Certificate of Financial Viability shall have the certificate before any permits shall be issued by the ADPH.

(13) State-Issued Product Permit. The Board may issue a product permit for a proprietary wastewater (sewage) treatment or disposal product, or for any wastewater (sewage) treatment or disposal design that may be used for Small-Flow Systems and that will not be subject to State-Issued Performance Permits. See Rule 420-3-1-.24, State Issued Proprietary Product Permits.

Authors: Thad Pittman, Lem Burell, Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§22-2-2(4); 22-2-2(6); 22-20-5; 22-26-1, et seq.; 22-25B-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.
Amended: Filed March 15, 2010; effective April 19, 2010.

420-3-1-.09 Minimum Lot Size Requirements for Sites Using an OSS

(1) Any lot for which an OSS is proposed shall have enough area as judged by the Board to accommodate the proposed development, the original EDF, a replacement EDF, and shall meet all setback requirements.

(a) When public drinking water supply is present or proposed the minimum lot size shall be 15,000 sq. ft. of land area per dwelling or establishment unless the lot is part of a large-flow development. If it is an individual lot, the requirements of Rule 420-3-1-.15, Construction Plan Requirements for Engineer Designed Systems must be met. In no case shall these lots contain hydric or high shrink-swell soils.

1. Field/area size for lots that do not meet the minimum lot size requirements of this Rule may be reduced by the Board on the basis of treatment only.

(b) For lots recorded on or after March 19, 2006, the effective date of these rules, and where public drinking water supply is not available, the minimum lot size shall be 40,000 square feet per dwelling or establishment, unless, the requirements of Rule 420-3-1-.15, Construction Plan Requirements for Engineer Designed Systems, have been met. In no case shall these type lots be less than 20,000 sq. ft. in area.

1. For lots recorded before March 19, 2006 where public drinking water supply is not available, the minimum lot size shall be 20,000 square feet per dwelling or establishment. Lots in this category do not have to meet the requirements of Rule 420-3-1-.15, Construction Plan Requirements for Engineer Designed Systems. In no case shall these type lots be less than 20,000 sq. ft. in area.

(c) The minimum area required for a dwelling or establishment using an OSS in high shrink-swell soils shall be 1 acre. If the EDF is in high shrink swell soil that is not contiguous with the rest of the lot, the minimum area on which the EDF is located shall be at least ½ acre. Under these conditions Rule 420-3-1-.15, Construction Plan Requirements for Engineer Designed Systems, must be met

(2) Easements or rights-of-way areas for underground utilities, surface or subsurface drainage areas, reservoirs/other impoundments, or rights-of-way for roads, streets and thoroughfares shall not be used in computing lot sizes. Easements or rights-of-way for overhead utilities may be used in computing lot sizes if the holder of such easements or rights-of-way areas specifically grant such usage in writing, a copy of which shall be included with the application.

(3) Frequently flooded areas, swamps, marshes, wetlands and hydric soils shall not be used in computing required lot sizes.

(4) If the lot is being served by a decentralized wastewater treatment system there are no minimum size requirements for the lot.

Authors: Lynn Scott, Lem Burell
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.10 Easements Required

Where all or part of an onsite sewage disposal system, including the replacement area, is to be on property other than the owner's, an easement in perpetuity, or until the system is abandoned per Rule 420-3-1-.56, Abandonment of a Sewage Tank , shall be recorded in the office of the Judge of Probate of the county in which the system is located. The easement shall be recorded prior to the issuance of a Permit To Install/Repair. Terms of the easement shall be sufficient to permit access, construction and maintenance of the onsite system.

Authors: Lynn Scott, Lem Burell .
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

DEVELOPMENT / APPLICATIONS / PERMITS

General Application Requirements

420-3-1-.11 General Requirements for all Permit Applications.

(1) An application for a new permit or permit re-issuance shall be made to the LHD in duplicate, using forms designated by the Board:

(a) The local or State Health Department may assess a fee where fee authorization exists.

(b) The Health Department form CEP-2 is used to apply for a Permit to Install for small-flow developments and individual small-flow systems in a large-flow development. The CEP-3 Part A is used for large-flow developments, and the CEP-3 Part B is used for large-flow systems.

(2) Signatory requirements for a permit application shall comply with the requirements of Rule 420-3-1-.87, Signatories to a Permit Application and Report.

(3) All applications are subject to Rule 420-3-1-.12, Time Limitations and Permitting Actions.

(4) All persons shall contact the Health Department and begin the appropriate planning process for the type of development intended prior to undertaking Building Development as it is defined by these Rules.

(5) The Board shall determine if the permit application is complete, as defined by this Rule, and if the information necessary for determining permit conditions has been submitted. Missing information shall be requested by the LHD and the applicant notified.

Authors: Lynn Scott, Lem Burell, Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.12 Time Limitations and Permitting Actions

(1) The LHD will review all CEP-2 application submittals within 10 working days. The time needed to process the CEP-3 for large-flow development will vary based on the project/development and the completeness/timeliness of the needed information. The LHD will take one of the following actions:

(a) If the application is incomplete, the LHD will notify the person submitting the application and/or the owner of items or missing information. The written or verbal notification must be documented as required by the Board.

1. If the missing items or information is not provided to the LHD within 90 days of documented notification, the application is denied without further notification. A new CEP-2 application may be submitted for review at any time after the 90 days.

(b) When the LHD judges the application to be complete a field review shall be performed in accordance with departmental policies and guidelines. If the application is complete and all necessary evaluations of the site have been performed, the Permit to Install shall be issued, with or without conditions, or denied in writing.

(2) If a State-Issued Performance Permit is required, the application may be submitted with the SPP.

(a) If a SPP is required and approved, the approval shall remain valid as long as conditions of the approval and circumstances under which it was issued do not change.

(b) If a State-Issued Performance Permit is required, the application shall be forwarded to the Board for review and coordination of the issuance of the Permit to Install/Repair and the State-Issued Performance Permit.

1. If the permit is denied the applicant shall be advised by letter of the reasons for the denial and the procedure for pursuing an administrative appeal of the denial.

(3) Any Permit to Install that was issued after January 1, 2000, under a previous set of Rules shall be honored for 5 years from the effective date of these Rules, provided that lot conditions and other factors upon which there approval was based have not changed. A holder of such a permit shall contact the LHD prior to beginning construction activity.

(a) Any Permit to Install that is issued under this set of Rules shall be valid for 5 years from the date of issuance providing conditions remain the same.

(b) Upon reapplication, if a LHD investigation of the site determines that conditions are consistent with the expired Permit to Install, and if factors upon which that permit was issued have not changed, the LHD may issue a new Permit to Install without additional soil tests. The LHD may require a new plot plan.

(c) Subdivision lots listed as "approved" in a Final Subdivision Report of previous rules dated on or after March 18, 1982 may be issued a Permit to Install by the LHD for 5 years from the effective date of these Rules, provided that lot conditions and other factors upon which their approval was based have not changed

(4) The State-Issued Performance Permit shall be valid for a period of 5 years from the effective date of the permit. A modification to the permit does not extend the 5-year permitting period.

(a) The LHD and permittee shall have 30 days to comment on the State-Issued Performance Permit. Once the comment period is over, the State may issue the permit, but activation of the permit will be subject to the LHD issuing the Approval for Use.

(5) If the authorized system is not operational within 2 years of the effective date of the Approval for Use, the Approval for Use shall become invalid. A new Approval for Use may be issued without additional testing or evaluation if the LHD is satisfied that there are no material changes to the site or these regulations that would change the conditions of the original Approval for Use. Once the system is approved for operation, the Approval for Use shall be valid indefinitely unless revoked by the Board, or unless a State-Issued Performance Permit is issued to the system, in which case the term of use shall be stated in the Permit.

Author: Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

Small-Flow Development Requirements

420-3-1-.13 General Provisions for Small-Flow Development/OSS

(1) A CEP-2 is required for small-flow development(s)/systems(s). If a small-flow development/system is determined to be a part of a large-flow development the applicant shall comply with the applicable large-flow development requirements. If significant modifications are made to a small-flow OSS site that effect either the EDF or the REDF, this may require a new site evaluation in compliance with Rule 420-3-1-.71, Site Limitation Determination (SLD).

(2) If the application is for a small system that is part of a large-flow development (Example: a dwelling on a subdivision lot), the SPP should be referred to when completing the application for the Permit to Install (CEP-2).

(3) If a lot that does not have an existing and approved OSS already on it, is to be sold, the prospective purchaser or owner is responsible for investigating the site according to the applicable Rules in the Chapter of the Rules of the State Board of Health, or otherwise satisfy himself or herself that the intended use of the lot is feasible under this Chapter of the Rules of the State Board of Health. Failure to make this investigation shall not be grounds for a hardship variance.

Authors: Lynn Scott, Lem Burell
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.14 Application and Accompanying Material for a Permit to Install/Repair a Small-Flow OSS

(1) An Application (CEP-2) for a Permit to Install/Repair a small-flow OSS must be submitted for each small-flow OSS, and contain the following information:

(a) The address/location (911 address if available) of the site or the proposed dwelling/establishment/development.

(b) The number of bedrooms (dwellings), the number of persons served (establishments), or other information that can be used to establish or determine design flow and strength of sewage as per Rule 420-3-1-.36, Design Flow and Wastewater Concentrations. Where actual flow rates are referenced, these must be from a similar facility or development and documented for a period representative of 12 consecutive months.

(c) A site evaluation as outlined in Rule 420-3-1-.71, Site Limitation Determination (SLD).

(d) A vicinity map or written directions in sufficient detail to enable a person to find the site.

(e) A legal description or copy of the deed.

(f) The results of all known soil tests conducted on the site.

(g) The site's source of drinking water (public/private) to include name of water system if applicable.

(h) If the system is within a Large Flow Development, name of developer, location within the development to include the plat/phase/addition/sector, the block and the lot.

(i) If the system will serve a dwelling, provide quantity of permanent dwellings or manufactured mobile home, and as applicable, whether or not garbage disposals, basements, swimming pools, spas/hot tubs will be present.

(2) A plot plan (drawn to scale) must accompany the CEP-2 and include the following items:

(a) Lot dimensions/size, with all property lines identified for lots one acre or less in size; and all lot lines within fifty feet of the OSS, EDF and REDF locations for larger lots.

(b) The location (relative to the property lines and proposed OSS), description (if applicable) and dimensions of any existing or proposed structure, decks, patios, paved and/or impervious surfaces, retaining walls, pools, etc.

(c) Location of existing (and proposed if known) underground and above ground utility lines or easements, such as gas, water, telephone, electric, cable television, other similar lines and any other easements and rights-of-ways on the property. Additionally, water lines (on adjoining property) that are located within 10 feet of system components shall be shown.

(d) Locations of surface waters (including swamps, marshes, wetlands, springs etc.), hydric soils, frequently flooded areas, surface or subsurface drainage features or systems (natural or man made, including drainage swales, drainage gullies, storm sewers, French or curtain drains, etc.), and storm water retention areas on the property or within 50 feet of any part of the primary and replacement EDFs.

(e) Locations of any wells (existing or proposed) on the property or within 100 feet of any part of the EDF/REDF.

(f) A description and location of any landfills or dumps (covered or open); surface mining operations; caves and sinkholes on the property and within 300 feet (measured from the closest edge or entrance) to the closest edge or part of the proposed EDF or REDF, whether or not on the applicant's property; sanitary sewer systems and/or public water supply sources within 500 feet.

(g) Location/identification of all known soil test sites, pits, etc.

(h) A layout of the proposed OSS, including recommended locations and capacities of treatment tanks, traps, distribution devices, pump chambers, and locations and sizes of the primary and replacement EDF/REDF areas.

1. The system layout shall also include the proposed maximum and minimum depths of the effluent trenches; recommended aggregate or EDF product and cover; and the direction and percent of slope, and identification of significant landscape features on the lot such as drainageways, drainage gullies and areas over 25% slope.

2. The EDF and REDF areas located and shown as protected areas and shall be staked and flagged by the site evaluator.

(i) The locations of areas with slope in excess of 25%, existing or proposed embankments, cut or fill areas (and reasons for cut/fill) located within 25 feet of any part of the proposed primary or replacement EDFs. If fill is required, the fill depth, natural ground and finished elevation(s) shall be indicated. Proposals using fill in the EDF area shall comply with the applicable parts of Rule 420-3-1-.66, Mounds, and 420-3-1-.68, Shallow Systems, depending on the type of fill system proposed. If a cut more than 12 inches in depth, or cut with fill is planned, the proposed cut area shall be evaluated as required in Rule 420-3-1-.67, Lot Modification and Controlled Fill Systems, These types of systems (cut or cut with fill) must be submitted with a construction plan (see Rule 420-3-1-.15, Construction Plan Requirements for Engineer Designed Systems).

(3) The ADPH, in its sole discretion, may determine that additional information (such as detailed soils mapping) is required to evaluate a proposed OSS site/application.

(4) When the proposed OSS is for buildings other than a single-family dwelling, the following additional information shall be submitted;

(a) Floor plans drawn to scale.

(b) An explanation of the occupancy and use of the building(s).

(c) Number of buildings that are a part of this application.

