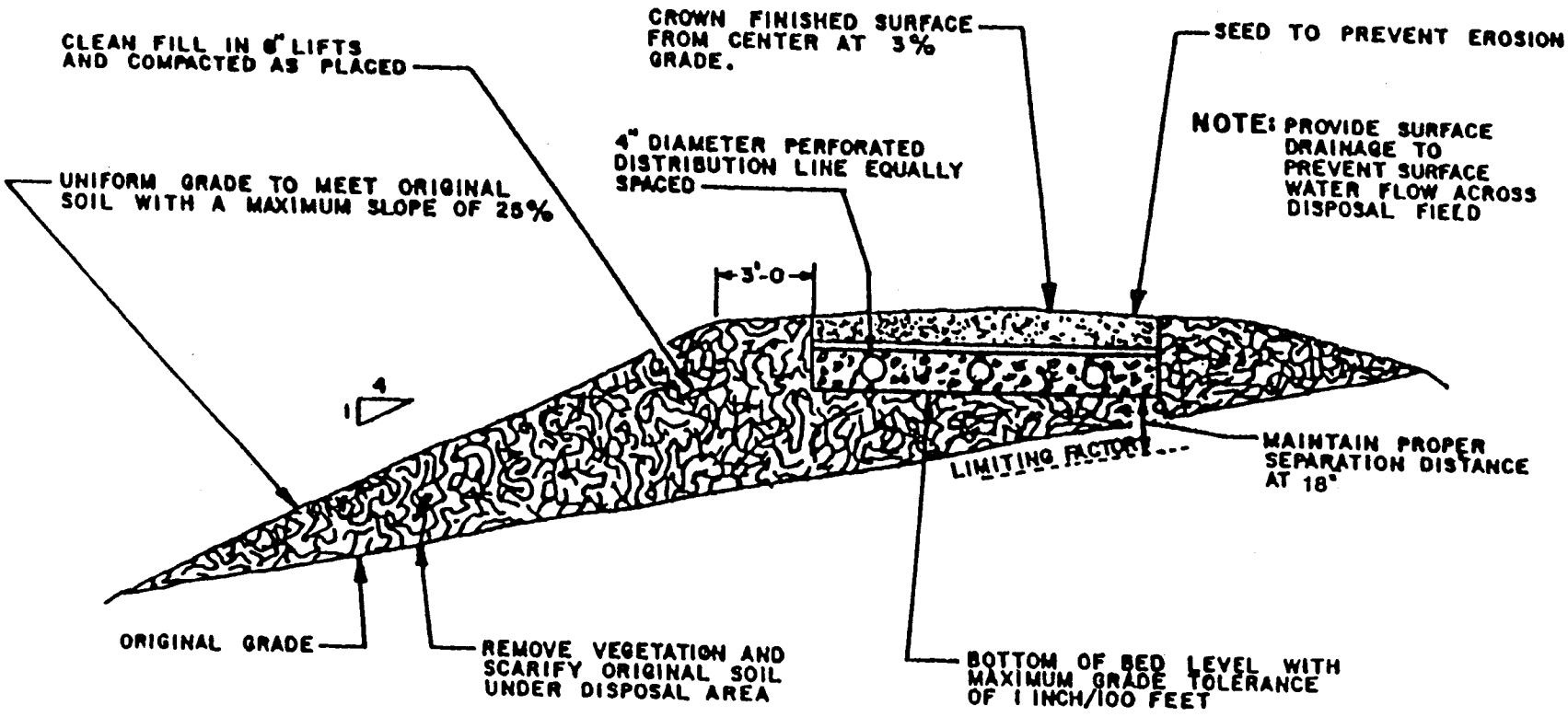


FIG. H-2

APPENDIX H

APPENDIX H

TYPICAL DISPOSAL AREA IN CONTROLLED FILL

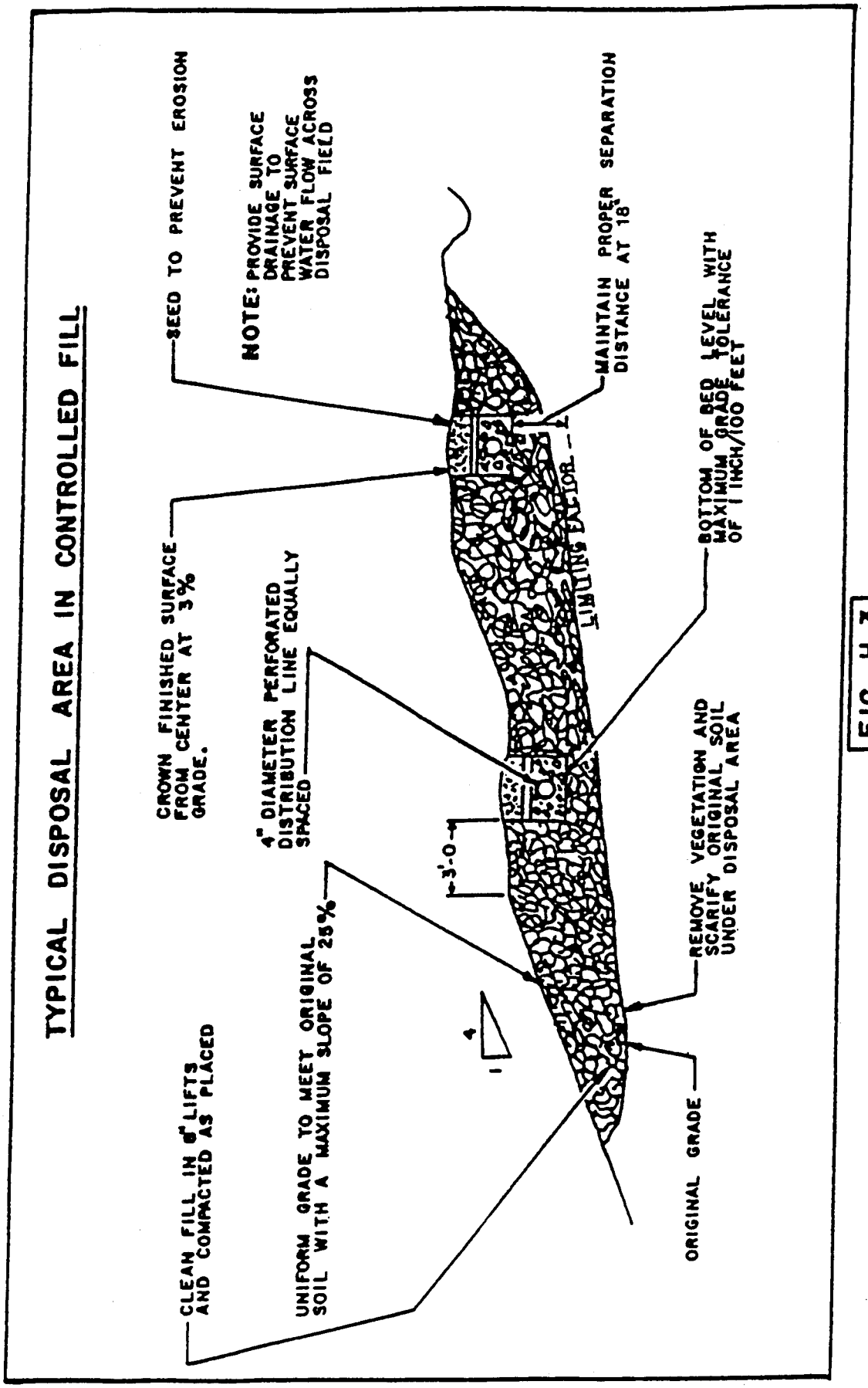


FIG. H-3

APPENDIX I

Minimum Spacing of Trenches* Based on Width of Trench And Slope Over Area of Drainfield

Trench Width	18"	24"
Slope	Spacing of Trenches	
26 - 30%	102"	96"
31 - 40%	114"	108"

*Note - Spacing sidewall to sidewall

Minimum Trench Depth Based On Slope

Slope	Depth
26 -30%	28"
31 - 40%	33"

APPENDIX J

ORGANIC LOADING RATES

Type of Establishment	Organic Loading Rates Pounds/BOD_5 Per Person Per Day (Unless Otherwise Noted)
Residential	
Hotels, motels, and rooming houses	0.15
Single family dwellings, multifamily dwellings, or apartments (per unit) (2 bedrooms or less)	0.68*
(3 bedrooms or more) (per bedroom)	0.34*
*Note: If garbage grinders are installed, multiply organic loading rate by 1.5	
Commercial	
Airports (per passenger-not including food)	0.02
Airports (per employee)	0.05
Bus service areas not including food	0.02
Day workers at offices	0.05
Drive-in theaters (not including food-per space per day)	0.02
Factories and plants (exclusive of industrial wastes) per shift	0.05
Movie theaters (per auditorium seat-not including food)	0.02
Restaurants (employees)	0.05
Restaurants (kitchen wastes per meal served)	0.03**
Work or construction camps	0.15
**Note: If the restaurant has a garbage grinder, add 0.03 pounds per meal.	
Institutional	
Churches (per auditorium seat-not including food)	0.02
Hospitals (staff and patients)	0.30
Schools, boarding	0.17
Schools	0.04
Schools (with cafeteria)	0.05***
Schools (with cafeteria, gym and showers)	0.06***
***Note: If cafeteria has garbage grinder, add 0.01 pounds per person.	
Recreational	
Camps, day (no meals served)	0.05
Camps, resort	0.17
Camps (night and day) with limited plumbing	0.15
Camps (tourist) trailer or campground with individual sewer hookups (per space)	0.17
Camps, (tourist) trailer or campground (per space)	0.15
Fairground and parks, picnic-with bathhouses, showers, and flush toilets	0.05
Fairgrounds and parks, picnic (toilet wastes only)	0.02
Marinas (toilet wastes only, per boat slip)	0.10
Marinas-with bathhouses, showers and flush toilets (per boat slip)	0.15
Swimming pool and bathhouses	0.03

APPENDIX K

REQUIREMENT FOR GRAVEL-LESS SEEPAGE SYSTEMS

Trench bottom - minimum width.....18 inches

Trench bottom - maximum width.....24 inches

Trench bottom - minimum depth.....18 inches

Trench bottom - maximum depth.....42 inches

Trench backfill - minimum overpipe.....12 inches

Effluent distribution line - minimum diameter..8-inch I.D.

Effluent distribution line - maximum diameter.10-inch I.D.

Large diameter effluent distribution lines shall be manufactured in accordance with the following specifications:

1) The 8-inch and 10-inch interior diameter tubing shall be corrugated polyethylene, or similar strength and durability material, meeting the requirements of ASTM-F-667, Standard Specifications, with the following exceptions:

   a. Perforations shall be clearly cut and uniformly spaced along the length of the tubing as follows: two (2) opposing rows of three-eighths (3/8) to one-half (1/2) inch diameter holes located 115 - 125 degrees down from the visible top location marking (each 55 - 65 degrees up from the bottom center line). These perforations should be staggered so that there is only one (1) hole in each corrugation. Holes shall be placed in corrugation "valleys", not in the crown or corrugation sidewall.