Authors: Lynn Scott, Lem Burell, Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.15 Construction Plan Requirements for Engineer Designed Systems

(1) Small-Flow Developments/Systems requiring an engineer as stated in Rule 420-3-1-.35, Engineer Design Required, are required to submit a Construction Plan as described in this section.

(a) In addition to the items required in Rule 420-3-1-.14, Application and Accompanying Material for a Permit to Install/Repair a Small-Flow OSS, the Construction Plan that is in compliance with Rule 420-2-1-.93, Professional Signatures and Seals which will include the following;

1. The location and elevation of a temporary bench mark (TBM).

2. Lot elevations and 1-foot contours (original and finished) shown for all sections of the lot within 25 feet of (and including) the proposed EDF. 2-foot contours may be used for slopes greater than 25%.

3. A detailed layout to scale of the OSS including all treatment devices (with capacities, filters, access manholes and risers shown), and pipe details (including type, sizes, lengths, spacing, etc.), and including the following:

(i) Maximum and minimum depths (in relation to the TBM) of trenches, cover, the top of the gravel or other aggregate/filter media, original ground and fill material, etc.

(ii) A cross-section view of the EDF.

(iii) A profile view of the system which shows the sequence of connections and specifies elevations (in relation to the TBM) for the dwelling/facility plumbing stub-out, tank inlet and outlet, pipe inverts, trench bottoms.

(iv) The EDF and REDF areas located and shown as protected areas.

4. A listing or description of materials to be used, methods of construction, instructions concerning inspection schedules, and operation and maintenance procedures.

5. An explanation of the system design, design calculations (including those for pump or siphon sizing, lift stations, dosing tanks, supply manifolds, small-diameter pipe sizing and spacing, EDF sizing, etc.), pump curves, pump or siphon locations, electrical connection details, on/off levels for pumps, high water alarms, and any other information needed to complete the design review.

(i) High water alarms shall be located to be easily heard/seen by the owner.

6. If boundaries are an issue the LHD may require a plat.

7. For lots smaller than the minimums set out in Rule 420-3-1-.09, Minimum Lot Size Requirements for Sites Using an OSS, there must be a surveyed boundary plat of the property recorded in accordance with Rule 420-3-1-.100, Recording Requirements, showing the following items surveyed in and on the recorded plat:

(i) Lot dimensions, including total acreage or square footage.

(ii) The dwelling/establishments/structures location, drawn to scale.

(iii) The EDF and REDF areas (to scale) shown as restricted areas.

8. A written plan describing how the EDF and REDF areas will be protected during lot development.

9. If the wastewater is from an establishment and is other than sewage as defined, the quantity, strength and method of treatment must be characterized by the design engineer.

10. For system that require a State Issued Performance Permit the requirements of 420-3-1-.23, Plans and Specifications for Large-Flow Developments, with a Large-Flow System Paragraph (1) 11 must be met.

Authors: Lynn Scott, Lem Burell
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

Large-Flow Development Requirements

420-3-1-.16 General Provisions for Large-Flow Development/OSS

(1) No person shall begin building development, as defined by these Rules, on a large-flow development/OSS prior to receiving approval of a SPP.

(2) Site/lot modifications not approved in the SPP that occur within 25 feet of the proposed EDF/REDF will require a detailed professional evaluation as determined by the Department. This evaluation will address the effect of the modifications on the suitability of the altered EDF/REDF area for such use.

(3) Lots that were approved for onsite sewage systems on subdivision final reports under previous rules of Chapter 420-3-1 may be developed according to the conditions set forth by the Local Health Department on the Final Report form, subject to the time limitations of Rule 420-3-1-.12, Time Limitations and Permitting Actions, and provided the conditions of approval still exist. If the conditions of approval no longer exist the site will have to be reevaluated under this Chapter.

(4) An application for a State-Issued Performance Permit shall be completed by an engineer and shall be signed by the individual meeting the requirements of Rule 420-3-1-.87, Signatories to a Permit Application and Report.

Authors: Lynn Scott, Lem Burell
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.17 Exceptions to the Large-Flow Development Rules

(1) The following activities shall not be considered as creating a large-flow system development:

(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 sale, lease, or rental of land, provided that the sale, lease, or rental does not take place incidental to building development.

(d) Dividing a parcel of land under an exemption found in the Code of Ala. 1975, Section 22-26-7.

(e) The division of a parcel of land into lots or tracts 3 acres or greater in size.

(f) Building development that is exclusively for immediate family of the owner/applicant.

Authors: Lynn Scott, Lem Burell
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.18 Establishments

(1) The wastewater generated by establishments may be sewage or high-strength sewage.

(2) If the establishment generates 1,200 gpd or less of sewage or high-strength sewage, as defined by these Rules, the establishment is considered a small-flow development, and a CEP-2 shall be submitted. Advanced treatment is not necessarily required for a daily average flow of less than 1,200 gpd unless dictated by lot conditions but the field must be sized according to Rule 420-3-1-.39, EDF Sizing for Establishments. A State-Issued Performance Permit will not be required for small flow establishments unless the Board determines that special conditions exist.

(3) If the waste is high-strength, the only reduction in field size that shall be allowed is for treatment as outlined in Rule 420-3-1-.40, EDF Reductions for Establishments.

(4) If the flow is over 1,200 gpd, the establishment is considered to be a large-flow development and a CEP-3 shall be submitted. The system is required to meet Secondary Limits, and a State-Issued Performance Permit is required.

(a) See Rule 420-3-1-.57, Advanced Treatment System (ATS) Specifications, Paragraph 5 for exceptions to this Rule.

Authors: Lynn Scott, Lem Burell
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.19 Site Preparation Plan Requirements

(1) A Site Preparation Plan (SPP) is required for the following:

(a) Large-Flow Development (including subdivisions).

(b) Large-Flow Systems.

(c) Establishments generating flow of over 1,200 gpd.

(2) The primary purpose of a SPP is to initiate early involvement of the Local Health Department (LHD) in a project, so as to protect the proposed EDF and REDF area(s) from any disturbance that will affect the performance of the onsite system (such as removing or compacting soil), aid the ADPH in determining the suitability of a site for onsite sewage treatment and disposal, determine the type and location of the system(s) to be installed, and avoid costly and untimely delays later on in the project. A SPP must be submitted before a Permit to Install/Repair will be issued.

(3) The SPP process is completed in three phases and culminates in the written site preparation plan.

(a) The applicant shall schedule an appointment with a public health environmentalist and other members of the design team. The applicant shall provide The Notice of Intent portion (Phase 1) of the CEP-3 which includes a preliminary soils map meeting the requirements of Rule 420-3-1-.83, Kinds of Soil Maps, Paragraph (2). The map shall be the basis of a discussion of the

proposed site which shall cover such subjects as development ideas, site evaluation methods to be used, potential site restrictions, availability of public sewer and water supply, lot sizes. A field visit (Phase 2) shall be scheduled at this time.

(b) Following the site evaluation, the LHD will conduct a site visit and Field Review (Phase 2). (It is recommended that the developer or his/her representative and the site evaluator be on the site for this visit). At this time the site evaluator and the LHD will discuss site evaluation results (soil types and limitations, such as restrictive layers, groundwater and groundwater indicators, site slopes/topography, rock, etc.) Additionally, existing/proposed lot modifications shall be considered and discussed with respect to their impact upon the soil test results and proper functioning of the proposed OSS(s). The developer should provide a preliminary plat, depicting, when applicable, the lot and street layout (together with a soils map overlay and topographic overlay), easements, lot sizes /dimensions /configurations, the proposed or probable dwelling/establishment locations, locations of any existing/proposed wells and water lines, and soil tests locations. Also discussed at this time will be the water supply, the types of OSSs the applicant may wish to consider, and the actions that will be taken to protect the EDF/REDF areas. Should an agreement not be reached on any of the above items, additional soil tests and evaluations may be necessary (including, but not limited to, a professional soils classifier visiting/mapping the site if that was not part of the original site evaluation and/or a geologist to determine underlying rock formations and movement of subsurface water through these formations, etc.)

1. On some occasions it will be possible to determine a suitable location for the OSS without evaluating the entire site. In such cases, only those areas to be used for the OSS need be evaluated and protected, provided no lot modifications are proposed or conducted within 25 feet of the proposed EDF and REDF area(s).

(c) An engineer must prepare the final SPP (Phase 3). The engineer should not develop the final SPP (Phase 3) until Phases 1 and 2 are completed. The submittal shall include the following:

1. The site evaluation (including all test results) on the site as outlined starting in Rule 420-3-1-.71 Site Limitation Determination (SLD).

2. A plat of the property that includes the following items drawn to scale and in compliance with Rule 420-2-1-.93 Professional Signatures and Seals:

(i) Lot dimensions, sizes, and layouts (including the total square footage or acreage of each lot.) The plat is to be based on the site evaluation and the individual lots/parcels sized so that proposed dwellings/establishments meet required setback and separation distances in Rule 420-3-1-.45, Setback/ Separation Distances, and 420-3-1-.46, Additional Setback/Separation for a Large System.

(ii) The locations of any surface waters (including swamps, marshes, wetlands, springs, etc.), hydric soils, frequently flooded areas, any existing or proposed surface or subsurface drainage features or systems, storm water

retention areas and in-ground swimming pools on the property or within 50 feet of any part of any existing/proposed EDF/REDF.

(iii) Location(s) of any wells (existing or proposed) and EDF/REDF(s) on the property and/or within 100 feet of any property line of the proposed development.

(iv) Locations and descriptions of any landfills, dumps (covered or opened), surface mining operations, caves and sinkholes on the property and within 300 feet as measured from the closest edge or entrance, to the nearest property line of any part of the development.

(v) The locations of any sanitary sewer systems, underground utility and underground utility easements, public water sources, or water lines serving and/or within 500 feet of any property line of the proposed development.

(vi) The locations of any existing or proposed dwellings, structures, or establishments on the property.

(vii) The locations and results of all soil tests performed and the area included in the site evaluation.

(viii) Property elevations and slopes (two-foot maximum contours) specifically designating areas of slope greater than 25%.

3. The SPP is a written plan attached to the plat that includes the following:

(i) A description of, and reasons for, any existing or proposed lot modifications (for each lot to have an individual OSS), such as existing or proposed cut or fill areas, embankments, or areas which have received, or will receive, extensive grading or modification, and a detailed evaluation by a Professional Soil Classifier of how these modifications may impact the placement/operation of an OSS or EDF replacement area on the lots(s).

(I) Modifications involving cut with addition of fill shall not be allowed unless based on an accepted design manual, provisions found in Rule 420-3-1-.67, Lot Modification and Controlled Fill Systems, or proposed as part of an advanced treatment OSS design acceptable to the ADPH.

(ii) A description of the measures that shall be taken to protect the primary and replacement EDF areas during lot development.

(4) Once their locations are determined, the primary and replacement EDFs shall be staked and flagged, and/or any other necessary measures shall be taken as approved by the LHD to protect the areas during lot development and/or dwelling/establishment construction. If either the primary or replacement EDF is modified or disturbed in a manner that affects its ability to properly accept, treat, or dispose of effluent, any approval that has been given may be revoked.

(5) Site/lot modifications not approved in the SPP within 25 feet of the proposed OSS or EDF replacement area will require a detailed professional evaluation as determined by the Department. This evaluation will address the effect of the modifications on the performance and operation of the OSS and EDF replacement area.

(6) If a State-Issued Performance Permit is required, the application may be submitted with the SPP, but it should be noted that conditions set forth in the State-Issued Performance Permit, particularly on type of system and permit conditions, may depend on results of investigation done for the SPP.

Authors: Lynn Scott, Lem Burell
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.20 Approval of a Site Preparation Plan

(1) Following a review of the SPP, the LHD shall issue an approval (accompanied by any conditions), a disapproval (accompanied by reasons and the opportunity to appeal), or an "approval withheld" (pending certain actions accomplished or information supplied by the developer).

(2) If in the course of the review process or after the issuance of the Permit to Install/Repair, it is discovered that the site or lot was improperly classified, or that the site/lot has been altered in a way inconsistent with the SPP, the site/lot approval and Permit(s) to Install/Repair is subject to review/revocation by the LHD, and corrective measures may be required.

(3) If approved, the final subdivision plat, containing any covenants or restrictions (including the areas reserved for the EDF/REDFs), shall be recorded in accordance with Rule 420-3-1-.100, Recording Requirements, and local subdivision and planning regulations in the Plat book in the Judge of Probate's Office, and a copy provided to the LHD.

(4) The SPP approval shall remain valid as long as conditions of the approval and circumstances under which it was issued do not change.

(5) If individual lots in a large-flow development (subdivision) are to be sold in any condition short of ready-for-occupancy (undeveloped or partially developed) at a minimum the developer shall prepare a SPP. Any modification of or building development on the lots must be in accordance with the approved SPP. Subsequent lot owners wishing to change any provision of the approved SPP must first apply to the LHD and receive approval to do so.

Authors: Lynn Scott, Lem Burell
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.21 Application Requirements for Individual OSS on Each Lot in a Large-Flow Development

When the requirements of the SPP have been met and the subdivision has been recorded according to Rule 420-3-1-.100, Recording Requirements, a CEP-2 may be submitted for each lot by the developer, builder or homeowner as appropriate. A Permit to Install/Repair for the individual lots may be issued by the LHD to the applicant (developer, the builder or the owner of the lot) as long as the requirements of the SPP have been met.

Author: Lynn Scott, Lem Burell
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.22 Application Requirements for Large-Flow Systems

(1) Large-Flow Systems shall require a State-Issued Performance Permit. The application (CEP-3) shall consist of items below:

(a) Name, physical address (911 address if available in the county), mailing address (if not the physical address), and telephone number of the responsible person, and the person completing the application.

(b) Type of business entity (corporation, general or limited partnership, sole proprietorship, or other), and if applicable, name and location of applicant's parent corporation or subsidiary corporations.

(c) If a corporation or other limited liability entity, a listing of corporate officers, their names and addresses, and the name and address of the agent designated by the corporation for purposes of service. If a partnership, the names and addresses of the general partners, and if a proprietorship, the name and address of the proprietor.

(d) Permit numbers for applicant's previous NPDES permits issued by ADEM, State-Issued Performance Permit issued by ADPH, and identification of any other state environmental permits presently held by the applicant or its parent corporation or subsidiary corporations within the State.

(e) Identification of any notices of violation or other administrative or legal actions taken by ADPH or ADEM against the applicant, its parent corporation or subsidiary corporation within the State.

(f) A description of the treatment and disposal plan, including prediction of flow and the calculations on which it is based, the pollutants that will enter the treatment facility, and the prediction of the pollutants that will be discharged from the treatment facility.

(g) The SPP (if not already submitted).

(h) A detailed description of changes or modifications made which were not previously approved, or which were not in accordance with the SPP.

(i) Legal description (if different from that submitted with the SPP application).

(2) An application for a State-Issued Performance Permit shall be completed by an engineer and may be accepted for review by the LHD, following the issuance and fulfillment of the conditions stated in the SPP.

(3) An applicant for a State-Issued Performance Permit shall keep complete records of the data used to complete the permit application for a period of at least 3 years from the date the application is signed or until any litigation involving the application is complete, whichever period is longer.

(4) The application for the State-Issued Performance Permit shall be signed by the individual meeting the requirements of Rule 420-3-1-.87, Signatories to a Permit Application and Report..

(a) The Board may require that an application for a State-Issued Performance Permit provide additional reports, specifications, plans, quantitative data, or other information reasonably required to assess the discharges and the potential impact of the discharges on waters of the state.

Authors: Lynn Scott, Lem Burell
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.23 Plans and Specifications for Large-Flow Developments with a Large-Flow System

(1) Plans and Specifications for large-flow developments shall include:

(a) A plat of the property that includes the following items drawn to scale and in compliance with Rule 420-2-1-.93, Professional Signatures and Seals:

1. Final lot dimensions, including total acreage or square footage of each lot;

i. If the lot is over 3 acres, only those lot lines and features listed below that are within 500 feet of any of the OSS components need be shown.

2. Final lot elevations and contours;

3. Location and description of all the existing ,and to the extent known, proposed structures, including, but not limited to, driveways, parking areas, sidewalks, walls, etc.; and

(b) A detailed layout of the proposed OSS, including a plan view that locates the treatment tanks, traps, pump chambers, distribution boxes, other treatment devices, pipe sizes, lengths, spacing, and the primary and replacement EDF. The layout shall also include the following:

1. A cross-section view of the EDF and the system as a whole;

2. Sequence of connections;

3. Maximum/minimum depth(s) of effluent lines, aggregate, cover, etc.

4. Temporary Benchmark location and elevation;

5. Elevations of trench bottoms, pipe inverts, top of EDF, top of original ground, top of fill (if applicable), tank inlet/outlet, and facility plumbing stub-out, etc., in relation to the established temporary bench mark;

6. Plans for tanks, showing capacity, invert and elevations, access manholes, inlet and outlet details. Plans for built-in-place or precast tanks will include dimensions, reinforcement details, liquid depth and other pertinent construction features;

7. Location and results of soil tests in both the primary and replacement EDF;

8. Locations of surface waters, springs, wetlands, swamps, marshes, hydric soils, wells, surface and subsurface drainage systems, underground utility and underground utility easements, sinkholes, caves, landfills, covered or open dumps, and surface mining operations on the lot, and within a 200-foot radius of the center of the primary and replacement EDF, sanitary sewer systems within 500 feet, public water supply sources within 500 feet, private water supplies and surface water supplies within 200 feet, water lines serving the project and within 10 feet of system components, building foundations, basements, property lines, embankments or cuts of 2 feet or more in vertical height, swimming pools, storm sewers, interceptor drains, surface drainage systems, and adjacent EDFs.

9. A surface contour map of the OSS area, compatible with the temporary benchmark, and with a maximum contour interval of 2 feet;

10. Location and design of associated surface and groundwater drainage systems that could potentially impact the OSS;

11. An explanation of the system sizing, design treatment rationale. Performance levels shall be indicated in the design as primary, secondary, advanced, or tertiary.

(i) The volume of sewage shall be computed from Rules 420-3-1-.36, Design Flow and Wastewater Concentrations.

(I) For a State-Issued Performance Permit application, the explanation should also state reasons for choosing the design and include suggested monitoring criteria (requirements, locations, methods, etc.), means for assuring the quality and integrity of the finished product, operation and maintenance procedures which address requirements for the system operator, inspection schedules, process and performance-monitoring schedules, and provisions for residuals management and maintenance of mechanical components, the EDF and the field vegetative cover. A contingency plan shall be provided for collection and disposal of effluent in the event of system failure or interruption of electrical power (if applicable). Treatment levels for performance-based systems shall be indicated as primary, secondary, advanced or tertiary. An operation and maintenance manual shall be prepared by the design engineer and/or product manufacturer, and provided as part of the original design. Changes to the operation and maintenance manual shall be approved and certified by the engineer.

(II) An application for a State-Issued Performance Permit shall be completed by the design engineer and signed by the individual meeting the requirements of Rule 420-3-1-.87, Signatories to a Permit Application and Report.

12. Plans shall include plan views for collection sewers, force mains, and supply lines, clean-outs and manhole locations, lateral connections, proximity to utilities, and pertinent features such as wells, water lines, storm drains, surface waters, structures, roads and other trafficked areas;

13. A contingency plan for effluent to be collected and disposed of or treated in the event of system failure or interruption of electrical power (if applicable);

14. An operation and maintenance manual shall be prepared by the design engineer and provided as part of the original design maintenance procedures addressing requirements for the system operator, inspection schedules, residuals management provisions, process and performance monitoring schedules, and provisions for maintaining mechanical components, the EDF, and its field vegetative cover.

Authors: Lynn Scott, Lem Burell
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

STATE-ISSUED PERMITS

420-3-1-.24 State-Issued Product Permits

(1) The Board may issue a permit to a manufacturer of a proprietary product or a wastewater treatment or disposal process which sets out the conditions that must be met in order to maintain approval of the product or process. This permit may also include conditions and requirements for installation, maintenance and reporting requirements that must be adhered to by the manufacturer, installers and users of the products.

(2) The Product Permit applicant must demonstrate to the Board's satisfaction that the product meets the requirements of this Rule including design calculations that demonstrate that the product can operate within the range of conditions specified by the Board.

(a) If a particular certification is a condition of approval and permitting, the product manufacturer must verify this certification as specified in the product permit.

(b) The applicant must include a description of all system components by product name/model number that can be identified in the field, including, but not limited to, the treatment system, drip tube, controllers, pumps, filters, supply manifold, return manifold, pressure regulators, air release valves, check valves, filter flush valves and headworks assembly, as applicable.

1. The Health Department may request conformation from the manufacturer of the appropriateness of the use of any component installed in the system.

(c) The Board may accept third party assessment and approval of some components associated with OSSs in lieu of issuing a State-Issued Product Permit if in the Board's opinion the third party approval is adequate to assure that use of the component will not endanger public health or the environment, except that any advanced treatment system must meet the conditions of Rule 420-3-1-.57, Advanced Treatment System (ATS) Specifications.

(3) The permittees holding State-Issued Product Permits shall warrant the product or package of products as described by the permit for a minimum of 2 years from the date of its installation. The warranty shall comply with the provisions of the Code of Alabama, 1975, §7-2-316(2), 7-2-714(1)(3), and 7-2-318 and shall guarantee the repair or replacement of a failing product, or a component thereof, at no cost to the owner when said failure is caused by a defect in the product. The warranty shall inform the owner of the replacement policy covering all mechanical and electrical component parts and the factors, events or actions that may void the product warranty. The State-Issued Product Permit holder, and not the manufacturers of the different components in the permitted product, shall furnish the warranty to the end user of the product or package of products.

(4) The permittee shall provide to the Board, LHD, its distributors, installers and engineers an initial instruction manual to guide the design and construction of the system(s). The permittee shall supply an updated manual when major changes are made to the design of the product/system(s).

(5) Service and standby mechanical and electrical component parts shall be supplied by the product permittee through a permittee-authorized distributor within the State of Alabama.

(6) The price of a system with a State-Issued Product Permit that requires maintenance shall include the cost of an initial maintenance contract. The contract shall provide for at least 4 service calls (1 every 6 months) for 2 years after installation to include inspection, adjustment and servicing of mechanical, electrical and other parts for proper function by a permittee-authorized distributor or service provider within the State.

(a) A continuing maintenance contract offering the same services shall be available and offered, through an in-State distributor/service provider, to the owner of the system package after the initial 2 years contract expires.

(7) The holder of a State-Issued Product Permit shall provide the training necessary to insure that an installer can competently install and maintain permitted products.

(8) The permittee shall submit a list of approved installers to the Health Department at least annually.

Authors: Jimmy Coles, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

Performance Standards

420-3-1-.25 General Requirements for Performance Standards

With review and approval of the Board, recognized standards may be used to establish and ensure that an OSS provide a measurable level of wastewater treatment in certain situations that do not lend themselves to the prescriptive method of permitting. In these situations, the ADPH may select an appropriate standard to define acceptable OSS goals for specific environmentally sensitive sites, to protect public health.

Authors: Jimmy Coles, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.26 Measurement Frequency, Limit Maximums, and Averages

(1) Sampling shall be performed as prescribed by the Board, following the criteria below:

(a) Daily sampling shall mean 7 days a week and shall be averaged on a monthly basis, unless otherwise stated in the permit and reported according to Rule 420-3-1-.27, Reporting.

1. Daily sampling shall start on the 1st day of the month following the effective date of the permit.

(b) Five-days-per-week sampling shall mean Monday through Friday and shall be averaged on a monthly basis, unless otherwise stated in the permit, and reported according to Rule 420-3-1-.27, Reporting.

1. Five-days-per-week sampling shall start on the 1st day of the month following the effective date of the permit.

(c) Weekly shall mean any day during the week, such that samples are at least three days apart, and shall be averaged on a monthly basis, unless otherwise specified by the permit.

1. Weekly sampling shall start on the 1st day of the month following the month in which the effective date falls.

(d) Monthly sampling shall mean once per month during a calendar month, such that there are at least 7 days between samples, and shall be averaged on a running quarterly basis. In other words, the average will be computed by averaging the most recent 3 months

1. Monthly sampling shall start on the 1st day of the month following the month in which the effective date falls.

(e) Quarterly sampling shall mean once per calendar quarter during any calendar month of that quarter, such that there are at least 30 days between samples, and shall be averaged on a running annual basis. In other words, the average will be computed by averaging the most recent 4 quarters.

1. Quarterly sampling shall start in the first calendar quarter in which there are 30 days or more left after the effective date of the permit.

(f) Semi-annual sampling shall mean once per 6 months during any calendar month of that 6-month period such that there are at least 175 days between samples.

1. Semi-annual sampling shall start in the first month in which there are 30 days or more left after the effective date of the permit.

(g) Annual sampling shall mean once in a 12-month period such that there are at least 350 days between samples.

1. Annual sampling shall start in the first month in which there are 30 days or more left after the effective date of the permit.

Authors: Jimmy Coles, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.27 Reporting

(1) Reporting shall be monthly, quarterly semi-annually or annually, as specified by the permit.

(a) Monthly reporting shall be due the 28th day of the month following the month in which the sample/samples are taken. For example, January results are due February 28th.

(b) Quarterly reporting shall be due the 28th day of the month following the calendar quarter. For example, 1st quarter (January, February, and March) results are due April 28th.

(c) Semi-annual results shall be due January 28th and July 28th.

(d) Annual results for the past year shall be due January 28th of the following year.

Authors: Jimmy Coles, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.28 Pre-treatment Standards

The standards that will primarily be used in permits are Primary Standards (effluent) and Secondary Standards (effluent) as defined by these Rules. Also, it should be noted that, under certain circumstances, ground-water monitoring with standards as stringent as drinking water standards may be applied, at the discretion of the ADPH. An example of this is a large EDF close to a property line or lake shore.

Author: George Allison, Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

State-Issued Performance Permit

420-3-1-.29 Requirements for State-Issued Performance Permits

(1) A State-Issued Performance Permit may contain the following:

(a) Authorization to operate as follows:

1. Authorization to operate for a period not to exceed 5 years.

2. If the permittee desires to continue operation of the system past the expiration date, at least 90 days prior to expiration of a permit the permittee shall submit an application for reissuance of the permit.

3. Applications for reissuance shall comply with Rule 420-3-1-.22, Application Requirements for Large-Flow System, except that previously submitted information need not be submitted unless requested by the Department.