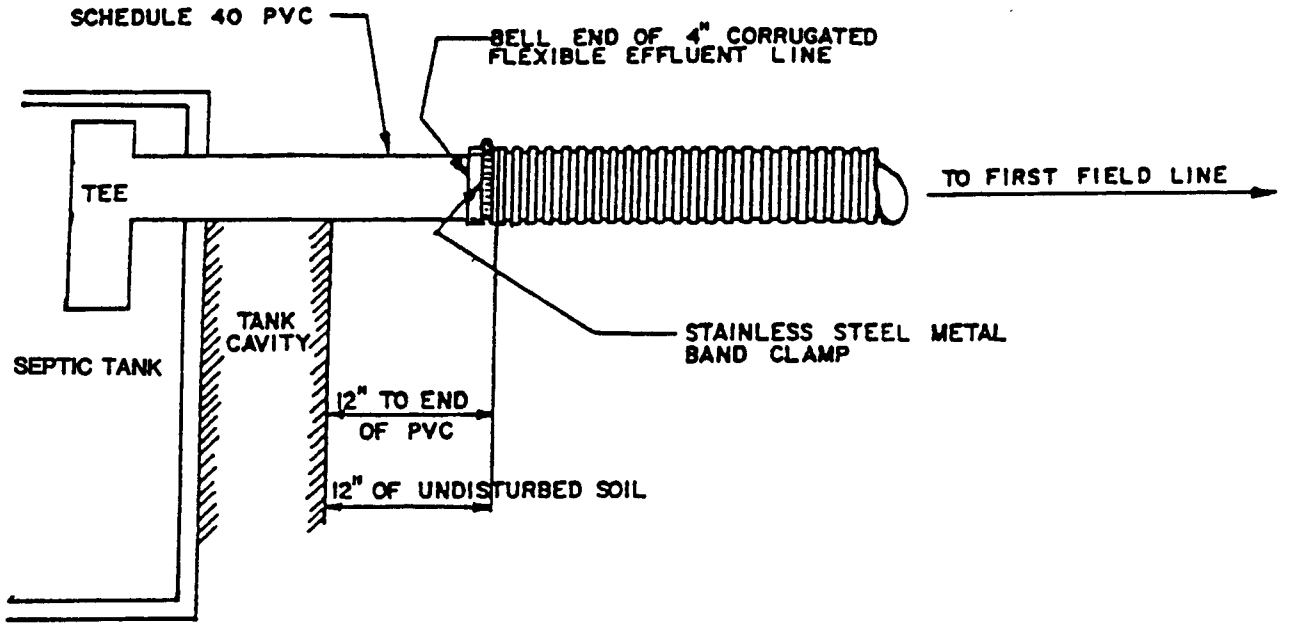
   b. The tubing shall be marked with a visible top location stripe.

2. Filter Wrap - All large (8-inch or 10-inch) diameter effluent distribution lines shall be encased, at the point of manufacture, with a spun bonded nylon, or other material of similar strength and durability filter wrap.

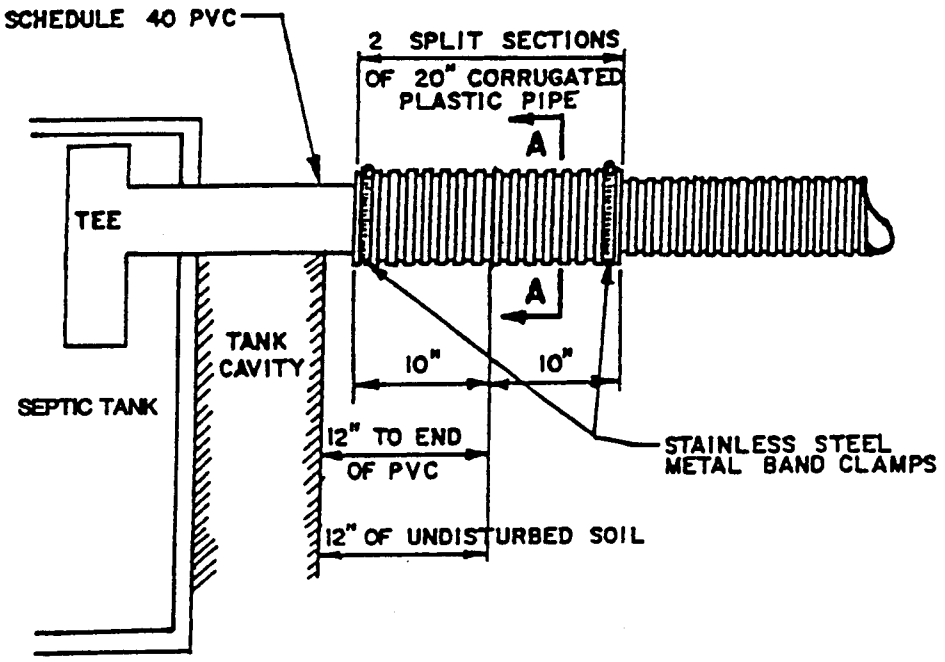
   a. The filter wrap shall be taped or secured to each section of pipe approximately one foot from each end in such a way that the fabric is pulled snugly along the length of the pipe.

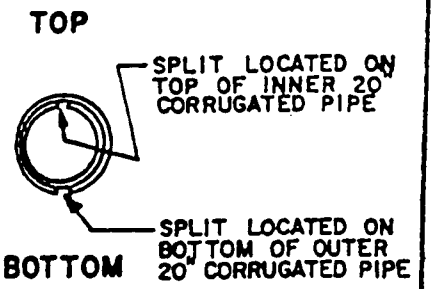
   b. The filter wrap shall be long enough to achieve a six-inch overlap at each coupling or fitting.

APPENDIX L



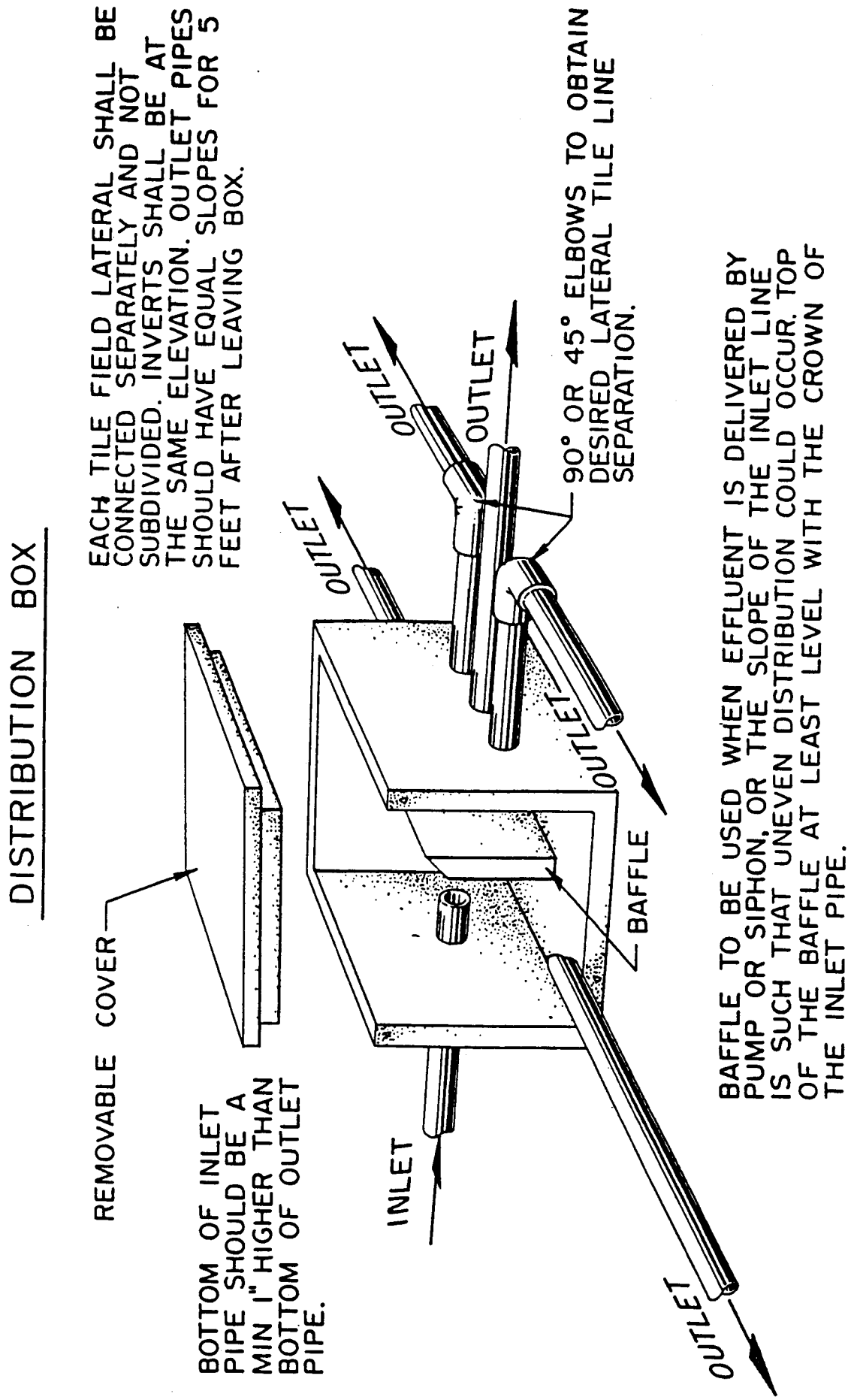
BEFORE 20" SPLIT SECTIONS ADDED





VIEW A-A

AFTER 20" SPLIT SECTIONS ADDED


DISTRIBUTION BOX
EACH TILE FIELD LATERAL SHALL BE CONNECTED SEPARATELY AND NOT SUBDIVIDED. INVERTS SHALL BE AT THE SAME ELEVATION. OUTLET PIPES SHOULD HAVE EQUAL SLOPES FOR 5 FEET AFTER LEAVING BOX.
OUTLET
OUTLET
OUTLET
OUTLET
90° OR 45° ELBOWS TO OBTAIN DESIRED LATERAL TILE LINE SEPARATION.
REMOVABLE COVER
BAFFLE
INLET
BOTTOM OF INLET PIPE SHOULD BE A MIN 1" HIGHER THAN BOTTOM OF OUTLET PIPE.
BAFFLE TO BE USED WHEN EFFLUENT IS DELIVERED BY PUMP OR SIPHON, OR THE SLOPE OF THE INLET LINE IS SUCH THAT UNEVEN DISTRIBUTION COULD OCCUR. TOP OF THE BAFFLE AT LEAST LEVEL WITH THE CROWN OF THE INLET PIPE.

APPENDIX N

INSTALLER'S ONSITE SEWAGE DISPOSAL SYSTEM CERTIFICATION

Name of Company/Installer: _____
Business Address: _____
Telephone Number: ( ) _____

Owner's Name: _____
Present Address: _____
Telephone Number: (_____

Location of This Installation: Lot_____ Block_____

Section_____ Subdivision_____

Other_____

_____

I hereby certify that the onsite sewage disposal system has been installed and completed in accordance with the construction plan and permit issued by the local health department on _____ _____19__ and is in compliance with Chapter 420-3-1, rules covering onsite sewage disposal systems and, when appropriate, plans and specifications for the project.

Installation date: _____

Septic Tank: Size_____, Permit No._____

Aerobic Sewage Tank: Make_____Model_____

Distribution System: ( )Level Header or ( )Serial Distribution

Type of Distribution Lines: ( )Gravel Trench,

( )Gravel-less

Depth of Effluent Distribution Trench _____inches

Width of Trench: ( )18", ( )24", ( )36", OTHER_____

Size of Gravel-Less Pipe If Used: ( )8", ( )10"

Length of Distribution Line Installed From Tank:_____ft.