4. The terms and conditions of an existing permit are automatically extended pending reissuance of the permit if the permittee has submitted a timely and complete application.

(b) Construction and maintenance requirements as follows:

1. The permittee shall properly construct, operate and maintain treatment systems, disposal system(s), monitoring well(s), sampling systems and other ancillary equipment which are installed or used by the permittee to achieve compliance with the conditions of the permit.

2. Department approval shall be obtained prior to any planned physical alteration or addition to a system. Application is required when:

(i) The alteration or addition could result in the discharge of additional effluent.,

(ii) The alteration or addition would result in additional discharge points that would require coverage under a State-Issued Performance Permit; or

(iii) The alteration will be the cause of a site modification that will directly or indirectly affect the EDF.

3. When monitoring wells are required by the Department, an as-built description and geologic log of the monitoring well(s) shall be obtained. The monitoring well(s) shall be completed and sampled prior to the use of the disposal system.

(c) Monitoring and operating requirements:

1. The permittee shall provide a method of obtaining grab or composite samples, as required by the permit, of effluent after all treatment and prior to disposal.

2. The permittee shall monitor the effluent and monitoring well(s) as required by the Department.

3. The Department may change the sampling frequency if the sampling data indicates a need to do so.

4. When sampling is required by the Department, all sampling and analysis shall be in accordance with EPA approved methods and procedures in all cases where an approved method and procedure is in existence.

5. When EPA has not approved methods and procedures for any sampling and analysis required by this Chapter of the Rules of the State Board of Health, the method and procedure shall be stated by reference or verbatim in the permit, an administrative order or directive.

6. Calibration of meters and other instruments used in monitoring shall be in accordance with the manufacturer's recommended procedure and frequency.

7. The system shall function properly and effluent shall not surface or saturate the uppermost soil layer. Any of the following constitute a failure of the system or a component and require immediate repair or replacement:

(i) A breakage, puncture or deterioration of the module, housing, or container that surrounds the treatment apparatus, medium or mechanism; a malfunction of the effluent distribution mechanism; or a product defect that would cause treated or untreated effluent to pond in the treatment unit; surface on the ground; back-up in the force main, pump sump, septic tank, or in the building; or interfere with the flow of effluent through the treatment system to the disposal field;

(ii) A wash-out, blow-out or disruption of the effluent disposal field caused by a malfunction in the treatment system.

(iii) The contamination of groundwater as a result of the discharge from the system, as determined through groundwater monitoring.

8. The permittee shall obtain all applicable licenses and certifications required by the AOWB, the Alabama Water Pollution Control Act and ADEM.

9. When allowed by the Department, the permittee may exceed permit limits due to an upset if no later than 24 hours after becoming aware of the upset the permittee reports the occurrence and circumstances of the upset to the Department. No later than 5 days after becoming aware of the upset, the permittee shall:

(i) furnishes the Department with evidence, including properly signed operating logs and other relevant evidence identify the cause of the upset;

(ii) that the facility was being properly operated at the time of the upset and;

(iii) demonstrates what steps were taken to minimize and adverse impact on human health or the environment resulting from the upset.

10. When required by the Department, the permittee shall perform best management practices.

(d) Records, reports and submittals as follows:

1. The permittee shall retain all records concerning the data used to complete the permit application, the operation of the system, nature and composition of effluent injected and ground water monitoring records for a period of at least 3 years from the date of the record(s), and shall deliver copies of any records to the Department if requested. Samples and measurements taken for monitoring and records kept for documentation shall be representative of the activity monitored or documented. Records of monitoring information shall include the following:

(i) The date, exact place and time of sampling or measurements;

(ii) The names of the individual(s) who performed the sampling or measurements;

(iii) The date(s) analyses were performed;

(iv) The names of the individual(s) who performed the analyses;

(v) The analytical techniques or methods used; and

(vi) The results of such analyses.

2. When required by the Department, the permittee shall submit to the Department monitoring reports summarizing the results from effluent, groundwater monitoring and system operation monitoring, not later than 28 days after the reporting period specified in the permit.

3. The permittee shall report to the Department any of the following:

(i) Any planned changes in the permitted facility or activity which may result in noncompliance with permit conditions;

(ii) Any planned transfer of ownership of the permitted facility by the person buying and the person selling the facility;

(iii) Compliance or noncompliance with interim and final requirements contained in any permit schedule of compliance within 14 days following each schedule date;

(iv) Any relevant facts which the permittee becomes aware of which should have been submitted in a permit application or corrections to incorrect data submitted in a permit application.

(e) Permit modification, revocation, suspension and termination as follows:

1. Permits may be modified, suspended, revoked or terminated either at the request of any interested person (including the permittee) or upon the Department's initiative for any of the reasons specified below. All requests shall be in writing, and shall contain facts or reasons supporting the request. The filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

(i) Violation of any provision of the permit or the Chapter has occurred;

(ii) Information submitted for the purpose of obtaining the permit or influencing the permit conditions is found to be misrepresented, materially false or inaccurate;

(iii) Errors in calculations, typographical errors or clerical errors are found in the permit application or other information submitted for the purpose of obtaining a permit which materially affects permit conditions;

(iv) New information becomes known to the Department which, if available at the time the permit was issued, would have influenced the permitting decision or permit conditions;

(v) Failure to meet conditions specified in the schedule of compliance contained in the permit;

(vi) New rules or regulations are promulgated which have a bearing upon the permitted operations;

(vii) Any other information not available at the time of permitting which may have a bearing upon the permitted operations;

(viii) The ownership of the facility is transferred to another person.

2. Modification, revocation, suspension, or termination of a permit shall not relieve the permittee of his responsibility to properly abandon the system.

3. If the Department tentatively decides to terminate a permit, the Department shall issue a notice of intent to terminate.

(f) General provisions as follows:

1. Any permittee authorized by permit to construct or operate a system shall allow access to their property and records by a duly authorized representative of the Department for the purpose of routine or other inspections and shall allow copying of records by a duly authorized representative of the Department. The duly authorized representative of the Department shall also be allowed to sample the effluent and the monitoring wells.

2. The permit shall not convey any property rights of any sort or any exclusive privilege.

3. The permittee shall comply with all conditions in the permit.

4. The permittee shall halt or reduce disposal if needed to maintain compliance with the conditions of the permit.

5. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with the permit.

Authors: Jimmy Coles, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.30 Establishing Limitations, Standards and Other Permit Conditions

(1) In addition to permit conditions required under Rule 420-3-1-.29, Requirements for State-Issued Performance Permits, the SHO may establish permit conditions, as required on a case-by-case basis, to provide for and ensure compliance with applicable requirements. An applicable requirement is a State statutory or regulatory requirement which takes effect prior to final administrative disposition of a permit. An applicable requirement is also a requirement which takes effect prior to the modification or revocation and reissuance of a permit.

(2) Applicable requirements shall be incorporated into a State-Issued Performance Permit or State-Issued Product Permit either expressly or by reference. If incorporated by reference, a specific citation to the applicable requirements shall be given in the permit.

(3) A State-Issued Performance Permit shall include conditions meeting the following requirements, where applicable:

(a) If discharge to a water of the State is allowed under this Chapter of the Rules of the State Board of Health, water quality standards established

under Section 303 of the Federal Water Pollution Control Act (FWPCA) and the Alabama Water Pollution Control Act (AWPCA) Ala. Code. 1975, Section 22-22-9(g)(1984), or as may be amended must be achieved.

1. Limitations shall be applied to control the pollutants or pollutant parameters which the SHO determines are, or may be, discharged at a level which will cause, have reasonable potential to cause, or contribute to the exceeding of a narrative or numerical water quality standard.

2. When the SHO determines that a discharge will cause, have reasonable potential to cause, or contribute to the exceeding of a narrative or numerical water quality standard for an individual pollutant, the permit shall contain a discharge limit for that pollutant.

(4) Other permit conditions may be required that are specific to site conditions.

Authors: Jimmy Coles, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.31 Calculating Permit Limitations for State-Issued Performance Permits

(1) Permit discharge limitations, standards and prohibitions shall be established for the discharge points from the facility, except where limitations on internal waste streams are more appropriately used.

(2) For the purpose of reporting and compliance, permittees shall use the Detection Level (DL) as established by EPA. Analytical values at or above the DL shall be reported as the measured value. Values below the DL shall be reported as "0."

Authors: Jimmy Coles, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.32 Schedule of Compliance

(1) The permit may, when appropriate, specify a schedule of compliance leading to compliance with the appropriate law.

(a) A schedule of compliance shall require compliance as soon as possible.

(b) If a permit establishes a schedule of compliance which exceeds one year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement, in accordance with the following:

1. The time between interim dates shall not exceed one year;

2. Dates for compliance shall be established, where applicable, as follows:

(i) Submission of pollution abatement program and preliminary plans;

(ii) Submission of final plans, specifications and drawings;

(iii) Initiation of construction;

(iv) Attainment of operational status; and

(v) Attainment of compliance with permit limitations.

(2) The permit shall be written to require that no later than 14 days following each interim date or the final date of compliance or other period which the SHO determines, the permittee shall notify the SHO in writing of its compliance or noncompliance with the interim or final requirements or submit progress reports.

Authors: Jimmy Coles, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.33 Enforcement Under Appropriate Law

(1) A person required to have a State-Issued Performance Permit or State-Issued Product Permit pursuant to this Chapter of the Rules of the State Board of Health and who discharges pollutants or markets a product without said permit, who violates the conditions of said permit, who discharges pollutants or markets a product in a manner not authorized by the permit, or who violates this Chapter of the Rules of the State Board of Health or applicable orders of the Department is subject to any one or combination of the following enforcement actions under the appropriate law:

(a) A court order requiring any combination of abatement compliance, mitigation, cessation of discharge, clean-up and penalties;

(b) An action for damages;

(c) An action for injunctive relief; or

(d) A criminal action for penalties.

(2) An order issued by the Department pursuant to the appropriate law, its implementing Rules or a State-Issued Performance Permit or State-Issued Product Permit shall specify a reasonable time within which noncompliance shall cease. In appropriate cases a reasonable time may be immediately. Reasonableness shall be determined based upon the severity of the violation and the complexity and availability of the measures necessary to correct the violation.

(3) If the permittee is not in compliance with the conditions of an expiring or expired permit, the SHO may choose to do one or more of the following, provided the permittee has made a timely application for reissuance of the permit:

(a) Initiate enforcement action based upon the permit which has been continued;

(b) Issue a notice of intent to deny the permit reissuance. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;

(c) Reissue the new permit with appropriate conditions; or

(d) Take other actions authorized by these Rules and the appropriate law.

Authors: Jimmy Coles, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.34 Sewage Tank Pumping Permit

(1) A person proposing to be a sewage-tank pumper shall obtain a permit (or permits) issued by the LHD(s) in accordance with the requirements listed below. LHDs may honor a permit issued by another LHD.

(a) The applicant shall submit an application to the LHD(s) on forms provided by the Board and shall state the business name, address and telephone number; the applicant's, owner's, and proprietor's name, address and telephone number; AOWB licensee name, license number and expiration date; the manner in which tank contents are to be collected, transported, and disposed of; the type of waste to be hauled; the location of disposal points, method of sewage disposal and the type of waste disposal at each point; and the tag number, state of registration, and sewage tank capacity (gallons) of each vehicle. Copies of written approvals from the disposal point authority shall be attached to the application.

1. The application shall have the following statement on it::

"I agree to allow inspection of all sewage tank cleaning equipment, vehicles, implements, containers, or other devices and sites used in the collection, transportation, or disposal of sewage tank contents. I also agree to mark my vehicle(s) and sewage holding tanks and to keep adequate records and submit them to the local health department personnel in accordance with rules of the State Board of Health. I understand that permit renewal is required each year between November 1 and December 31."

(b) The LHD(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 the 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 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 LHD is affected, cooperative understandings on the inspection process may be mutually honored.

(c) The LHD shall not issue a Sewage Tank Pumping Permit under this Chapter of the Rules of the State Board of Health unless an approved source and method of sewage disposal is provided.

(d) The LHD shall submit to the Board a copy of the original and each renewal permit issued under this Rule.

(e) If the application is approved, the LHD(s) having jurisdiction where the pumper pumps and discharges shall issue a permit on a form provided by the Board, with identifying number.

1. Permits shall not be transferable, and shall become invalid upon a change of ownership or upon suspension or revocation.

2. A permit may be denied, suspended or revoked when the LHD determines that the operation is not being conducted in accordance with these Rules or conditions of the permit.

(2) A vehicle used in the collection, removal, transportation or disposal of septage shall display, in letters at least 2 inches high, and in a conspicuous place on both sides of the truck cab or carrier tank the name and address of the firm under which the business is conducted, the county in which the permit was issued, and the permit number.

(a) A carrier tank aboard a vehicle 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 another purpose is prohibited. The required lettering shall be a minimum of 3 inches high.

(b) A carrier tank used for the collection, removal, transportation, or disposal of sewage tank contents shall be fully enclosed, leak proof, fly proof, 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.

(c) Only pumping equipment, tanks and vehicles approved or permitted by the LHD shall be used.