Separate Washer Line (If Used): _____width_____length

DATE_____19___, SIGNATURE OF INSTALLER_____

APPENDIX O

SITE EVALUATION CRITERIA

Policy

It is the intent of the Department of Public Health to aid and assist the public in the installation of on-site sewage disposal systems, where possible, by utilizing the best information, techniques and soil evaluations for the most suitable system that the site and soil conditions permit.

APPENDIX O

PROCEDURES

Steps To Install An Onsite Sewage Disposal System For A Single Family Dwelling

Step	Procedures	Permit
1.	Obtain an application for a permit to install the system.	Applications are available at all local health departments.
2.	Complete the application and attach a sketch of the site (sketch of the property and surroundings including dimensions, existing sewage and water systems, etc., influencing the location of the proposed sewage system and water supply system, if applicable).	The local environmentalist can assist in preparation of the application, or by providing advice regarding requirements for the sketch/plat.
3.	Submit the application and sketch/plat to the local health department in the county/city in which system is to be installed.	
4.	Make an appointment with the environmentalist to visit the property. (The property lines and the area proposed for the sewage disposal system and building site should be indicated by stakes).	It is recommended that you be present when your local health department evaluates the site and soil.
5.	The environmentalist will evaluate the site and soil, to include reserve area where required.	The environmentalist may require additional information, such as percolation tests, before the system can be designed.
6.	If the soil and site are satisfactory, the environmentalist will issue a permit to install.	If you are denied a permit, ask your local health department about appeal procedures.
7.	Upon presenting the sewage disposal system construction permit to the installer, you may proceed to construct the sewage disposal system.	
8.	The local health department must inspect and approve the sewage disposal system before it is covered and before an operation permit is issued and the system is placed in service. If an individual water supply is constructed in conjunction with the sewage system, it, too, must be inspected and approved before the operation permit is issued.	Before you release your contractor(s) from his/her obligation to install the system properly, insist on receiving the local health department's written approval, including the contractor's completion statement.
9.	In the event the system fails to operate satisfactorily, contact your local health department, where assistance can be obtained.	Sewage disposal systems require maintenance, and a septic tank will usually need cleaning every three to five years.

APPENDIX O

1.00 Site Evaluation Criteria for Effluent Disposal Fields

1.01 General

Soil evaluation for effluent disposal fields shall follow a systematic approach, including consideration of physiographic province, topography, available area, degree of slope, and soil profile (thickness of each horizon, color, permeability, and texture). Evaluations shall indicate whether or not the soil is suitable for the installation of a subsurface soil absorption system. The topography, available area, seasonal water table, drinking water supplies, bodies of water, soil horizon, depth, rate of absorption, or combination of any of the above shall be considered in such evaluation. A percolation test may be required as a prerequisite to the issuance of a permit when the local health department or owner questions the Texture Group.

1.02 Site and Structure Identification - A site plan (sketch) showing dimensions of property, proposed and/or existing structure(s), driveways, underground and overhead utilities on the property, adjacent sewage disposal systems, bodies of water, drainage ways, agricultural drain tile, wells, cisterns and springs for a minimum of 200 feet radius of the center of the proposed building or drainfield is necessary in order to evaluate the suitability of an effluent disposal field for that site. In addition, for new construction, the boundary of the lot and building site shall be staked. As a minimum, prior to issuance of the construction permit, the perimeter of the effluent disposal field site(s) shall be shown on a copy of a surveyed plat of the property. When a parcel of land consisting of a single lot is involved, on which an onsite sewage disposal system is proposed to be located, and is not directly influenced by the off-site location of any onsite sewage disposal system, well, body of water, etc., the requirement for the surveyed plat may be waived by the district or local health department.

1.03 Soil Profiles and Patterns

1.03.01 General - The purpose of determining the soil profiles and patterns is to identify the soil characteristics that affect installation of an effluent disposal field.

1.03.02 Soil Profile - A soil profile is a vertical section of the soil throughout all its horizons.

1.03.03 Profile Holes

a. **Acceptable Equipment**

1. **Auger** - An auger is defined as a mechanical device which is used to remove a soil sample for evaluation. Devices

utilizing the Archimedes screw principle are prohibited because they blend and mask the true soil characteristics.

2. **Other Equipment** - Other equipment may be used in addition to an auger to expose the soil profile, as long as it does not mask or blend the true soil characteristics.

b. **General Location of Profile Holes** - Profile holes to determine design requirements shall be located in the area of the proposed effluent disposal field.

c. **Depth of Profile Hole** - The minimum depth of the profile hole shall be five feet, unless prevented or made unnecessary by some physical feature of the soil such as gray coloration, rock, or when a potential horizon is found at a lesser depth. Where a potential soil horizon is considered for use, the soil evaluation shall be extended below the potential horizon to ensure that there is no interference with seasonal groundwater, rock or impervious strata.

d. **Number and location of Profile Holes** - A minimum of five (5) holes is necessary to determine the design requirements of an area for the placement of effluent distribution trenches. Where there is uniform topography and the profile holes exhibit a uniform profile, a minimum of three (3) holes is necessary. The size of the area investigated shall be based on the soil texture group encountered. As a minimum, holes shall be placed to be representative of the area under consideration for placement of the effluent distribution trenches.

If more than one area is required in which to install the effluent distribution trenches, each area shall be evaluated as described above. If any proposed effluent distribution trench site is found unacceptable due to soil conditions, the site shall have been evaluated with a minimum of three (3) holes which characterize the soil problem(s) and support the reasons for rejection. The actual area and number of holes to be investigated may be more than described above and shall be determined on a case-by-case basis.

e. In situations where a large area is to be evaluated, where the soil is highly variable, where the profile must be exposed below five (5) feet, or where the soil is "tight" (dense or compact) and/or rocky, the local health department may require that the owner have the soil profile in selected areas exposed by the digging of trenches, auger holes or pits. The actual area and number of holes to be investigated shall be determined on a case-by-case basis.

1.03.04 Soil Profile Documentation - Soil profiles shall be determined and a record made in writing of each boring. Additional documentation may be required by the local health department.

1.04 Characteristics of Soils that Determine Suitability

1.04.01 Color - Color is a key indication of the suitability of a soil.

a. Gray color or gray mottlings indicate seasonal water tables for at least three weeks' duration.

b. Black color may be due to organic matter which has accumulated due to poor soil drainage.

1.04.02 Texture - The term texture refers to the relative proportion of various size groups of individual soil grains in a mass of soil. Specifically, it refers to the proportion of sand, silt, and clay.

a. **Soil Classification** - For the purpose of these rules, soils have been categorized into four groups based on texture as follows:

1. Texture Group I - sands, and loamy sand;
2. Texture Group II - sandy loam, loam, and sandy clay loam;
3. Texture Group III - silt loam, clay loam, silty clay loam; and
4. Texture Group IVa - sandy clay, silty clay and clay
5. Texture Group IVb - clays (montmorillonite or mixed mineralogy) - These clays are unsuitable for conventional effluent disposal fields.

b. The soil texture shall be estimated by field testing. The field test that shall be applied is contained in Appendix O and is entitled Field Guide to Soil Texture Classes. Laboratory estimation of texture by sieve and sedimentation analysis may be substituted for the field test at the owner's request and expense. Samples shall be collected by the laboratory under supervision of the district or local health department.

1.04.03 Permeability - The term permeability pertains to the characteristics of the soil that enable water or air to move through its pores. The permeability of a soil profile may be limited by the presence of one nearly impermeable horizon, even though the others are permeable.

a. **Estimated rates** - The soil classifications contained in subsection 1.04.02a have been assigned the following in 1.05.01 for the purposes of design. These rates may be modified by the Board when experience has shown that, because of soil structure, the texture group has a demonstrated rate different from that assigned.

b. **Percolation Tests** - When the soil texture groups are in question, percolation tests may be performed.

1.04.04 Soil Restrictions - A soil restriction is a feature in the soil that impedes the percolation of water. Restrictions generally consist of a layer or soil horizon within a soil that is firmly compacted or is very rich in clay. Soils containing restrictions may require verification of the percolation rate by percolation tests. In addition, soil restrictions in themselves may form the basis for outright rejection of the site. Examples of restrictions are listed below.

a. **Pans** - the term pans include hard pans, fragipans, clay pans, plowpans, traffic pans, iron pans and plinthic horizons.

b. **Stoniness** - The term stoniness pertains to the relative proportions of stone present in a soil. Stoniness reduces the soil volume for absorption, and, therefore, may require a larger subsurface soil absorption field than would be indicated by soil texture.

1.04.05 Soil Concretions - Soil concretions are hard grains, pellets, or nodules from concentrations of compounds in the soil that cement the soil grains together. Concretions are indicative of slow percolation rates, restrictions, and/or seasonal water tables.

1.04.06 Free-Standing Water - The presence of free-standing water in a profile hole may be grounds for rejection of the site.

1.04.07 Shrink-Swell Soils - When soils containing horizons with shrink-swell characteristics have been identified, they shall be rejected for use for subsurface soils absorption systems. Shrink-swell soils may exhibit satisfactory percolation rates when dry and therefore must be thoroughly wetted before a percolation test is performed.

1.05 Availability of Suitable Soils - Sufficient suitable soils shall be available to install the subsurface soil absorption system and alternate area. Design criteria for subsurface soil absorption systems are contained in 1.05.01.

APPENDIX O

MINIMUM REQUIREMENTS OF EFFLUENT DISPOSAL FIELD LINES

Soil Texture Group	Single Family Dwellings								Estimated Effluent Disposal Field Loading Rate (Sq. Ft/Gal./Day)
	Primary Disposal Fields				Separate Washer Line				
	square feet per bedroom	linear feet/bedroom			square feet per bedroom	linear feet/bedroom			
		18" width	24" width	36" width		18" width	24" width	36" width	
I	170	113.3	85.0	56.7	34	22.7	17.0	11.3	.84 to 1.14
II	250	166.7	125.0	83.3	50	33.3	25.0	16.7	1.14 to 1.67
III	330	220.0	165.0	110.0	66	44.0	33.0	22.0	1.67 to 2.20
IVa	675	450.0	337.5	225.0	135	90.0	67.5	45.0	2.20 to 4.5
IVb	Unsuitable for conventional effluent disposal fields.								

2.00 General Requirements

2.01 General - The criteria contained in this section shall apply to onsite sewage disposal systems.

2.02 Site Preparation and Alteration

2.02.01 Preservation of Soil Structure - The preservation of the original structure of the soil in the area selected for placement of the effluent distribution trenches is essential to maintaining the percolative capacity of the soil.

a. **Prohibition on Construction** - Effluent disposal fields shall not be constructed in Texture Group III and IV soils during periods of wet weather when the soil is sufficiently wet at the depth of installation to exceed its plastic limit. For the purpose of these rules, the plastic limit of a soil shall be considered to have been exceeded when the soil can be rolled between the palms of the hands to produce threads 1/8 inch in diameter without breaking apart and crumbling.

b. **Soil Compaction** - Special caution shall be taken in allowing wheeled and tracked vehicles to traverse the area selected for placement of the effluent disposal fields before, during and after construction of the trenches, especially during wet weather. Precaution is especially important where Texture Group III and IV soils are involved. Alteration of soil structure by movement of vehicles may be grounds for rejection of the site and/or system.

c. **Soil Smearing** - Excavating equipment utilized to construct the effluent disposal field shall be so designed as not to compress or smear the side walls or bottom of the system. Excessive smearing of the usable effluent distribution trench sidewalls or bottom during construction may result in irreversible damage to the soil infiltrative surface and may be grounds for rejection of the site and/or system.

APPENDIX O

Field Guide To Soil Texture Classes (USDA)

Introduction - The purpose of this test is to provide a standard procedure for estimating soil texture in the field. The texture is estimated by the "feel" of the moist soil. The texture of a soil cannot be estimated by "feel" if it is either dry or wet.

Definitions

Particle Size Classes

-**Sand** - Sand has a particle size ranging from 0.05 millimeters (mm) to 2.0 mm in diameter. Sand imparts a gritty feel to soil due to the shape of the individual particles.

-**Silt** - Silt has a particle size ranging from 0.002 mm to 0.05 mm in diameter. When moist, silt has a floury feel and does not ribbon when pressed between the thumb and forefinger due to the shape of the individual particles. When placed between the teeth, silt has a gritty feeling.

-**Clay** - Clay has a particle size less than 0.002 mm in diameter. Clay exhibits collodial properties, has a negative charge, and is flat and platelike in shape. Moist clay is sticky and will ribbon readily when pressed between the thumb and forefinger. When placed between the teeth, clay has a smooth, slick feeling.

-**Soil Texture** - Soil texture refers to the relative proportions of sand, silt and clay particles in a soil material that has a particle size less than two (2) mm in diameter. Soil texture is an indicator of infiltration capacity, permeability, degree of aeration and drainage, as well as other physical characteristics of a soil material.

-**Soil Texture Classes** - The United States Department of Agriculture (USDA) has identified 12 soil texture classes as follows: sand, loamy sand, sandy loam, sandy clay loam, loam, silt loam, silt, silty clay loam, clay, clay loam, sandy clay and silty clay. Each texture class has a distinctive characteristic(s) which can be estimated in the field by trained personnel.

Distinguishing Characteristics - The following characteristics are based on moist soil:

-**Sand** - Sand has a gritty feel, does not stain the fingers and does not form a ball when moist.

-**Loamy Sand** - Loamy sand has a gritty feel, stains the fingers (silt and clay) and forms a weak ball, but cannot be handled without breaking.

-Sandy Loam - Sandy loam has a gritty feel, and forms a ball that can be picked up with the fingers and handled with care without breaking.

-Loam - Loam may have a slightly gritty feel, but does not show a finger print and forms only short ribbons of from 0.25 inch to 0.50 inch in length. Loam will form a ball that can be handled without breaking.

-Silt Loam - Silt loam has a floury feel when moist and will show a finger print, but will not ribbon and forms only a weak ball.

-Silt - Silt has a floury feel when moist and sticky when wet, but will not ribbon and forms a ball that will tolerate some handling.

-Sandy Clay Loam - Sandy clay loam has a gritty feel, but contains enough clay to form a firm ball and may ribbon to form 0.75 inch to one-inch pieces.

-Silty Clay Loam - Silty clay loam is sticky when moist and will ribbon from one (1) to two (2) inches. Rubbing silty clay loam with the thumb nail produces a moderate sheen. Silty clay loam produces a distinct finger print.

-Clay Loam - Clay loam is sticky when moist. Clay loam forms a thin ribbon of one (1) or two (2) inches in length and produces a slight sheen when rubbed with the thumb nail. Clay loam produces a nondistinct finger print.

-Sandy Clay - Sandy clay is plastic, gritty and sticky when moist, and both forms a firm ball and produces a thin ribbon to over two (2) inches in length.

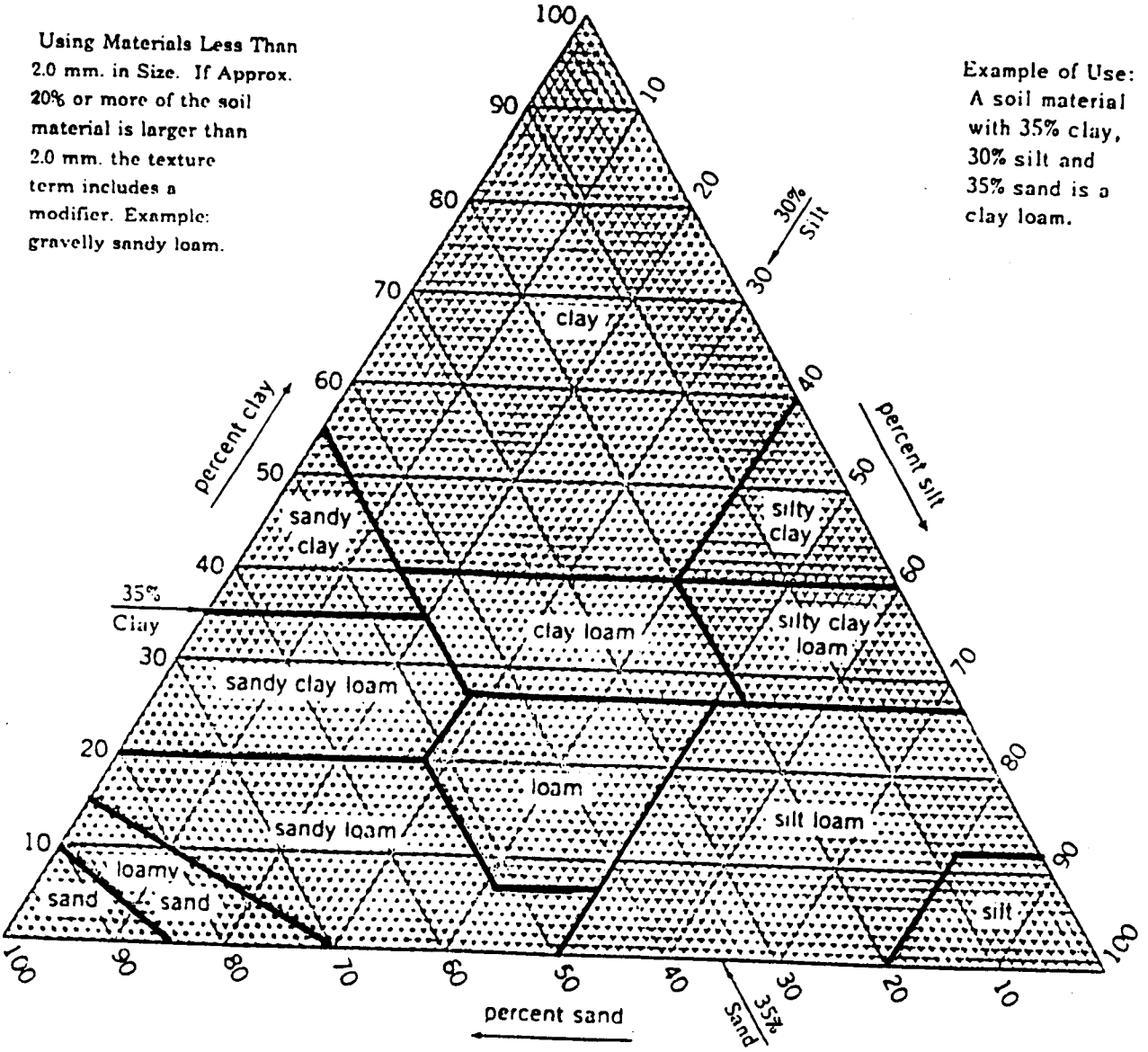
-Silty Clay - Silty clay is both plastic and sticky when moist and lacks any gritty feeling. Silty clay forms a firm ball and readily ribbons to over two (2) inches in length.

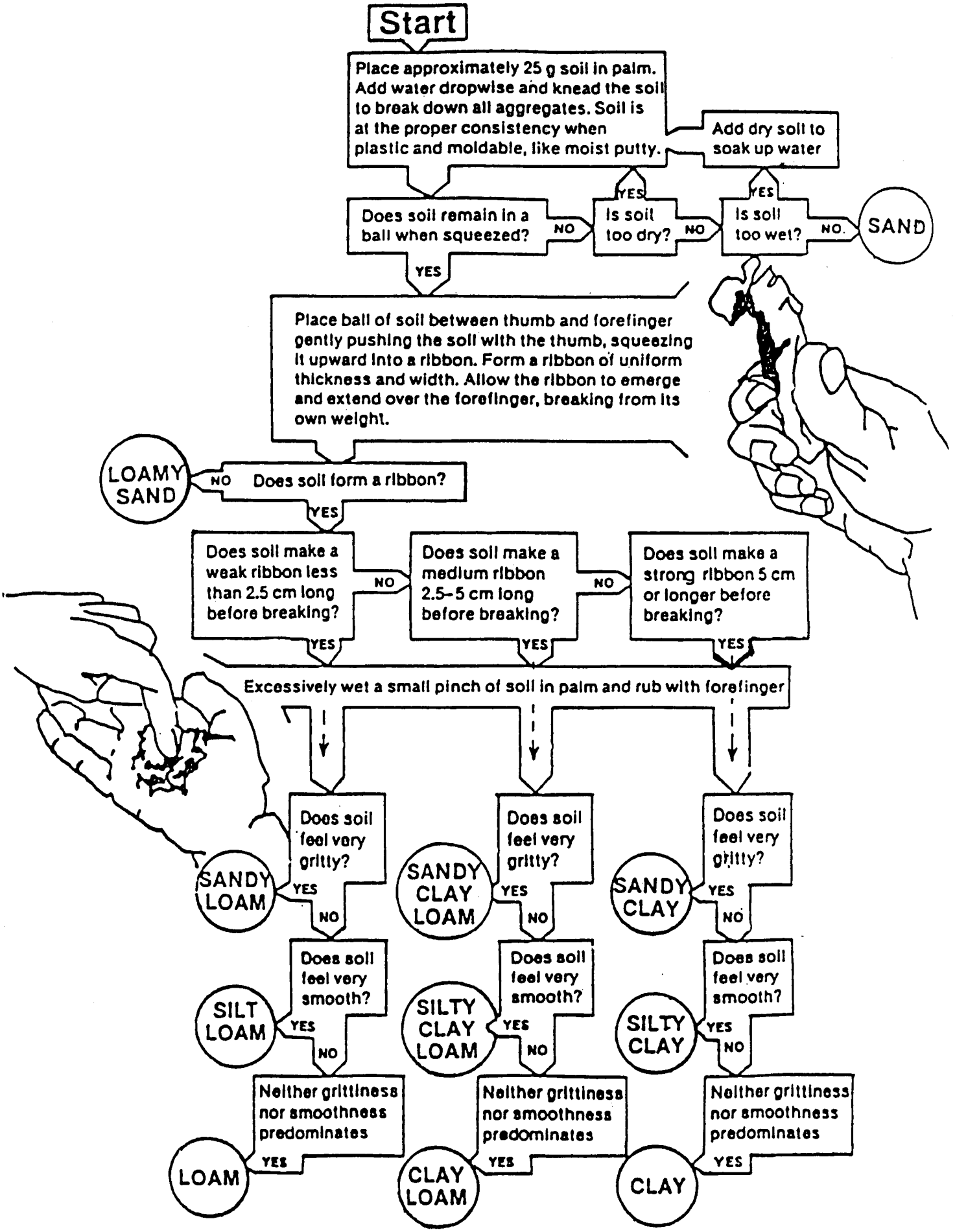
-Clay - Clay is both sticky and plastic when moist, produces a thin ribbon over two (2) inches in length, produces a high sheen when rubbed with the thumb nail, and forms a strong ball resistant to breaking.

GUIDE FOR USDA SOIL TEXTURAL CLASSIFICATION

Using Materials Less Than 2.0 mm. in Size. If Approx. 20% or more of the soil material is larger than 2.0 mm. the texture term includes a modifier. Example: gravelly sandy loam.