(d) The equipment, implements, containers or other devices used for the collection, removal, transporting or disposal of sewage tank contents shall be maintained and operated so as to prevent unsanitary or nuisance conditions.

(3) A 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:

(a) Waste water resulting from the flushing and cleaning shall be disposed of either by an OSS designed for such activity or by a sanitary sewer system, when available.

(b) 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.

(4) A sewage-tank pumping contractor shall keep a complete record of facilities pumped or cleaned and shall submit such records to the LHD quarterly or when requested by the LHD. The LHD may suspend a sewage-tank pumping contractor's permit for refusing to submit records quarterly. The LHD shall determine the duration of the suspension period. Records shall specify the following:

(a) Name and address of the person for whom the waste was removed;

(b) Date of completion of the operation;

(c) Size of the tank and the amount, in gallons, of the waste removed;

(d) Location of the disposal site; and

(e) Method of final disposal.

(5) 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. Septage may be disposed of by the following approved methods:

(a) Discharging the contents into a public sewer manhole or at an acceptable point in a ADEM-permitted sewage treatment plant, provided that the written approval of the responsible person 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 shall be provided to the LHD with the sewage tank pumping permit application;

(b) Land application of septage may be permitted by the Board when proper application for permit is made by the owner. Such applications shall be submitted through the LHD to the Board, under the provisions of the Septage Management Rules, ADPH, Chapter 420-3-6; or

(c) To an ADPH-approved sewage tank for temporary storage.

(6) A permitted sewage-tank pumping contractor, when pumping a sewage tank, shall effectively and completely remove the liquid and sludge in the tank by removing the inspection ports at both ends of the tank or the lids covering both ends of the tank, where inspection ports are not provided, and pump all compartments. The pumper shall make the access ports used in pumping watertight at the end of the pumping, and shall report problems or deficiencies noted in a tank to the LHD. These may include, but are not limited to, the structural soundness of the tank; the absence or condition of a baffle, an inlet or outlet fixture, an outlet filter; or the water-tightness of the tank.

(7) The LHD shall suspend a sewage tank pumping contractor's permit for a period of at least 6 months for improperly discharging septage into the environment. Depending on the severity of the violation, the Board may permanently revoke a sewage tank-pumping contractor's permit.

(8) A pumper of portable toilets shall meet all conditions of this Rule with the additional requirements listed below;

(a) A carrier tank used exclusively for the pumping of portable toilets or marine sanitation waste may have a minimum holding capacity of less than 1,250 gallons. The sewage-tank pumping contractor shall state in writing that the carrier tank is used only for the pumping of portable toilet or marine sanitation waste.

Authors: Kim Rice
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

SYSTEM DESIGN CRITERIA & TECHNICAL SPECIFICATIONS

420-3-1-.35 Engineer Design Required

(1) An OSS meeting one or more of the following conditions shall be designed by an engineer.

(a) The system is designed to handle more than 1,200 gpd, of sewage as determined by Rule 420-3-1-.36, Design Flow and Wastewater Concentrations.

(b) The system will handle any amount of high-strength sewage.

1. The high-strength system does not necessarily have to use advanced treatment unless the design flow is over 1,200 gpd but the field must be sized according to Rule 420-3-1-.39, EDF Sizing for Establishments.

(c) The site characteristics prohibit the use of a conventional system, or require any cut or fill to be used except that necessary to cover a shallow placement system.

(d) The lot is smaller than the minimums set out in Rule 420-3-1-.09, Minimum Lot Size Requirements for Sites Using an OSS.

(e) Sites that require mound systems as described in Rule 420-3-1-.66, Mounds.

(f) Sites which have received or will require Modification or Fill as described in Rule 420-3-1-.67, Lot Modification and Controlled Fill Systems.

(g) The REDF is to be smaller than the primary EDF or the REDF includes driveway or parking areas.

(h) A holding tank is specified. See Rule 420-3-1-.55, Holding Tank Requirements.

(i) An OSS using complex pumping systems.

1. A single, demand-type pump that pumps effluent from the pump chamber to a non-pressurized EDF is not considered a complex system unless the field must be dosed to comply with Rule 420-3-1-.43, EDF Dosing Requirements. The pump used must meet the requirements of Rule 420-3-1-.65, OSS Requiring Pumping of Effluent.

2. Pressurized fields of any type are considered complex systems.

(j) Sites with a percolation rate over 120 min/inch.(k)

(k) Sites with slope of over 25%.

Authors: Lynn Scott, Lem Burell, Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.36 Design Flow and Wastewater Concentrations

(1) The daily design flow volume and concentration of sewage from dwellings shall be computed using Table 1.

(2) The daily design flow and concentration of sewage or high-strength sewage from establishments shall be computed as follows:

(a) From Table 1; or

(b) From generally accepted engineering design criteria, taking into consideration the BOD loading values from Table 1 or other generally accepted BOD loading values from literature subject to ADPH approval; or

(c) The design flow may be derived from actual water use data of comparable developments and shall be submitted to the LHD/ADPH with the application. The flow shall be based on a thorough examination of actual water use, actual BOD and TSS concentration and other appropriate pollutant concentrations. Data from the establishment or from a comparable establishment, justifying a flow rate and concentrations, shall be submitted with the application to the LHD and the Board.

Authors: Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

Fields

420-3-1-.37 Gravel Field Standard EDF Sizing for Dwellings

(1) The Gravel Field Standard is the minimum total trench bottom area for dwellings calculated by multiplying the number of bedrooms by the number in the column labeled "Square Feet per Bedroom" in Table 3 and Table 3a that corresponds to the measured or assigned percolation rate determined according to Rule 420-3-1-.73, Soil Permeability.

(a) A primary EDF shall be a minimum of 300 square feet of the Gravel Field Standard or equivalent disposal medium/device unless designed by an engineer.

Author: Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.38 Gravel Field Standard Reductions for Dwellings

(1) Any reductions in Gravel Field Standard bottom area for a dwelling using any disposal medium/device alternative to the Gravel Field Standard as calculated in Rule 420-3-1-.37, Gravel Field Standard EDF Sizing for Dwelling, shall be expressed as a percent reduction of bottom area and shall be reflected in the State-Issued Product Permit.

(a) The reduction from the Gravel Field Standard for advanced treatment to secondary standards is found in Table 2.

(b) The minimum square footage calculated in accordance with Rule 420-3-1-.37, Gravel Field Standard EDF Sizing for Dwelling, for the Gravel Field Standard may be reduced by 33% of bottom area if gravel depth is increased to 24 inches total for fields with percolation rates of less than 120 min/in.

(c) Only one reduction may be taken per field, except for controlled fill installations. For example, if a reduction is taken for effluent treatment, no reduction may be taken for disposal technology used, or if a reduction is taken for depth of gravel, no reduction may be taken for effluent treated to secondary standards.

(2) Even if it is determined that a system has failed because a reduction to field size was taken according to these Rules, it shall be the owners responsibility to repair the system.

Authors: Lem Burell, Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.39 EDF Sizing for Establishments

(1) The EDF field sizing (square footage of bottom area) for establishments is based on BOD loading for wastewater that has a higher organic concentration (stronger) than the secondary standards and hydraulic

loading for wastewater that is weaker than secondary standards. It shall be calculated by the following method:

(a) Determine the average design load in lbs of BOD/day from Table 1 (or other appropriate engineering literature, as identified by the engineer and approved by the Board).

(b) To calculate the BOD load to the field assume that the septic tank will remove 40% of the BOD from sewage and 30% of BOD in high-strength sewage.

(c) Divide the BOD load to the field calculated in paragraph (b) by the appropriate figure from the column headed "Field Sizing for Establishments Primary Effluent" in Table 3 or Table 3a. This is the size of the field based on BOD loading.

(d) Next divide the design flow in gpd from the establishment by the appropriate number from the column headed "Field Sizing for Establishments with/without Secondary Effluent." This is the required size of the field based on hydraulic loading to the soil.

(e) The larger field size computed above is the required bottom area.

(f) Advanced treatment is required for all establishment design flows over 1,200 gpd of high-strength sewage and 4,000 gpd sewage unless it can be shown that the wastewater (prior to the septic tank or any treatment) is already weaker than secondary standards in which case the field can be sized as prescribed above.

Authors: Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.40 EDF Reductions for Establishments

(1) If the field size calculated in Rule 420-3-1-.39, EDF Sizing for Establishments, is large because of high-strength sewage, the field area may be reduced by treating to secondary standards and the column headed "Field Sizing for Establishments w/ Secondary Effluent" in Table 3 or Table 3a may be used for field sizing. No other reductions may be taken for these systems.

(2) Even if it is determined that a system has failed because reductions to field size was taken according to these Rules, it shall be the owner's responsibility to repair the system.

Author: Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.41 Onsite Sewage System (OSS) Area Requirements

(1) The OSS area, including the EDF and REDF area, shall be protected and preserved in the following manner in order that the natural soil may function as an infiltrative medium for wastewater disposal and treatment.

(a) Onsite sewage treatment and disposal systems (OSS) shall not be constructed in Texture Group III (3), IVa (4a), IVb (4b), or IVc (4c) soils during periods of wet weather or when the soil is sufficiently wet at the depth of installation to exceed its plastic limit. Under these Rules, the plastic limit of a soil is deemed 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) Special caution shall be taken in allowing vehicles to cross the EDF area during wet weather. Protection of Texture Group III (3), IVa (4a), IVb (4b), or IVc (4c) soils, or imported soils, is extremely important. Alteration of soil structure in the EDF area by vehicles may be grounds for the ADPH to reject the site or system.

(c) Excavating equipment used to construct an OSS shall be operated so as to not compress or smear the sidewalls or bottom of the EDF trenches. Excessive smearing of the usable absorption trench sidewalls or bottom during construction may result in irreversible damage to the soil infiltrative surface, and may be grounds for the ADPH to reject the site or system.

(d) Vegetation with extremely hydrophytic (water-loving) root systems shall be removed for a minimum distance of 10 feet from the EDF area

(e) Grading of a site with an SPP shall follow the requirements of the SPP and Rule 420-3-1-.19, Site Preparation Plan Requirements .

(f) Grading requirements for sites that do not require an SPP shall be as follows:

1. Alteration of the natural condition of a site may cause the site rating to be revised to a rating of Severe or Extreme and may necessitate a SPP, or may be grounds for denial of a Permit to Install or a State-Issued Performance Permit.

2. Final grading of a site shall divert surface water around the EDF, shall prepare the site for seeding and landscaping, and shall avoid damaging or compacting the EDF area to the maximum extent possible.

3. Grading for a mound or controlled fill shall follow the engineer's design and the requirements set forth in the respective mound design manual or in Rule 420-3-1-.67, Lot Modification and Controlled Fill Systems, respectively.

(g) Drainage requirements for an OSS area shall be as follows:

1. An EDF shall not be located in a depressed area where surface water can accumulate. Provisions shall be made to minimize the flow of surface water over an EDF.

2. The discharge from drains, gutters, roof, condensate, sump pumps, footings, etc., shall be diverted away from the OSS tank(s) and EDF.

3. A French drain may be required to divert subsurface water movement away from the EDF area. The French drain shall be placed perpendicular to the general slope of the land and generally parallel to and up gradient of the EDF. The French drain shall discharge into a natural or man-made drainage way. The French drain and associated drainage way shall comply with applicable setback/separation distances.

4. An OSS shall not receive any discharge other than the building sewer.

(h) Protection of an OSS area shall be accomplished as follows:

1. No structure shall be placed over a component of the system unless approved by the LHD and access is provided for repair and replacement of the component.

2. Lawn sprinkler water supply lines may be installed over an EDF if protected from backflow in accordance with the requirements of the International Plumbing Code or the International Residential Code. These lines, if installed, should be at least 12 inches above the top of the EDF pipe.

3. Engineering precautions shall be taken in the design of an EDF proposed for installation under designated playgrounds and athletic fields.

4. An EDF shall not be located under a driveway or other area subject to vehicular traffic, whether paved or unpaved. A driveway or parking area may be all or a part of the REDF when an engineer addresses its proposed future use to the satisfaction of the LHD.

5. Driveways or parking areas shall not be constructed over other components of the system unless structural provisions have been designed and certified by an engineer. A driveway or parking area shall not obstruct or limit access points required to operate or maintain a system component. The distribution piping and related devices and materials shall be rated for the anticipated load.

6. Piping for effluent conveyed under a traffic area shall be in compliance with the International Plumbing Code.

7. No action shall be taken under this Rule until a complete construction plan for any structure, driveway, or parking area that will go over a component of the OSS, with supporting documents, has been submitted to the LHD and approved.

Author: Randall Farris
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.42 Gravel Field Standard Construction Specifications

(1) The minimum acceptable material for non-perforated rigid pipe and fittings shall be Schedule 40 PVC or other material approved by the Board.

(2) The EDF shall be of the level header type or the serial distribution type, depending on the topographic characteristics of the site. A properly

designed and installed distribution box may be used in lieu of either. A distribution box is required instead of serial distribution when EDF lines are placed in fill on sloping sites.

(a) The level header type is used on relatively flat terrain where topography will allow EDF trench bottoms to be on the same elevation, within tolerance. The header shall be joined to the effluent line by a vent tee laid horizontally and at the same elevation as the EDF pipe. A sanitary tee shall not be used for this connection.

1. The invert of the header shall be at least 4 inches below the invert of the septic tank outlet.

2. The header line shall be level.

3. A non-perforated header line shall not be counted as part of the required EDF.

(b) When a level header system cannot be installed, a system of serial distribution following land contours may be used, as shown in Figure 2 and Figure 3.

1. Effluent shall enter the uppermost EDF pipe through a watertight effluent line discharging into the trench through a vent tee laid horizontally. A sanitary tee shall not be used for this connection.

2. EDF pipes shall be connected by means of a non-perforated line, and constructed so that each trench is filled with effluent to the full design depth before effluent flows through the cross-over line to the next lower EDF pipe. Distribution of effluent to EDF trenches shall be designed to ensure that lines are equally dosed when receiving effluent from preceding trenches. Where crossovers from the same trench are used to feed separate effluent lines, the receiving lines shall be of equal size and square feet.

3. The invert of the uppermost EDF pipe shall be at least 8 inches lower than the invert of the septic tank outlet. The invert of a cross-over line shall be at least 4 inches lower than the invert of the septic tank outlet. The inverts of all crossovers from an EDF trench shall be set at equal elevation.

4. At the point where a cross-over line leaves an EDF pipe, the trench for the cross-over line shall be dug no deeper than the top of the aggregate or top of the EDF product in the preceding trench so that an undisturbed block of earth will remain in place for the full depth of the aggregate or EDF product. Cross-over lines shall be laid on undisturbed earth. Successive cross-over lines shall be separated to the maximum distance practical to prevent short circuiting. Cross-overs shall be constructed as shown in Figure 4 or in accordance with the product permit.

5. The maximum length of a serial EDF pipe is 100 feet in each direction when measured from cross-over.

(i) For EDF pipes less than or equal to 100 feet one cross-over is required.

(ii) When EDF pipes exceed 100 feet in length, at least two cross-overs are required.

(iii) Cross-overs on successive lines shall be distributed in the system to minimize short-circuiting of effluent.

(3) A distribution box may be used as follows:

(a) In lieu of a header line, to connect the effluent line to EDF pipes on the same elevation.

(b) To evenly distribute effluent to separate EDF field sections of an OSS.

(c) In lieu of serial distribution, to connect EDF pipes on different elevations.

(d) The distribution box shall be set on level grade. Non-perforated rigid pipe shall exit the distribution box for a minimum of 5 feet on level grade or equal grade before the EDF pipe (perforations) begins, as shown in Figure 5. Watertight effluent lines shall then convey effluent to the EDF pipe.

(e) Where EDF trenches are not placed in natural soil, such as in some controlled fill systems, a distribution box shall be used in lieu of cross-over lines and serial distribution.

(4) The EDF trenches 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 LHD may approve alternate trench widths in special circumstances.

(b) The minimum distance between EDF sidewalls shall be 5 feet measured horizontally. Where trenches are on slopes with a grade greater than 25% the minimum distance between trenches shall comply with requirements set forth in Table 4.

(c) All trench bottom elevations in any 100-foot run of trench shall be within plus or minus 1 inch of all other elevations in that run.

(d) The minimum EDF trench depth shall be 12 inches. There shall be a minimum cover of 12 inches. The maximum EDF trench depth shall be 60 inches. Trench depth shall comply with the minimum vertical separation (MVS) in 420-3-1-.76, Soil Depth and Vertical Separation.

(e) The maximum length of an EDF trench in an EDF shall be 100 feet, except as provided in serial distribution systems section of Rule 420-3-1-.42, Gravel Field Standard Construction Specifications.

(5) The EDF pipe in an EDF using aggregate shall meet the following:

(a) Appropriate pipe and fittings that conform to applicable ASTM standards shall be used.

(b) All pipe elevations in any 100-foot run of trench shall be within plus or minus 1 inch of all other pipe elevations in that run.

(c) The minimum size of EDF pipe shall be 4 inches inside diameter.

(d) EDF pipe shall be rigid or semi-rigid 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 openings shall be of such size, shape and uniformity as to preclude sealing by solids or entrance of gravel or other approved substance surrounding the pipe. Pipe with slits, such as agricultural drain pipe, are not approved for use as EDF pipe.

(e) Perforated pipe in the EDF trenches shall be installed with the perforations turned down.

(f) The EDF pipe shall be installed in Board-approved aggregate.

(6) Aggregate and cover material shall meet the following:

(a) When the aggregate is coarse gravel or stone, it shall be washed and clean, free from fines, dust, sand, or clay, and ranging in size from ¼ to 2½ inches. The gravel or stone shall extend at least 8 inches below the lowest point of the EDF pipe and at least level with the top of the EDF pipe. The Board may consider other aggregate under a State-Issued Product Permit.

(b) The aggregate surrounding the EDF pipe shall be gravel as specified by the rules or approved for such use by the product manufacturer and shall be covered with untreated building paper, heavy Kraft paper, geotechnical fabric, or other Board-approved material, and then back-filled with at least 12 inches of earth cover.

(c) Material which is impervious to air and water, such as plastic sheeting, polyethylene or similar materials, shall not be used as a cover material over the aggregate in the EDF trench.

(7) The trench bottom of an EDF line shall be placed entirely in the native soil or in the fill soil, if required, but not in both. If the EDF line is in controlled fill or a mound, the depth of the line shall comply with Rule 420-3-1-.67(1)(d).

Author: Randall Farris
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.43 <u>EDF Dosing Requirements</u>

(1) EDF's requiring more than 1,400 linear feet of EDF pipe, as determined by the Gravel Field Standard, shall be divided into separate and equal EDF's containing not more than 1,000 linear feet of EDF trench in each field and shall comply with the following:

(a) Each EDF shall be dosed not more than six times a day, unless the effluent is treated to secondary standards or better; then dosing requirements may be modified by an engineer, with Health Department approval. This dosing requirement does not apply to drip irrigation or controlled fill with LPP.

(b) Each dose shall not be greater than 70 percent of the volume of the perforated pipe or other disposal product in the section or sections of the EDF into which the pumping tank is to discharge, unless the effluent is treated to secondary standards or better then dosing requirements may be modified by an engineer, with Health Department approval.

(c) Dosing shall be accomplished through the use of effluent pumps from a properly sized and designed dosing tank (this does not apply to drip irrigation). The dosing tank shall meet the structural tank requirements in Rule 420-3-1-.47, Septic Tank, Grease Trap and Holding Tank Standards and Specifications.

(d) Effluent pumps shall meet the requirements of Rule 420-3-1-.65, OSS Requiring Pumping of Effluent.

(e) The use of dosing siphons such as Miller siphons, may be considered by the Board.

(f) The use of low-pressure EDF pipe, placed within 4-inch diameter EDF pipe and placed in minimum 18-inch-wide trenches with a minimum of 8 inches of aggregate under the pipe, may be used as a means of equalizing the distribution of effluent over the EDF. The use of low-pressure EDF pipe shall require engineer design, using a recognized method.

Author: Randall Farris
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.44 Disposal of Effluent From Clothes Washing Machines and Residential Spas

(1) The effluent from a clothes-washing machine in a single-family dwelling shall be disposed of by one of the following methods;

(a) Discharge into the building drain or sewer or

(b) Discharge into a separate EDF. The amount of field line for a separate EDF for the washing machine shall be no less than 1/4 of the primary EDF, as determined from Rule 420-3-1-.37, Gravel Field Standard EDF Sizing for Dwelling. The primary EDF may be reduced by the amount used for the washer line, not to exceed 1/5 of the total required for the primary EDF before any other reductions are taken.

1. Example 1: If the original EDF prior to any reductions, were 500 square feet, 125 square feet (1/4 of the total) would go into the washer effluent field, and the regular effluent field line(s) would be reduced by 100 square feet (one fifth), making it 400 square feet. Therefore, there would be 525 total square feet in the 2 fields.

2. Example 2: If the original EDF as calculated from Table 3 (prior to any reductions) were 800 square feet, 200 square feet (1/4 of the total) would go into the washer line field, and the "regular" effluent field would be reduced by 160 square feet (1/5 of the total), making it 640 square feet. If a further reduction is allowed by Rule or Permit, that further reduction would come from the 640 square feet of "regular" field lines. So if a further reduction of 50% is allowed it would be taken from the quantity remaining after the washing machine line was deducted, so then the primary EDF would be 320 sq.ft. (640 sq.ft. x .50 = 320 sq.ft.). The total in both fields then would be 520 (320 sq ft. + 200 sq.ft.)

(2) The trench bottom areas of the EDF for a spa, at a private dwelling, shall be a minimum of 50% of the EDF shown in Table 3. No additional reductions for treatment are permitted unless the engineer determines the amount of additional field line for the spa or similar device from actual water use data submitted to and approved by the Health Department.

(3) The effective liquid capacity of the tank shall be increased by 500 gallons for each spa.

Authors: Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.45 Setback/Separation Distances

(1) The minimum setback/separation distances between EDFs, septic tanks, pump chambers, aerobic pre-treatment devices (including sand filters, biofilters, and ATUs), header lines, and similar devices, and various structures and topographic features, are contained in Table 5.

(2) No underground utility service or main, such as a water, electrical, phone, TV, or gas lines may cross over or under an EDF pipe.

(3) An OSS, the EDF, or the EDF replacement area shall not be located in an underground utility easement.

(4) Separation distances from a natural or man-made drainage system, embankment or cut may be reduced if sufficient information is submitted with the application to show that the drainage feature will not adversely affect the functioning of the EDF, and that effluent will not reach the feature, embankment or cut.

(5) See Rule 420-3-1-.89, Repair, Replacement and Inspection of an Existing OSS, for certain exceptions to separation distances for OSS repairs and replacements.

Authors: Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.46 Additional Setback/Separation for a Large System

(1) In addition to the requirements of Rule 420-3-1-.45, Setback/Separation Distances, the EDF/REDF for a large-flow system, which includes one or more EDFs with individual capacities of greater than 600 gpd, shall be located at least the minimum horizontal distances as listed in Table 6 and Table 7.

(2) A sewer line (not EDF pipe) may cross a water line if 18 inches clear separation distance is maintained, with the sewer line passing under the water line. When conditions prevent an 18-inch clear separation from being maintained, or whenever it is necessary for the water line to cross under the sewer, the water line shall be encased in materials specified in the International

Plumbing Code for a distance of at least 5 feet on each side of the point of crossing.

(3) A collection sewer, force main, or supply line shall be located at least the minimum horizontal distances as listed in Table 7.

(4) A sewer line may cross a storm drain if;

(a) 12 inches clear separation distance is maintained or

(b) The sewer is of ductile iron pipe or encased in concrete or ductile iron pipe for at least 5 feet on either side of the crossing.

(5) A sewer line may cross under a stream if at least 3 feet of stable cover can be maintained, or the sewer line is of ductile iron pipe or encased in concrete or ductile iron pipe for at least 10 feet on either side of the crossing, and protected against the normal range of high and low water conditions, including the 100-year flood/wave action. An aerial crossing shall be by ductile iron pipe, with mechanical joints or steel pipe. Pipe shall be anchored for at least 10 feet on either side of the crossing.

Author: Jimmy Coles, Lynn Scott
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

Tanks

420-3-1-.47 Septic Tank, Grease Trap and Holding Tank Standards and Specifications

(1) A new, replacement, or repaired septic tank, grease trap or holding tank used in Alabama after the effective date of these Rules shall be designed and constructed in accordance with the following specifications and standards:

(a) A tank, when configured for use, shall be watertight. The tank and all components shall be corrosion resistant and resist the effect of sewage, sewer gases, household chemicals and soil burial.

(b) A septic tank shall have at least 2 compartments. The baffle wall forming the 2 compartments shall be located so that the inlet compartment comprises approximately 2/3 of the effective liquid capacity of the tank.

(c) The Board may require test reports from an independent testing laboratory to substantiate a manufacturer's tank design.

1. A baffle wall is not required in a grease trap, holding tank or a pump tank provided the tank has been tested without the baffle to meet the structural requirements of this Chapter of the Rules of the State Board of Health.

2. At the discretion of an advanced treatment system designer, the baffle wall for the tank preceding an advanced treatment system is not required provided the tank has been tested without the baffle to meet the structural requirements of this Chapter of the Rules of the State Board of Health.

(d) When used, the baffle wall forming the 2 compartments shall be permanently fastened to the tank and shall be 1 of the following types:

1. Type 1, a baffle wall (see Figure 7) with a continuous opening 4 inches wide extending at least 75% of the width of the baffle, with the top of the opening located 12 inches below the effective liquid surface. Allowance shall be made for adequate support of the upper portion of the baffle. A space of 2 inches shall be provided between the top of the baffle and the opposing underside surface of the tank cover or top.

2. Type 2, a baffle wall designed and sealed by an engineer.

(e) Concrete tanks may be precast or poured in place. Both shall comply with these rules, and precast tanks shall conform to the to the appropriate provisions of the American Society for Testing and Materials (ASTM) Standard concerning the standard specifications for precast concrete septic tanks.

1. The Board may approve concrete tanks with advanced technologies for reinforcement if the plans carry the seal of an engineer.

(f) Except as otherwise permitted by these Rules, the minimum hydraulic detention time for both a septic tank and grease trap, or tanks in series, shall be 2 days (48 hours), based on flow computed per Rule 420-3-1-.36, Design Flow and Wastewater Concentrations, or Table 1. In no case shall the tank effective liquid capacity be less than 1,000 gallons.