Example of Use: A soil material with 35% clay, 30% silt and 35% sand is a clay loam.





Instructional diagram for determining soil texture by feel.

Rules
Of
State Board Of Health
Bureau Of Environmental Services
Division Of
Community Environmental
Protection

Chapter 420-3-5
SOLID WASTE
COLLECTION AND DISPOSAL

Adopted by the State Board of Health
June 15, 1988
Effective Date
July 25, 1988

RULES
OF
STATE BOARD OF HEALTH
BUREAU OF ENVIRONMENTAL AND HEALTH SERVICE STANDARDS
DIVISION OF ENVIRONMETNAL HEALTH, GENERAL SANITATION BRANCH

CHAPTER 420-3-5
SOLID WASTE COLLECTION AND DISPOSAL

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420-3-5-.01 Purpose. The purpose of these Rules is to provide for the regulation of the issuance of Certificates of Exception, the closing of unapproved disposal sites, the storage of solid waste, the permitting of solid waste collectors and their equipment, the operational procedures for treatment and processing facilities, the establishment of semisolid waste landfarming sites, the elimination of tire dumps, the establishment and operation of tire storage sites, the transportation of solid wastes generated outside the territories assigned by the governing bodies and solid wastes transported by rail, air, water, or overland by vehicle in order to protect the public health.

420-3-5-.02 Statutory Authorizations. The Board of Health is authorized to promulgate these Rules under and by virtue of authority granted in the Code of Ala., 1975, Sections 22-2-2(6); 22-10-1, et seq; and 22-27-1, et seq.

420-3-5-.03 Definitions. For the purpose of these Rules the following words and phrases shall have the meanings ascribed to them in these Rules and as ascribed by law unless the context of the Rules indicate differently.

(1) Act - the "Solid Wastes Disposal Act", Act No. 771, (Regular Session, 1969), as amended, by Act No. 2247 (Regular Session, 1971) Code of Ala., 1975, Section 22-27-1 et seq.

(2) Baling - a volume reduction technique whereby solid waste is compressed into bales for transporting and for final disposal.

(3) Bedrock - the solid rock underlying unconsolidated surface materials such as soil. Boulders and soft sandstone, which are capable of being removed or easily ripped with conventional backhoe equipment, will not be considered as being bedrock.

(4) Board - the State Board of Health as constituted by Code of Ala., 1975, Section 22-2-1, and includes the Committee of Public Health or State Health Officer when acting as the Board.

(5) Certificate of Exception - a permit issued to the applicant for disposal of his household solid waste by either burial on a site approved for such use and control by the applicant or by transporting of such waste to an approved sanitary landfill by the applicant.

(6) Collectors - persons as defined herein who, under written agreements do the work of collecting and/or transporting solid wastes from industries, offices, retail outlets, businesses, institutions, and/or similar locations, or from residential dwellings, provided however, that this definition shall not include an individual collecting and/or transporting waste from his own single family dwelling unit.

(7) Composting or Compost Plant - an officially controlled method or operation whereby putrescible solid wastes are broken down through microbic action to a material offering no hazard or nuisance factors to public health or well-being.

(8) Contaminant - any substance or combination of substances introduced into groundwater so as to:

(a) Cause the maximum allowable contaminant levels established in the Alabama Primary Drinking Water Standards adopted by the Alabama Department of Environmental Management (ADEM) with the concurrence of the Board to be exceeded in any groundwater.

(b) Cause an increase in the concentration of that substance in the groundwater where the existing concentration of

that substance exceeds the maximum contaminant level specified in the Alabama Primary Drinking Water Standards adopted by the Alabama Department of Environmental Management with the concurrence of the Board.

(c) Cause the groundwater to be unusable for human or animal consumption as determined by the Board.

(9) Crops For Direct Human Consumption - crops that are consumed by humans without processing to minimize pathogens prior to distribution to the consumer.

(10) Elements - weather conditions caused by activities of air, water, fire, and earth.

(11) Facility - any land and appurtenances thereto used for the processing, treatment, or disposal of solid waste.

(12) Facility Structures - any buildings and sheds or utility or drainage lines on the facility.

(13) Garbage - putrescible animal and vegetable wastes resulting from the handling, preparation, cooking and consumption of food, including wastes from markets, storage facilities, handling and sale of produce and other food products, and excepting such materials that may be serviced by garbage grinders and handled as household sewage.

(14) Groundwater - water below the land surface in the zone of saturation.

(15) Incineration - the process of burning solid, semisolid or gaseous combustible wastes to an inoffensive gas as a residue containing little or no combustible material.

(16) Incorporated Into The Soil - the injection of semisolid waste beneath the surface of the soil or the mixing of semisolid waste with the surface soil.

(17) Landfarming - the incorporation of semisolid waste into the soil to establish a media for biodegradation of the waste or for the purpose of fertilization or soil conditioning.

(18) Landfill - a method of compaction and earth cover of solid wastes other than those containing garbage or other putrescible wastes, including, but not limited to, tree limbs and stumps, demolition material, incinerator residues and like materials not constituting a health or nuisance hazard, where cover need not be applied on a per day used basis.

(19) Local Health Officer - the County, District or Regional Health Officer of a Local Health Department elected in accordance with Section 22-3-2(5)-(6), Code of Ala., 1975, or his designee

provided by law.

(20) Manifest - an invoice of cargo that is transported by rail, air, water, or overland by vehicle.

(21) Nuisance - those things, conditions and acts enumerated in the Code of Ala., 1975, Section 22-10-1.

(22) Open Dump - any officially recognized place, land or building which serves as a final depository for solid wastes, whether or not burned or buried, which does not meet the minimum requirements for a sanitary landfill, except approved incinerators, compost plants and salvage yards.

(23) Permit - a formal written authorization granted to a person by the Board or Local Health Officer, whichever is applicable by these Rules, to operate a solid waste management system for the collection, processing or disposal of solid waste.

(24) Person - any individual, trust, firm, joint stock company, corporation (including a government corporation), partnership, association, State, municipality, commission, political subdivision of the state, any interstate body, or any other private or public legal entity.

(25) Point of Destination - the location at which solid waste transported by rail, air, water or overland by vehicle is off-loaded to be taken to a permitted disposal site.

(26) Practice - any operating method, technique or procedure for the management of solid waste.

(27) Putrescible - solid wastes which are capable of being decomposed by micro-organisms with sufficient rapidity to cause nuisances from odors or gases.

(28) Recycling - the process by which recovered resources are transformed into new products in such a manner that the original products lose their identity.

(29) Rubbish - nonputrescible solid wastes, excluding ashes, consisting of both combustible and noncombustible wastes. Combustible rubbish includes paper, rags, cartons, wood, furniture, rubber, plastics, yard trimmings, leaves and similar materials. Noncombustible rubbish includes glass, crockery, metal cans, metal furniture and like materials which will not burn at ordinary incinerator temperatures, not less than 1600 degrees F.

(30) Sanitary Landfill - a controlled area of land upon which solid waste is deposited and is compacted and covered with compacted earth each day as deposited, with no onsite burning of wastes, and so located, contoured and drained that it will not

constitute a source of water pollution.

(31) Semisolid Waste - any waste (for example, septage, sludges pumped from grease traps or septic tanks) derived from the sedimentation of domestic wastes in onsite sewage disposal systems and containing at least 20 percent solids by weight. Liquids and solids removed from holding tanks where the waste is housed temporarily without treatment until it can be processed in an approved sewage treatment facility shall not be included in this definition. Liquid waste taken from grease traps and septic tanks may be incorporated into the soil to become semisolid waste.

(32) Shredding - the process by which solid waste is cut or torn into small pieces for final disposal.

(33) Sinkhole - a depression in the topography without a surface outlet for drainage from the low point. Sinkholes are common in areas containing limestone and generally result from the collapse of solution cavities.

(34) Soil Boring - a hole of 8 inches or more in diameter excavated into the ground to the required depth through the use of a hand auger, posthole digger or other equipment for the purpose of exposing the soil profile. A backhoe may be used; however, devices utilizing the Archimedes screw principle are prohibited because they blend and mask the true soil characteristics.

(35) Solid Wastes - all putrescible and nonputrescible discarded materials, except household sewage and livestock and poultry wastes, including, but not limited to, garbage, rubbish, ashes, street and highway cleanings, dead animals, including offal, abandoned automobiles and such industrial wastes as are not controlled by other agencies. This definiton shall include semisolid waste.

(36) State - the State of Alabama.

(37) State Health Department - the Alabama Department of Public Health as defined by Section 22-2-1, Code of Ala., 1975.

(38) State Health Officer - the Health Officer for the State of Alabama as set out in Section 22-2-8, Code of Ala., 1975, or his designee provided by law.

(39) Unauthorized Dump - any collection of solid wastes either dumped or caused to be dumped or placed on any property either public or private, whether or not regularly used, and not under the control and supervision of any person or agency. An abandoned automobile, large appliance or similar large item of solid waste shall be considered as forming an unauthorized dump within the meaning of this article, but not the careless

littering of smaller individual items as tires, bottles, cans and the like. An unauthorized dump shall also mean any solid waste disposal site which does not meet the regulatory provisions of this article.

(40) Unit - the smallest containment housing that collectively makes up the whole of a shipment, into which solid waste is placed for transporting by rail, air, water, or overland by vehicle. This would include but not be limited to a single trailer load of compacted, loose-filled, or baled solid waste; a container into which solid waste is placed in compacted, loose-filled or baled form; a railroad car into which solid waste is placed in compacted, loose-filled or baled form; or a barge filled with solid waste that is in compacted, loose-filled, or baled form.

(41) Vector - An agent, such as an insect, snake, rodent, or animal capable of mechanically or biologically transferring a pathogen from one organism to another.

(42) Washout - the carrying away of solid waste or earth cover by waters of the base flood.

(43) Waters - all waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the state, natuaral or artificial.

(44) Water Table Elevation - the upper limit of the portion of the ground wholly saturated with water.

420-3-5-.04 Limitations. Nothing in these Rules shall be construed to limit the authority of municipal and county governments, or solid waste authorities from adopting more stringent solid waste management requirements than those set forth in these Rules.

420-3-5-.05 General. All solid waste shall be stored, collected, separated, processed, recycled, recovered, incinerated, transported, shredded, ground, baled, composted, reclaimed, and disposed of in a manner consistent with the requirements of these Rules or covered by an exception under Rule 420-3-5-.06 in order to prevent the creation of a nuisance, insanitary condition, or a potential health hazard. In determining whether a solid waste constitutes an endangerment to the public health, the Board or Local Health Officer shall consider both thequantity and quality of the solid waste, the location of the disposal site, vectors present, and other factors which would warrant special concern.

420-3-5-.06 Certificate of Exception. These Rules specify the method of obtaining a Certificate of Exception for any householder who meets the minimum requirements and who chooses to

store, transport and dispose of his own household solid waste on his land or transport his solid waste to a sanitary landfill. A Certificate of Exception shall be valid for one year as long as the conditions under which the certificate was issued do not change.

(1) An individual householder who wishes to obtain a Certificate of Exception to dispose of his own household solid waste on his property or the property of another and who wishes to be excepted from solid waste services that may be offered by a governmental or permitted private agency shall apply to the Local Health Officer and use approved methodology for the storage, transporting, and disposal of his waste pursuant to these Rules.

(a) The request for a Certificate of Exception from an individual householder for utilizing his proposed solid waste disposal site shall be made on forms provided by the Board and the forms shall be prepared and signed by an engineer or land surveyor currently holding a license to practice in the State of Alabama.

(b) In the preparation of the forms for submittal, the collection of required information, and the design of the solid waste disposal site for the householder the engineer or land surveyor shall take into consideration the following items:

1. A statement shall be included describing the method that will be used by the householder to excavate and cover the disposal site.

2. The location of the proposed disposal site shall be indicated on a detailed sketch of the property drawn to scale and giving all pertinent distances from the site to property boundaries, inhabited dwellings, wells, springs, waters and other features, such as strip pits, that might have an impact upon the site location.

3. A copy of a legally executed easement with the other property owner shall be included if the waste is to be disposed of on property other than that owned by the applicant. It is the responsibility of the holder of a Certificate of Exception to possess or acquire a sufficient interest in or right to the use of the property for which the Certificate is issued, including the access route thereto.

4. The results of two soil borings made at the proposed location for disposal and indicating the depth to groundwater or bedrock if either is encountered shall be submitted. The soil boring shall be 8 inches in diameter or larger and must be made available for inspection upon the request of the Local Health Officer. The soil borings shall be dug to a depth of 5 feet below the proposed bottom elevation of the trench to be excavated

for burial of solid waste. The location of the soil borings and the results from each shall be shown on the sketch of the property.

5. Disposal sites for individual householders shall not be permissible in wetlands, beaches or dunes and where the soils surrounding and underlying the disposal site are predominantly sand or gravel.

6. An individual householder must own, or have available to him through ownership or by a legally executed easement, 5 acres or more of property on which a suitable disposal site can be found in order to qualify for a Certificate of Exception.

7. Refuse and garbage shall be covered with 6 inches or more of compacted earth each time the disposal site is used.

8. The disposal site shall be located so as not to be subject to washing by surface water drainage, flooding or washout or to posing a potential contamination source for surface water and groundwater.

9. The disposal site shall not be less than 300 feet horizontally from a potable water well or waters. The disposal site should be located down gradient from existing or proposed potable water wells to minimize the possibility of contamination.

10. The location and operation of the disposal site shall not cause a nuisance or health hazard.

11. The disposal site shall not be located within 300 feet of a sinkhole.

12. The maximum depth of excavation in creating a depression for disposal purposes shall not exceed 5 feet unless approved beforehand by the Board.

13. The minimum depth to the watertable elevation or bedrock shall be 5 feet below the undisturbed ground level on which the solid waste is first deposited.

14. A minimum separation distance of 150 feet shall be maintained between the disposal site and any property boundary; likewise, a distance of 300 feet shall be maintained between the disposal site and any inhabited dwelling existing at the time the request is filed and which is not owned by the householder making the request.

15. Open burning of solid waste at the disposal site shall be prohibited.

16. The holder of a Certificate of Exception for the operation of a disposal site for his solid waste cannot accept

solid waste from any other generator or source to dispose of at the site.

17. The earth cover over completed areas of the disposal site shall be a minimum of 2 feet deep. The earth cover shall be of a quality to be easily managed and with sufficient clay content to provide an adequate seal on the landfilled wastes.

18. A vegetative cover shall be established and maintained over each completed area, that has been filled to the existing or design elevation, to prevent erosion.

19. The maximum ground slope at a proposed site shall not exceed 10 percent.

20. A drawing showing the proposed dimensions of the excavated disposal site shall be submitted. Design calculations utilized in computing the volume of solid waste to be disposed shall also be included. The site should be designed to hold a minimum of one year's wastes.

21. A Soil Conservation Service soil map shall be submitted for the area where the disposal site is to be located. The location of the site shall be indicated on the map and a description of the soils underlying the site shall be given.

(2) An individual householder who wishes to dispose of his own household solid waste by transporting such waste to a sanitary landfill shall apply for a Certificate of Exception to the Local Health Officer and use methodology for the storage, transporting and disposal of his waste pursuant to these Rules.

(a) The request for a Certificate of Exception from an individual householder shall be made on forms provided by the Board and shall include the following information as minimum requirements:

1. The name and location of the sanitary landfill that will receive the waste shall be indicated on the form(s).

(b) The householder shall not reduce the volume of his solid waste to be transported to a sanitary landfill by burning.

420-3-5-.07 Unapproved Disposal Sites/Open Dumps and Unauthorized Dumps. Any open dump or unauthorized dump shall be considered by the Board and Local Health Officer to constitute a nuisance menacing public health and to be unlawful by virtue of authority as enumerated in the Code of Ala., 1975, Section 22-2-14 and Sections 22-10-1 through 22-10-3 and the person owning property upon which a dump is found or a person creating or maintaining such a dump shall be subject to the following requirements:

(1) Immediately, upon written notification by the Board or Local Health Officer, pursue a course of action to convert or have others to convert the dump into an approved solid waste disposal site or close the dump in accordance with the following:

(a) Discontinue the use of the dump by complying with those requirements of the Alabama Department of Environmental Management for the closing of such dumps.

420-3-5-.08 Solid Waste Storage. This section is applicable to all individual householders, private, public, commercial, and industrial storage systems.

(1) All solid waste shall be stored in such a manner that it does not constitute a nuisance or health hazard or provide food or harborage for animals and vectors, and shall be contained or bundled so as not to result in litter. It shall be the responsibility of the occupant of a residence or the owner or manager of an establishment to utilize a storage system that will include containers of adequate size and strength, and in sufficient numbers, to contain all solid waste that the residence or other establishment generates in the period of time between collections or disposal by other approved methods.

(2) Solid waste containing putrescible materials shall be collected and transported to a disposal facility at a frequency adequate to prevent propagation and attraction of vectors and the creation of a public health nuisance but in no case shall the waste be stored for more than one week prior to being transported to a disposal facility.

(3) Garbage shall be stored in:

(a) Rigid containers that are of a size or weight that can easily be lifted by a collector, durable, rust resistant, nonabsorbent, watertight, and rodent proof. The container shall be easily cleaned, fixed with close fitting lids, fly-tight covers, provided with suitable handles or bails to facilitate handling, and equipped with disposable liners made of reinforced kraft paper or polyethylene or other similar material designed for storage of garbage.

(b) Nonrigid disposable bags designed for storage of garbage. The bag shall be provided with a wallhung or free standing holder which support and seals the bag; prevents insects, rodents, and animals from access to the contents; and prevents rain and snow from falling into the bag.

(c) Other types of containers that meet the requirements of this section or are acceptable to the Board.

(4) Rubbish shall be stored in durable containers or as otherwise provided in Rule 420-3-5-.08(5). Where garbage is

stored in combination with rubbish, containers for the storage of the mixture shall meet the requirements for garbage storage.

(5) Rubbish too large or otherwise not suitable for storage in containers shall be stored in a nuisance-free manner consistent with requirements of these Rules.

420-3-5-.09 Permitting of Solid Waste Collectors. Persons engaging in the collection and transportation of solid waste are subject to the following requirements:

(1) No person shall collect or transport solid waste without a permit issued by the Board or Local Health Officer, renewable annually at the time licenses are due.

(2) All mutual agreements or contracts entered into by a county commission or public authority for the collection and transporting of solid waste to a sanitary landfill or other approved means for disposal shall be subject to review by the Board or Local Health Officer, and all such contracts and agreements shall be subject to cancellation upon 30 days notice from the Board or Local Health Officer any time said contracts or agreements fail to be in the best interest of the health of the citizens residing in the affected area(s).

(3) No governing body may assign territories to a collector(s) or approve or disapprove of the disposal site(s) to receive the waste without the concurrence of the Board or Local Health Officer.

(4) No license shall be granted to a collector or fee collected by a collector until he has been issued a permit by the Board or Local Health Officer.

420-3-5-.10 Solid Waste Collector Responsibilities. The following responsibilities apply to any person who collects or transports solid wastes:

(1) The person operating the collection system shall provide for prompt clean up of all spillages caused by the collection operation.

(2) The person operating the collection system shall provide for prompt collection of any waste materials lost from the collection vehicles along the route to a disposal area or processing facility.

(3) A solid waste collector shall be responsible for the satisfactory collection and transportation of all solid waste to an approved treatment, processing or disposal facility.

(4) A solid waste collector who delivers or disposes of solid waste at an unapproved treatment, processing or disposal

facility shall be responsible for the cleaning, removal and transporting of the solid waste to an approved treatment, processing or disposal facility.

(5) A solid waste collector shall be held responsible for fulfilling all the requirements, including the collection schedule, as specified in the contracts or agreements entered into.

(6) A solid waste collector shall have the capability of providing maintenance for his vehicles and equipment and shall have adequate standby vehicles and equipment available.

420-3-5-.11 Collection and Transportation Equipment. All vehicles and equipment used for the collection and transportation of solid waste to a sanitary landfill or other approved means of solid waste disposal shall meet the requirements of these Rules and shall be subject to inspection by the Board or Local Health Officer.

(1) All vehicles and equipment used for collection and transportation of solid waste shall be designed, constructed, maintained, and operated in a manner that will prevent the escape of any solid, semi-liquid or liquid wastes from the vehicle or container. Collection vehicles shall be cleaned as often as necessary to prevent a nuisance or insect breeding and shall be maintained and serviced periodically, and should receive periodic safety checks. Safety defects in a vehicle shall be repaired before the vehicle is used.

(2) Solid waste shall not be stored after collection in a collection vehicle for more than 12 hours unless the vehicle is parked in an area in which the land use is predominately industrial or light industrial. Solid wastes shall not be stored overnight in a collection vehicle parked in an area in which the land use is predominately residential.

(3) Solid waste shall not be unloaded from any collection vehicle unless the collection vehicle is a satellite vehicle unloading into a larger vehicle or the unloading facility, transfer station or disposal area, except the unloading may be done to facilitate repairs, to extinguish a fire, or for other emergencies. When a vehicle is unloaded due to an emergency situation, the solid waste shall be reloaded and removed promptly after the emergency no longer exists.

(4) All roadside containers or dumpsters shall be provided with fly-tight lids and shall meet the following site requirements:

(a) The site shall have good access to it at all times, even during periods of heavy rainfall or snow.

(b) The containers or dumpsters shall be housed within a chain link fence, or other fence material approved by the Board or Local Health Officer, that extends from ground level to a minimum height of 1 foot above the tops of the containers or dumpsters. The fence shall be equipped with a gate(s) that allows access to the containers or dumpsters by the public and the collector.

(c) The site shall be kept clean of all visible solid wastes and shall be maintained.

(d) A sign shall be attached to the fence indicating how the site is to be used including the closing of any gates before the user leaves the premises.

420-3-5-.12 Treatment and Processing Facilities. Those facilities that transfer, shred, grind, bale, compost, recycle, reclaim, incinerate or otherwise process solid waste prior to ultimate disposal shall meet the following general requirements:

(1) Surface drainage in and around the facility shall be controlled to minimize surface water runoff onto, into, and off the treatment area.

(2) The facility shall not accumulate solid waste in quantities that cannot be processed within such times as will preclude the creation of fly-breeding or harborage of other vectors. If such accumulations occur, additional solid waste shall not be received until the adverse conditions are abated. If a significant work stoppage should occur at a solid waste processing facility due to a mechanical breakdown or other cause, and it is anticipated to last long enough to create fly-breeding or harborage of vectors, steps shall be taken to remove the accumulated solid waste from the site to an approved back-up processing or disposal facility. Whenever supplemental vector control measures are necessary, as determined by the Board or Local Health Officer, those measures shall be promptly carried out.