(g) The effective liquid capacity of a septic tank for a dwelling shall be based on the number of bedrooms proposed or that can be anticipated and shall, as a minimum, comply with Table 8.

(h) The inside length of a tank shall be at least 1 and 1/2 times the inside width. The inside width of a tank shall not be less than 3 feet.

(i) The minimum effective liquid depth of a tank shall be 3 feet, and the maximum effective liquid depth shall be 6 feet. Greater liquid depths require special consideration by the Board.

(j) A minimum air space of 8 inches shall be provided between the effective liquid surface and the lowest point on either the underside of the lid or the underside of the tank top.

(k) The inlet to a tank shall be a sanitary or vent tee extending below the effective liquid level.

(l) The invert of the inlet tee shall be a minimum of 2 inches above the invert of the outlet tee.

(m) When required, a tee shall be used for the outlet of the tank, and the tee shall extend at least 6 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 tank manufacturer or installer. See Rule 420-3-1.-53 Effluent Filter Specifications for effluent filter requirements.

(n) The inlet tee and the outlet structure shall be centered and aligned with the access inspection openings in the lid or top so as to provide

unrestricted access to the inlet and outlet structures. Inlet piping shall comply with the plumbing code. Outlet piping shall be 4-inch Schedule 40 PVC or approved equal. The inlet and outlet structures shall penetrate the tank wall. A watertight flexible joint shall be used to accommodate installation and post-installation tank movement.

(o) Septic tanks with an integral pump chamber shall meet all design and testing requirements for septic tanks in these Rules. The tank wall separating the septic tank and pump chamber compartment shall be poured monolithically with the tank walls and bottom, and shall contain, at a minimum the same reinforcing and the same thickness as the sidewalls of the septic tank.

(p) Cast in-place tanks shall have minimum wall, bottom and lid thickness of 4 inches.

(q) Precast concrete tanks with capacities of less than 1,200 gallons shall have minimum lid thickness of 3 inches and tanks with capacities of 1,200 gallons or more shall have minimum lid thickness of 4 inches.

(r) Individual dwelling concrete tank lids shall have a minimum 6 x 6 x 10 (6-inch on centers of number 10 gauge) welded steel reinforcement.

(s) A lid for a tank may be monolithically poured. The lid for a tank with an effective liquid capacity of less than 1,200 gallons shall have only 1 section; a larger tank lid may have more than 1 section. In no case shall it be necessary to remove a lid or lid section in order to gain access to a tank for inspection or maintenance purposes. Where more than 1 lid section is used, joints between sections shall be sealed to form a watertight seal. Except for a monolithic pour or a proprietary product design, an approved water stop shall be used to affix the lid to the tank body or to seal multiple-part tank bodies.

1. Tanks and lids for traffic installations shall be designed, signed and sealed by an engineer. Whenever vehicular traffic is anticipated to cross over a tank, traffic lids shall be installed with risers to finished grade. Tanks and lids shall be designed in accordance with ASTM C 890-91 (Re-approved 1999), "Standard Practice for Minimum Structural Design Loading for Monolithic or Sectional Precast Concrete Water and Wastewater Structures", herein incorporated by reference, for the appropriate loading. Application of paragraph 5.2.4 of ASTM C 890-91 (Reapproved 1999) shall be at the discretion of the design engineer.

(t) Any tank lid certified by the engineer to meet the appropriate AASHTO H-20 Loading Criteria may be approved by the Board.

1. Access inspection openings with a minimum 18-inch diameter or equivalent area opening shall be provided in the tank lid or top over the area of the inlet and outlet structures.

(u) Risers for new tanks shall be cast directly into tank lids or tops. Risers shall be manufactured of materials that are compatible with the expansion and contraction of tank material and form a mechanical bond with the tank material, ensuring a watertight seal. Tanks manufactured before the effective date of these regulations may be retrofitted with risers and sold for one year after March 19, 2006, the effective date of these regulations. The risers for these tanks shall be mechanically bonded to the tank top using an approved

method such as epoxy, silicone or butyl sealant to form a water tight seal after the concrete tank has been cast.

1. Risers shall be located over the inlet and outlet structures and shall be a minimum of 18 inches in diameter. Depending on specific situations, additional risers may be required.

2. All risers and components shall have watertight covers/lids. The cover/lid shall be designed, constructed, and maintained to prevent unauthorized access.

3. A plastic or fiberglass access riser and cover/lid shall have third-party documentation that ultra-violet (UV) protection is molded into all components.

(2) Polyethylene and Fiberglass tanks shall meet the requirements of the appropriate sections of the International Association of Plumbing and Mechanical Officials (IAPMO). If the requirements of this code conflict with the standards in this section, the standards in this section shall apply.

(a) Tanks shall be constructed in accordance with good construction practices.

(3) The use of metal tanks, drums, barrels or pipes as sewage tanks is prohibited for use with onsite sewage disposal systems.

Authors: Randall Farris, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.48 Tank Installation

(1) A new, replacement, or repaired septic tank, grease trap or holding tank used in Alabama after the effective date of these Rules shall be installed by individuals who are appropriately licensed under current law and regulation. Tanks shall be installed on a level, firm, and compacted surface such that the tank is placed both longitudinally and laterally level. Installation instructions shall be followed where specific installation instructions are provided by the tank manufacturer. All fiberglass and plastic tanks must be accompanied by clear and concise instructions from the manufacturer for the proper installation of the tank. A minimum layer of 2" of sand or gravel placed level in the tank hole is recommended for leveling purposes.

(a) Tank risers for dwelling shall be placed from 6 inches below final grade to final grade.

(b) Risers on a tank for an establishment shall be brought to a minimum of stabilized finished grade.

(2) When 2 tanks are connected in series to obtain the required capacity, a baffle wall shall not be used in the inlet tank, and a baffle wall shall remain in the second tank.

(a) No more than 1 two-tank series may be used per building sewer.

(3) A new tank that requires repair prior to being placed into use shall be repaired to meet the standards of these Rules and shall be repaired as directed by the manufacturer. Repair of a tank already in use shall be coordinated with the LHD, and shall meet the requirements of Rule 420-3-1-.89, Repair, Replacement and Inspection of an Existing OSS.

(a) A repaired tank may be subjected to the same structural and water-tightness test as are prescribed in Rule 420-3-1-.49, Tank Testing and Quality Control.

Authors: Randall Farris, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.49 Tank Testing and Quality Control

(1) All tank manufacturers proposing to sell precast septic tanks, holding tanks or grease traps of less than 2500 gallons capacity, or that has a construction joint below the water line, shall demonstrate that the design and construction technique employed are sufficient to ensure that each such product meets or exceeds the structural, water-tightness and concrete specimen testing protocols outlined below. The manufacturer shall make this demonstration upon initial application for each model tank to be sold in Alabama.

(a) The structural integrity shall be verified by actual vacuum load or hydrostatic test as specified by the Department in accordance with Table 9.

(b) The water tightness shall be verified by ASTM C1227 00b, "Standard Specification for Precast Concrete Septic Tanks" paragraph 9.2., herein incorporated by reference. ASTM C1227 98, paragraph 9.2.2, shall be modified to read as follows: Water-pressure testing – Fill the tank with water to the invert of the outlet and let stand for 24 hours. Refill the tank. The tank is approved as watertight if the water level is held for one hour. Tanks that pass the vacuum or pressure test and also pass the water tightness test shall be approved.

(c) Structural and water tightness testing of tanks shall be conducted in the presence of an engineer or a certified employee of the Department, if the manufacturer is in State and work schedule allows. Test results shall be certified by the engineer or state employee per the signed statement specified in Rule 420-3-1-.97, Tank Testing Certification.

(d) Septic tanks of 1,500 gallons or less capacity used in Decentralized Cluster Systems that are subject to financial viability requirements of the Onsite Wastewater Management Entities Act (§22-25A-1 *et seq.,* Ala. Code (2001)) shall, after installation, be individually tested for watertightness, before backfilling. Written test results shall be provided to the ADPH upon request.

(2) Concrete used in septic tanks shall have a 28-day compressive strength of at least 4,000 psi. The concrete tank manufacturer shall submit to the Board for approval the materials proportion for the concrete mix design and test data showing that such a mix meets the 4,000 psi requirements.

(a) Concrete tank manufacturers shall cast at least four compressive-strength specimens every week in which a tank is manufactured, or every 100 cubic yards, or increment thereof, of concrete mix used, whichever is more frequent. Two of the specimens shall be tested at 7 days and the other 2 shall be tested at 28 days. Specimens shall be tested in accordance with the appropriate ASTM standard covering testing method for compressive strength of cylindrical concrete specimens."

1. If the 7-day specimen tests at 4,000 psi or greater the 28-day test is not required.

(b) Specimens shall be 6-in. diameter by 12-in. high cylinders unless the maximum aggregate size is ¾ inch or smaller, in which case 4-in. diameter by 8-in. high cylinders may be used. Specimens shall be made in accordance with the appropriate ASTM standard having to do with methods of making and curing concrete test specimens in the field. Specimens shall be cured in a manner similar to the curing of concrete products represented by the specimens.

(c) All test records shall be kept for a period of 3 years and shall be provided to the Health Department upon request. Failure to satisfactorily maintain records may be grounds for permit suspension.

(d) Any tank(s) manufactured from a pour that does not test at a minimum of 4,000 psi shall be destroyed.

(e) Persons conducting quality control (QC) tests shall hold either a American Concrete Institute (ACI) level 1 certification or a National Precast Concrete Association's (NPCA) certification, "QC personnel training course (Fundamentals of Quality Precast)". If testing is performed by an outside testing agency, the agency must maintain records to demonstrate that the personnel performing the tests are either ACI or NPCA certified.

(f) If a tank manufacturer can provide documentation, to the satisfaction of the Board, that the concrete used in the tanks came from an Alabama Department of Transportation (ALDOT) approved concrete plant and the concrete mix is an A1-C ALDOT approved concrete mix, the manufacturer shall not have to meet the requirements of paragraph (2) of this Rule.

(3) All tank series approved in Alabama on the effective date of these regulations shall have 1 year from that date to be in compliance with this Rule.

Authors: Randall Farris, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.50 Tank Manufacturer Inspections

(1) The Alabama Department of Public Health shall make periodic inspections of tank production sites or tank staging areas and tanks for all tank series with a capacity of 1,500 gallons or less to determine compliance with the requirements of these Rules. Inspections shall be made upon initial application for new tank series, upon annual permit renewal and periodically as deemed

necessary by the Department. The LHD shall conduct these inspections and act on the application within 30 days of its receipt. Larger tanks may not be required to be available for inspection at the manufacturer or at a staging area if the tank manufacturer is certified by the National Precast Concrete Association (NPCA), or the International Association of Plumbing and Mechanical Officials (IAPMO). The manufacturer shall certify to the Department annually that they are certified by NPCA or IAPMO. When required the Department may make periodic inspections of larger tanks at a site specified by the Department if deemed necessary.

(a) A violation of the Rules discovered by a LHD or the Board may result in the revocation of the permit for a specified tank model, accompanied by written notice to the AOWB.

(2) In addition to the testing required in Rule 420-3-1-.49, Tank Testing and Quality Control, the ADPH may require testing, at the rate of 1 tank annually, during the tank manufacturers' periodic inspection.

(a) This inspection shall be a no-notice inspection and the tank to be tested shall be selected by the Health Department.

(3) If the LHD has cause, it may request, through the Area Environmental Director, that the Board direct additional tank testing.

(4) If the tank fails the structural or watertightness test, one other test on another tank of the same series, selected by the Health Department, shall be run immediately. This additional test shall be run only if the manufacturer requests the test and if there is a suitable tank available. If no tank passes the test during the inspection, no tanks of that series shall be sold, and that specific permit shall be suspended until a tank of that series passes the test. Tanks that fail either test shall be identified, and shall not be used in any OSS. Scheduling a new test shall be at the option of the Health Department representative but shall not be delayed for more than two weeks unless the manufacturer requests more than two weeks.

(a) If after 30 days from the date of the permit suspension the manufacturer has not had a tank from that series successfully tested, the permit for that series of tanks shall be revoked.

(b) The Health Department shall provide written notification to the manufacturer at the time of the suspension and revocation.

Authors: Randall Farris, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.51 Prefabricated Septic Tank, Grease Trap and Holding Tank Permit

(1) No prefabricated septic tank, grease trap or holding tank shall be installed other than a tank which has been permitted jointly by the Board and the LHD having jurisdiction in the county where the manufacturer (AOWB-licensed and Department permitted) is located or does business. The permit

number, issued by the Board for the specified tank, and the effective liquid capacity of the tank, shall be permanently embossed on the tank end wall at the inlet end so that it is readily visible after installation and prior to covering.

(2) An out-of-state manufacturer of a tank used in interstate commerce shall, in coordination with the Board and the designated LHD, establish a specific fee-based county within the State of Alabama as the county of record for business purposes. This manufacturer shall have and provide the LHD with information on their AOWB-licensed distributor/agent designee.

(a) Within one year from the effective date of this Rule, an out-of-state manufacturer shall assure that its designated distributor or agent provides and makes known to the LHD of the county of record a specific, fixed location, readily accessible, where its tanks are sent for distribution and made available for inspection by the LHD during reasonable business hours.