(3) No facility shall allow the collection of windblown materials in such quantity to provide harborage for vectors. If a facility is not completely enclosed, wire or other fencing or screening shall be provided when found necessary by the Board or Local Health Officer to minimize windblown materials.

(4) A facility shall be operated in such a manner as to prevent the creation of a nuisance, insanitary condition or potential public health hazard.

(5) The Board may require a quality control program or an analysis for pathogens and toxic substances for solid waste that has been processed or treated so that it may be given, sold or otherwise distributed to the public. Processed solid waste

material that has received a certification from the U. S. Department of Agriculture as a soil enhancer or fertilizer shall be exempt from this requirement.

420-3-5-.13 Semisolid Waste Landfarming Sites. Any person wishing to incorporate semisolid wastes into the soil shall be subject to the following conditions:

(1) Unless otherwise authorized by the Board all semisolid waste shall be applied to the soil surface only and incorporated immediately into the soil by discing or plowing until the waste is adequately turned under or thoroughly mixed with the soil.

(2) Any person that desires to incorporate semisolid waste into the soil shall apply to the Board for a permit for such and use approved methodology for the storage, transportation and disposal of the waste pursuant to these Rules.

(a) The request for a Landfarming Permit shall be completed by an engineer or land surveyor currently licensed to practice in the State of Alabama and shall include the following information as minimum requirements:

1. A copy of a legally executed easement made between the applicant and the other property owner shall be included if the waste is to be disposed of on property not owned by the applicant. It is the responsibility of the holder of a Landfarming Permit to possess or acquire a sufficient interest in or right to the use of the property for which the permit is issued, including the access route thereto.

2. A written plan stating how the semisolid waste shall be stored, transported, and disposed.

3. The exact location of the disposal site shall also be shown on a map provided by a registered engineer or registered land surveyor. Distances from the disposal site boundaries to major points of interest such as other property boundaries, wells, structures, waters, springs, and sinkholes shall be given if such points of interest are located outside the site but are within 300 feet. The route into the property and location of all soil borings shall also be indicated on the map.

4. The results of 3 soil borings per acre of property to be included in the disposal site shall be submitted by a registered engineer, registered land surveyor or a registered soil classifier. The engineer, land surveyor or soil classifier making the borings shall describe the color, depth, and texture of each soil change encountered per boring and shall indicate the depth to bedrock or watertable elevation if encountered. Each boring shall be made in a location on the property that would give the Board a good assessment of soil substructure underlying the proposed site. Soil borings shall be 8 inches or larger in

diameter and shall be to a minimum depth of 3 feet. The soil borings shall be made available for review onsite at the request of the Board.

5. A copy of a Soil Conservation Services (SCS) soils map and description of soils found on the map shall be submitted showing the outline boundaries of the proposed disposal site on it.

(b) The following requirements shall be adhered to in the development of and use of the site:

1. The watertable elevation or depth to bedrock shall be a minimum of 18 inches below the cultivated or plowed depth of the furrow that will accommodate the semisolid waste.

2. No semisolid waste shall be applied on land within 500 feet of waters.

3. The disposal site shall be located a minimum of 300 feet from any inhabited building. Furthermore, the Board may require larger buffer zones when circumstances warrant.

4. No semisolid waste shall be applied to land within 300 feet of wells or springs used for drinking water.

5. Where semisolid wastes are applied to public lands, access to the facility shall be controlled to restrict unauthorized personnel during operation and for at least 12 months following final application.

6. Where semisolid waste is applied, grazing by animals shall be restricted during operation and for 30 days thereafter.

7. Where semisolid waste is applied, no crops that will be consumed raw by humans shall be planted until a minimum of 18 months has lapsed from the date of the last application. For all other crops grown for indirect human consumption, a minimum of 30 days shall lapse between the date of the last application and the date the crop is planted.

8. Limitations may be placed by the local health department and the Board upon the loading rates of any contaminant when it is determined necessary to protect the public health. The holder of a Landfarming Permit is responsible for supplying any soil test results for any contaminant that may be required by the Board.

9. If substances that may be deleterious to human health are placed on the land in amounts that are in excess of those established as acceptable for growing food chain crops, notice of such shall be given to future landowners (via notice to the deed). If, however, soil analyses show that such levels of

contaminants are no longer present, the notice to future landowners shall not be required.

10. The disposal site is subject to review by the local health department or the Board at any time. Access to the site will be provided to the local health department or the Board pending prior notification of such need to the holder of the Permit.

11. The Landfarming Permit is valid for one year so long as the holder complies with all the requirements of these Rules and so long as the site is not expanded beyond the permitted boundaries.

12. Each landfarming site shall be posted at prominent entry points with a sign indicating the name of the Landfarming Permit holder, the telephone number where the Permit holder can be reached, the Landfarming Permit number and the fact that it was issued by the Alabama Department of Public Health, and an indication that the site is a "no tresspassing" area. The lettering on the sign shall be a minimum of 1 inch in height and the sign shall be made of a material that is weather resistant.

420-3-5-.14 Tire Dump. Any site upon which more than 100 tires are dumped in disarray and are uncovered and subject to the elements for 10 or more days shall be considered by the Board and Local Health Officer to constitute a public nuisance menacing public health and be unlawful by virtue of authority as enumerated in the Code of Ala. 1975, Section 22-2-14 and Sections 22-10-1 through 22-10-3 and the person owning property upon which a tire dump is found or a person creating or maintaining such a dump shall take immediate steps upon written notification by the Board or Local Health Officer to comply with those requirements found in Section 420-3-5-.15.

420-3-5-.15 Tire Storage Permit. Any person desiring to collect more than 100 tires at a site, retain them without burial and store them subject to the elements shall obtain a Tire Storage Permit through the Local Health Officer for sites of .5 acre in size or smaller and jointly from the Local Health Officer and the Board for sites exceeding .5 acre in size. The following information shall be supplied as minimum requirements on forms provided by the Board.

(1) A copy of a legally executed easement with the other property owner shall be included if the tires are to be stored on property other than that owned by the applicant. It is the responsibility of the holder of the Tire Storage Permit to possess or acquire a sufficient interest in or a right to the use of the property for which the Tire Storage Permit is issued, including the access route thereto.

(2) A statement shall be included indicating how the

applicant plans to control rats and mosquitoes at the site. A copy of all contract(s) with a pest control operator(s) for vector control shall be included where such contracts are required by these Rules.

(3) A legible sketch or drawing made to scale of the property shall be submitted and the proposed row arrangement of tires shall be shown along with the location of any wells, springs, surface waters and sinkholes located within 300 feet of the site.

(4) When the proposed tire storage site exceeds .5 acre in size, the request and the site layout and details shall be completed and signed by an engineer or land surveyor currently licensed to practice in the State of Alabama.

(5) A tire storage permit shall be valid for one year as long as the requirements and conditions under which the permit was issued do not change. Any proposed expansion of a tire storage site beyond that initially approved by permit shall be considered by the Board as constituting a new site and shall be subject to the permitting requirements as found in these Rules.

420-3-5-.16 Tire Storage Site Requirements. Any proposed site for tire storage shall meet the following general requirements:

(1) A permitted tire storage site shall be maintained in a manner that will not create a nuisance, insanitary condition, potential health hazard, or provide harborage for vectors of public health significance.

(2) Each tire storage permit holder shall maintain a manifest, which shall be made available upon request to the local health department or the Board indicating the following:

(a) The location from which each load of tires originated before being delivered to the tire storage site.

(b) The destination of any load of tires leaving the tire storage site.

(3) Tires being brought to a tire storage site shall be emptied of any water that they may contain prior to being stacked or being transferred to a new location.

(4) When the proposed tire storage site exceeds .5 acre in size, a topo map of the area showing five foot contour intervals shall be submitted. If a site will be graded or the existing topography altered in any manner, plans shall be submitted showing the final elevations proposed.

(5) A tire storage site shall not be placed in a location

subject to flooding or ponding of water.

(6) The tires stored at a tire storage site shall be stacked vertically one on top of the other and the stacks placed side by side to form rows. The number of tires that may be included in each individual stack shall be determined by the ability of the stack to support itself without tipping over; however the height of the stacks shall be limited by the effectiveness of mosquito control activities.

(7) Two to five rows of tires may be placed back to back with the following separation distances required:

(a) A separation distance of 4 feet minimum shall be allowed between each set of two rows of tires for a tire storage site consisting of .5 acre or less in size.

(b) A separation distance of 10 feet minimum shall be allowed between each set of five rows of tires for a tire storage site consisting of over .5 acre in size. Each 10 foot wide separation area shall be capable of being traversed by a vehicle with adequate mosquito control equipment aboard. Access lanes for the mosquito control vehicle to enter the tire storage site and to make necessary direction changes shall also be provided in order for the vehicle to have access to each separation lane throughout the storage site.

(8) Each tire storage permit holder with a site comprising more than .5 acre in size shall provide for adequate vector control through the use of a person licensed for such purposes and acceptable to the Board and the Local Health Officer. The local health department or the Board may require the use of a licensed pest control person for a site of up to and including .5 acre in size if it determines that the permit holder is not providing for adequate vector control otherwise.

(9) The Board shall reserve the right to consider and approve any innovative designs for tire storage sites so long as the design provides for protection of the public health.

420-3-5-.17 Transportation of Solid Waste From Outside Assigned Territories and Solid Waste Transported by Rail, Air, Water or Overland by Vehicle. The following requirements apply to any person who has the responsibility for solid waste containing garbage and who transports or causes to be transported such waste within the State, when waste is generated outside of territories assigned by the governing bodies, or into the State by rail, air, water or overland by vehicle:

(1) Each separate shipment of solid waste containing garbage shall be accompanied by a manifest and report for the local health department(s) and such manifests and reports shall contain the following information:

(a) Identification of the place(s) of origin (state, county, municipality, etc.).

(b) Certification from the transporter and the owner of such wastes that the wastes do not contain regulated hazardous or infectious wastes.

(c) The date on which the solid waste was collected at the source(s) of generation.

(d) The identifying numbers and/or letters of the alphabet assigned to each unit and the number and type of individual units shipped.

(e) A description of how wastes are managed from the place(s) of origin to the disposal site. Name of collectors, transporters, transfer stations, and all others who handle wastes enroute to the disposal facility.

(f) Identify steps taken at each point to ensure wastes are not commingled or blended with other wastes enroute to the disposal facility.

(g) The name, telephone number and address of the person(s) responsible for the transport and disposal of the solid waste at the point of origin(s) and destination.

(h) The name and location of the disposal site.

(i) Certification from the transporter(s) that the wastes are collected and transported in accordance with all rules and regulations of the state of origin.

(2) No solid waste containing garbage shall be transported under these Rules unless it is contained within a unit that meets the following specifications:

(a) Each unit arriving at a destination must be clearly labeled on a visible portion of the unit with the identifying numbers and/or letters identifying it on the manifest.

(b) Each identifying number and/or letter shall be a minimum of 3 inches in height and stamped, painted or otherwise attached to the unit so that they are not altered by the elements.

(c) Each unit shall be specifically designed, constructed and maintained for the transportation of solid waste containing garbage and operated in a manner that will prevent the escape of any solid, semi-liquid of liquid wastes.

(3) No unit shall be off-loaded from its rail, air, water,

or vehicle delivery source if it cannot comply with 420-3-5-.17(2)(c) or if it poses a threat to public health as determined by the Board or Local Health Officer or if it has not been delivered within the specified time limitation.

(4) Any solid wastes containing garbage that is transported under these Rules must be disposed of within a one week period beginning with the day of collection from the source.

(5) Any person transporting solid waste containing garbage from the point of destination, to the disposal site shall first obtain a permit for such purposes from the Local Health Officer in the county that received such solid waste and the Local Health Officer in the county where final disposal of the solid waste will occur. In obtaining the permit(s) and transporting the solid waste containing garbage to its final point of disposal the person requesting the permits shall agree to comply with those requirements as provided in 420-3-5-.09,.10 and.11.

(6) The Board shall reserve the right to review plans, specifications, and appropriate materials for any new method(s) proposed for the shipment of solid waste by rail, air, water, or by vehicle and approve of it provided that such method(s) does/do not endanger the public health.

(7) All solid waste containing garbage delivered to a point of destination in the state in concurrence with the Rules shall be ultimately disposed of by a method or facility permitted by the Alabama Department of Environmental Management.

(8) As a condition of issuing a permit to out-of-state shippers to transport solid waste containing garbage into the state under the conditions of 420-3-5-.17(5), the permittee shall deposit a surety bond for not less than $250,000 with the Board to guarantee that such solid waste material does not contain any hazardous, infectious or explosive materials or debris.

420-3-5-.18 Variances. In order to avoid undue hardships and promote the effective and reasonable application and enforcement of these Rules, the Board may grant variances from requirements of these Rules in accordance with such procedures and conditions as it may prescribe. Variances, other than those for Certificates of Exception, shall not be granted at the local level. A variance shall be granted upon finding that strict application of the Rules in question would cause the applicant undue hardship which results from conditions peculiar to the site or situation under consideration which conditions could not reasonably have been anticipated in the writing of the Rules. Variable factors such as seasonal loadings, nature of wastes, water table conditions, topography, soil and geology, land use and any other factors impacting upon the situation may be taken into account in determining the degree of variance, if any, which may be allowed. Variances may be granted under the

following procedures:

(1) Any person may request a variance from specific provisions of these Rules by submitting an application through the Local Health Officer to the Board on a form furnished by the Board. The person shall state the reasons and circumstances which support the request and shall submit any other pertinent data to support the request.

(2) Any variance not granted within 60 days is deemed denied. If approved, any conditions or time limitations needed to comply with all applicable state laws or to protect public health or the environment shall be specified by the Board or Local Health Officer, as the case may be. A date upon which the variance will no longer be valid shall be prescribed in the decision.

(3) Any person may submit a request in writing to extend a prior or existing variance. The person shall demonstrate need for continuation of the variance. The variance may be reissued or extended for another period upon findings by the Board or Local Health Officer, as the case may be, that the reissuance or extension of the variance would not endanger public health or the environment.

(4) Any variance may be revoked if the Board or Local Health Officer, as the case may be, finds that:

(a) The person is in violation of any requirement, condition, schedule or limitation of the variance.

(b) Operation under the variance is threatening public health or the environment. Written notice of revocation shall be provided to the person granted the variance.

(5) If in the case of a man-made or natural disaster, the Board or Local Health Officer, as the case may be, finds that certain requirements cannot be complied with and that the public health is better served by not fully complying with these Rules, the Board or Local Health Officer, as the case may be, may authorize the suspension of the application of the Rules for a specifically affected person(s) or site and institute a provisional regulatory plan until the disaster is abated.

(6) The denial or revocation of a variance in whole or in part, may be appealed to the Board or Local Health Officer, as the case may be, in accordance with the agency's hearing procedures.

(7) The grant of a variance in whole or in part may likewise be appealed by any affected person.

420-3-5-.19 <u>Permit or Certificate Revocation</u>. The Board

or Local Health Officer, as the case may be, may modify or revoke any permit or certificate issued if the holder of the permit or certificate is found to be in violation of any of the permit or certificate conditions, if the holder of the permit or certificate fails to perform such activity in accordance with the approved plan, if the holder of the permit or certificate submitted false information, or if such activity creates a nuisance or is inconsistent with the Act or these Rules. In the event of modification or revocation of a permit or certificate, the Board or Local Health Officer, as the case may be, shall serve written notice of such action on the permit or certificate holder and shall set forth in such notice the reason for such action.

420-3-5-.20 Transfer of Permit or Certificate. Permits or certificates are not transferable from one person to another or from one site or facility to another.

420-3-5-.21 Communication. All official communications, reports, and correspondence concerning this Chapter shall be addressed to the State Health Officer, Room 381, State Office Building, Montgomery, Alabama 36130.

420-3-5-.22 Penalty of Violations. No agency or person shall violate any of the provisions of these Rules. Violation of these Rules shall be deemed to be a violation of the Act, Code of Ala. 1975, Section 22-27-7, and shall be punishable as provided therein or by other applicable penalties which may be more stringent.

420-3-5-.23 Appeals. Any person aggrieved by a ruling of the Board or local health department has the right of appeal in accordance with procedures promulgated by the Board.

420-3-5-.24 Severability. The parts, sections, paragraphs and provisions of this Chapter are severable. Should any portion thereof be ruled unconstitutional or unenforceable by any court, the said ruling shall not affect any other provisions of this Chapter not ruled upon.

420-3-5-.25 Repealer. All rules promulgated and adopted by the Board which are in conflict with this Chapter or any provisions thereof are hereby expressly repealed.

420-3-5-.26 Effective Date. This Chapter shall be in full force and effect 30 days after promulgation and adoption.

Authority Code of Ala. 1975, Sections 22-2-2(6); 22-10-1, et seq; 22-27-1 et seq.

June 17, 1991

LANDFARMING CRITERIA

To ensure that the landfarming application is complete and to avoid being returned by this office for additional information, the application should include, but not necessarily be limited to, the following:

1. Proof of ownership of the property or a copy of a legally executed easement made between the applicant and the property owner.

2. A written plan stating how the semisolid waste shall be stored, transported and disposed. This plan should include the following:

   a. When public lands are used, a method to control and restrict unauthorized personnel during the operation and fo 12 months following final application.

   b. A met restricting the grazing of animals during the ope tion and for 30 days after final application.

   c. If crops are to be planted, a method for restricting the growth of crops to be consumed raw by humans for a minimum of 18 months and all other crops for a period of 30 days after final application. The plans should include the growth and harvesting of a nitrogen consuming crop to protect surface and ground waters from nitrogen pollution. Root crops are not to be grown on the site for two years after its closure.

   d. A method for posting the prominent entry points with signs as required by Chapter 420-3-5-.13(2)(b)12.

   e. Storage facilities for semisolid waste during periods of equipment failure, service disruptions and bad weather. Semisolid waste should not be applied to frozen, snow covered or flooded lands.

   f. A method of treatment of septage with lime to raise the ph. to 12 or above for at least 30 minutes in order to stabilize the septage, exceed maximum pathogen reduction requirements, and to drastically reduce odors which in turn reduces vector attraction.

   g. A method of application that will not exceed a maximum septage application of 30,000 gallons/acre/year.

   h. A method of screening of metals and plastics from the septage prior to application and a method of disposal of the screened materials.

   i. A method for erosion, runoff and infiltration control. Semisolid waste is to be applied at a rate that would not result in runoff from the site.

3. A map showing the exact location of the disposal site, distances to major points of interest including, but not limited to, property boundaries, wells, structures, waters, springs and sinkholes, if located outside the site but within 300 feet, the route to the property and all soil borings. The landfarming site is to be located a minimum of:

   a. Five hundred (500) feet from any waters.

   b. Three hundred (300) feet from any inhabited dwelling, unless larger buffer zones are established by the Board.

   c. Three hundred (300) feet from wells or springs used for drinking water.

4. The results of 3 soil borings per acre dug a minimum of 8 inches in diameter and 3 feet deep and located in the area proposed for the disposal of semi-solid waste.

   a. The water table elevation or depth to bedrock shall be a minimum of 18 inches below the area of the site receiving the semi-solid waste.

   b. When a methodology of grease disposal is proposed, the soil borings are to be dug to a depth of 18 inches below the area receiving the grease.

5. A copy of a Soil Conservation (SCS) map of the site with soil descriptions and boundaries.

ADEM

ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Leigh Pegues, Director

Jim Folsom
Governor

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November 1, 1993

Mr. Kelly Ewing
U. S. EPA, Region 4
345 Courtland Street NE
Atlanta, GA 30365

Dear Mr. Ewing:

This is in response to our phone conversation of November 1, 1993, concerning the practice of leachate recirculation, existing MSWLF's compliance and the Chapter 8 variance rules.

It is the Department's interpretation of Rule 335-13-4-.22(20)(b) that approved equivalent liner designs also approved for leachate recirculation must include a flexible membrane liner (FML). No approved equivalent liner designs lacking a FML will be approved for leachate recirculation.

All existing MSWLF's operating under the vertical expansion concept must be in full compliance with current ADEM regulations. Permits are issued for 5 year terms and must be renewed as of the expiration date. During the renewal process, the MSWLF must address the Division 13 Solid Waste regulations entirely. They must submit updated operational/closure narratives and updated design drawings. All of the existing MSWLFs operating under the new 40 CFR Part 258 (vertical expansion) are currently being processed for permit renewal. There is a reasonable time frame allowed for this process and should be completed during the next six (6) months.

The Department has no intention or desire to issue or grant any variance that would allow any facility to operate under requirements less stringent than included in the 40 CFR part 258 requirements. Facilities will be required to meet the minimum Federal requirements with the exception of flexibilities provided for approved states.

Hopefully this information will clarify any misunderstanding. Should you need additional assistance please feel free to contact this office.

Sincerely,

Russell A. Kelly

Russell A. Kelly, Chief
Solid Waste Branch
Land Division

RAK/ghs#3775

AL-009

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ADEM

ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Leigh Pegues, Director

Jim Folsom
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FACSIMILE TRANSMITTAL

DATE: 11-2-93

TO:

NAME: Kelly Ewing

ORGANIZATION: EPA

FACSIMILE PHONE: 404-347-5205

OFFICE PHONE:

FROM:

NAME: Russell Kelly

OFFICE PHONE:

NUMBER OF PAGES TO FOLLOW: 1

ADEM

ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Leigh Pegues, Director

Jim Folsom
Governor

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November 1, 1993

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U. S. EPA, Region 4
345 Courtland Street NE
Atlanta, GA 30365

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Hopefully this information will clarify any misunderstanding. Should you need additional assistance please feel free to contact this office.

Sincerely,

Russell A. Kelly, Chief
Solid Waste Branch
Land Division

RAK/ghs#3775

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ADEM

ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Leigh Pegues, Director

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November 19, 1993

Kelly Ewing
Office of Solid Waste
U. S. EPA, Region IV
345 Courtland Street, N.E.
Atlanta, GA 30365

Dear Mr. Ewing:

RE: Alabama's Solid Waste Management Permit Program
Application for Determination of Adequacy

I am enclosing revisions to pages 12 and 13 of the Program Description that incorporate Mr. Russell Kelly's letter (dated November 1, 1993) clarifying the Department's position concerning leachate recirculation, existing MSWLFs' compliance and Chapter 8 variance regulations. The changes were made in conjunction with our phone conversation on November 16, 1993, as you requested. Please replace these pages in your application package. If I can be of further assistance, please call me.

Sincerely,

Lynn Garthright

Lynn Garthright, Chief
Special Services Unit

LG:mah:SSU3815

c: Russell Kelly, Chief
Solid Waste Branch
Land Division

RECEIVED
29 1993
OFFICE OF SOLID WASTE

AL-010

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