(3) A manufacturer of a prefabricated tank shall comply with the requirements of Rule 420-3-1-.47, Septic Tank, Grease Trap and Holding Tank Standards and Specifications. On a form provided by the Board, the tank manufacturer or its designated AOWB-licensed distributor/agent shall submit, to the county of record and to the Board, the company name, owner's name, AOWB license number, mailing address, 911 address if available, telephone number, test results as outlined in Rule 420-3-1-.49, Tank Testing and Quality Control, and accompanying detailed plans for each size and configuration of tank. The plans shall accurately and completely show all dimensions, baffle walls, access inspection holes, risers, inlet and outlet holes and water stops, and ancillary equipment. The plans shall include top, sectional side, sectional end views, and shall include material specifications, such as reinforcement material and additives.

(a) The submittal shall include clear and concise written instructions from the manufacturer as to the proper shipping, handling, assembly, installation, maintenance, or repair of the tank and equipment. The instructions shall clearly identify site conditions, if any, that would prohibit tank installation or would void manufacture warranty.

(b) The submittal shall include a copy of any applicable tank warranty.

(c) Duplicate submittal packages shall be sent concurrently to the LHD in the county of record and to the Board.

1. The Board shall issue a permit number for each series of tanks that it approves.

2. The Board shall maintain a listing of licensed manufacturers holding permits for approved tank series. The LHD shall maintain a current list of permits issued within its jurisdiction, including issue and anniversary dates, and shall ensure that current information is provided to the Board.

3. A permit is not transferable from one person to another, from one tank form or tank model to another, or from one manufacturing site to another.

(4) In July of each year, a licensed manufacturer, or a manufacturer's licensed distributor/agent, shall submit to the LHD an application for an annual permit renewal on a form provided by the Board. The terms and

conditions of an existing permit are automatically extended pending reissuance of the permit if the manufacturer has submitted a timely and complete application.

(5) Prefabricated tank form manufacturers may submit detailed and professionally drawn scale plans to the Board for preapproval. Such plans shall be accompanied with electronic drawings in a format acceptable to the Board. Upon approval, plans shall be assigned a State approval number and date.

(a) If a tank manufacturer purchases a form that is preapproved in Alabama, the plans for the form need not be resubmitted. The application must state the form manufacturer's name, the plans approval number and date assigned to the form that is to be used

(6) The issuance by the Board or the LHD of an initial or renewal permit for an approved tank model shall in no way imply a guarantee of the onsite acceptability, approval or performance of a tank.

(7) No cast in place or otherwise constructed tank shall be installed without prior review of design and construction plans by the LHD and Board and subsequent permitting by the Board.

Authors: Randall Farris, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.52 Tank Manufacturer Records

(1) A person selling, distributing, or marketing tanks shall keep a complete record of all tanks sold and shall make such records available to the Health Department for inspection at their place of business during reasonable business hours. Information in the records concerning general business practices such as number of tanks sold, etc., shall be considered confidential by the Health Department. Records shall include the following:

(a) Name and address of the buyer.

(b) Date of sale of the tank(s).

(c) Tank model permit number(s), size of the tank(s) and number of tanks sold.

(d) The location of the buyer or place of installation if other than that provided in subparagraph (a) above of this Rule.

(e) The LHD Permit to Install/Repair Identification Number or a written explanation of the intended tank use.

(f) The AOWB licensed installer number, when applicable

Authors: Randall Farris, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.53 Effluent Filter Specifications

(1) An effluent filter meeting the appropriate NSF Standard shall be installed in or with the septic tank, and shall be properly sized for the system in accordance with the filter manufacturer's recommendations. The requirement for a septic tank effluent filter may not apply to any sewage tank that is used as a grease trap in concert with a septic tank or a pre-treatment/trash tank in conjunction with an advanced treatment system unless it is recommended by the advanced treatment system manufacturer.

(2) An effluent filter may be housed in a chamber separate from the primary treatment tank, in which case the chamber must comply with Rule 420-3-1-.65, OSS Requiring Pumping of Effluent, (1) (c).

Authors: Randall Farris, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.54 Trash Trap Specifications

If a trash trap is required by the onsite system designer or manufacturer, the trash trap shall meet the structural requirements of Rule 420-3-1-.47, Septic Tank, Grease Trap and Holding Tank Standards and Specifications. When recommended or required by the advanced treatment system manufacturers or the engineer, a sewage trash trap or septic tank preceding an advanced treatment unit shall meet the design requirement of the advanced treatment system manufacturer. Such a sewage trash trap or septic tank, if required by the manufacturer, shall meet the structural requirements for tanks in these Rules.

Author: Randall Farris, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.55 Holding Tank Requirements

(1) Applications that propose using holding tanks as an onsite sewage disposal system are to be submitted by an engineer and shall be permitted in the same manner as septic tanks.

(2) The use of a holding tank for a dwelling shall be prohibited as part of a permanent OSS.

(a) Use of a holding tank at a dwelling on a temporary basis may be approved by the Board when a permanent OSS has been approved and is expected to be in service in a reasonable time.

(3) Local Health Departments may permit a holding tank to be used on a temporary basis with a building other than a dwelling until another approved means of sewage treatment and disposal is available. The period of use shall be stated in the permit and shall be a reasonable and defined time frame. Prior to the end of this period, the permittee shall present information to the LHD regarding the abandonment or proposed continued use of the holding tank. To

explore other options of treatment and disposal, the LHD may require the permittee to submit an engineering analysis of other options and their cost. The LHD shall decide whether to renew the permit and shall establish the terms and conditions of continued use.

(4) The design, construction and use of a holding tank shall be as follows:

(a) A holding tank shall be permitted and obtained from a tank manufacturer holding a permit issued under Rule 420-3-1-.51, Prefabricated Septic Tank, Grease Trap and Holding Tank Permit; or the proposed tank shall be inspected and certified in writing by the engineer to be structurally sound and suitable for the intended purpose.

(b) Holding tank capacity shall be calculated using the sewage flows in Rule 420-3-1-.36, Design Flow and Wastewater Concentrations. The tank shall be sized to provide a capacity 25% larger than the projected sewage flow accumulation between scheduled pumpings and as a buffer in case of weather conditions, temporary unavailability of a sewage tank pumper, or other adverse conditions.

(c) A holding tank 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 effective liquid capacity. The alarm shall be placed in a location of easy recognition, and shall be labeled "Alarm-Sewage Holding Tank."

(d) All practical water-conservation measures shall be incorporated into designs/systems proposing the use of holding tanks.

(e) A holding tank shall be maintained and pumped at such frequency as to prevent public health hazards or nuisances. The minimum frequency for inspection shall be weekly.

(f) The conditions of operation which may be prescribed by the ADPH in the permit for a holding tank shall include, but not be limited to, the requirement that the owner/user:

1. Contract with a sewage tank pumper permitted under Rule 420-3-1-.34, Sewage Tank Pumping Permit. The contract shall provide that the pumper maintain, and make available to the ADPH, a complete record of pumping activities at the site, as set forth in Rule 420-3-1-.34, Sewage Tank Pumping Permit. A copy of this contract shall be placed on file with the ADPH.

2. Deliver to the ADPH, on a periodic basis established by the LHD not to exceed quarterly, copies of the sewage tank pumper's bills, statements or invoices.

3. Provide written and notarized authorization to allow the ADPH to initiate required maintenance at the owner's/user's expense if either noncompliance with these Rules or legal notices results in an imminent or existing health hazard or nuisance.

(5) A holding tank shall be properly abandoned in compliance with Rule 420-3-1-.56, Abandonment of a Sewage Tank, when its permitted use expires.

Authors: Randall Farris, Thad Pittman

Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.56 Abandonment of a Sewage Tank

When the use of a sewage tank is discontinued; or when the system cannot be made to comply with these rules; or when the property is condemned, the tank shall be abandoned, and its further use prohibited. An abandoned tank shall be pumped out by an AOWB-licensed pumper. An empty tank may be removed at the property owner's option, or to make room for new system components. If no replacement component is intended, the hole left by the removal of a tank shall be filled with sand or soil. An empty tank left in place shall be filled with sand or soil. As an additional recommended step, the bottom of the tank may be ruptured.

Author: Randall Farris, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

Advanced Treatment & Drip Irrigation

420-3-1-.57 Advanced Treatment System (ATS) Specifications

(1) For a system to be considered an advanced treatment system by the Board it must do one of the following:

(a) Demonstrate continued compliance with the conditions of a State-Issued Performance Permit.

(b) Be currently listed and certified by a testing organization as meeting the appropriate NSF standard. Those products having a Product Permit on the effective date of these Rules are exempt from this requirement. Should there be any changes in the exempted system it must comply with the appropriate NSF Standard.

1. This testing and certifying organization must show proof of being ANSI-certified to have the capability of judging compliance of a product with the appropriate NSF Standard. Such organization shall include developed criteria and procedures for periodic quality assurance inspection of the listed manufacturer's plant(s) and unit(s) equivalent to NSF.

(2) Be capable of producing effluent that meets secondary standards as defined by these Rules.

(3) The treatment unit must be distinct and separate from the disposal field.

(4) The treatment medium or unit must be easily accessible for inspection and maintenance.

(5) An ATS shall be permitted either through a State-Issued Performance Permit issued to an individual system or through a Product Permit issued to the manufacturer of a proprietary ATS, listing the type and model ATS which will be sold in the state.

(6) A person proposing to market an ATS within Alabama shall submit an application as required by these Rules to the Board for each model to be marketed. The application shall include the following information:

(a) Model name and number, the names, mailing addresses and telephone numbers of the manufacturer, authorized state dealer(s) and provider(s) of warranty service/repair and maintenance.

(b) Test report, identifying unit tested, with any added devices, and results and conclusions of tests conducted.

(c) Evidence of authorization to use the certifying organization seal.

1. Evidence that certifying organization is ANSI-certified to judge compliance with the appropriate NSF Standard.

(d) Design hydraulic loading capacity (gallons per day) and design organic loading capacity.

(7) The dealer of an ATS and its auxiliary or peripheral equipment installed within the State shall provide to the owner's a owners manual and written warranty that meets the requirements of Rule 420-3-1-.24, State-Issued Product Permits.

(8) The following shall require advanced treatment:

(a) The design flow of the system is over 4,000 gpd. Any system with a design flow, as defined in these Rules, of between 1,201 gpd and 4,000 gpd has the option under a State-Issued Performance Permit of performing advanced treatment, putting in ground water monitoring wells, or other measures that are protective of public health.

(b) Any establishment that is treating sewage or high-strength sewage of over 1,200 gpd must treat to secondary standards except if the average strength is 3,000 mg/l BOD or greater the Board may consider treatment to primary standards if there are no environmental or health ramifications, but the field must be sized in accordance with Rule 420-3-1-.39, EDF Sizing for Establishments.

(c) Sites where depth to ASHES from the surface is less than 6 inches;

(d) Sites where depth to rock from the surface is less than 12 inches.

(e) Soil or soil material with an estimated or actual percolation rate of less than 1 min/in;

(f) Sites where percolation rate is greater than 240 min/in.

(g) When there is, in the judgment of the Board, a particularly environmentally sensitive site.

Author: Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.58 Drip Irrigation General Requirements

(1) All drip irrigation systems shall meet the following general requirements:

(a) All piping, valves, pumps, fittings, level control switches and other components shall be designed and manufactured to resist the corrosive effects of wastewater and common household chemicals, and meet applicable ASTM standards. Confirmation that equipment meeting this requirement shall be furnished to the Board.

(b) The design, placement, location, installation, and operation of a drip irrigation system shall comply with the standards and provisions of this Chapter of the Rules of the State Board of Health, unless otherwise indicated in the Product Permit or the State-Issued Performance Permit.

(c) The design and installation of the drip irrigation system shall be based on the most restrictive naturally occurring soil above any restrictive horizon/layer to a depth of 24 inches.

(d) When the native soil or site conditions are unsuitable, a drip irrigation system may be placed in select fill soil that meets the requirements of Rule 420-3-1-.67, Lot Modification and Controlled Fill Systems.

(e) The size of the EDF for a drip irrigation system shall be based on Table 10.

(f) All electrical equipment shall comply with appropriate National Electrical Manufacturer's Association (NEMA) requirements. The installation of all electrical components shall comply with the most current version of the National Electrical Code.

Author: Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.59 Drip Pre-Treatment and Flushing Requirements

(1) Wastewater entering a drip irrigation system shall be pretreated to meet the Secondary Treatment Standard for wastewater.

(2) After treatment all drip irrigation systems shall employ a method of filtration adequate to remove suspended solids from the wastewater. This method shall meet the standard specified by the drip tube manufacturer. The minimum filter specification shall not be less than 120 mesh or its equivalent. The filter shall achieve the minimum specified filtration at a rate equal to or greater than the peak discharge rate.

(a) The filtration system shall be capable of flushing each drip field or zone back to the pre-treatment tank at a minimum fluid velocity of 2 feet per second. Field flushing velocity shall be measured at the distal end of the drip tube.

(b) All filter and field flushing shall be accomplished automatically. Back flushing of the filter shall occur after each pump cycle or as recommended

by the manufacturer if this is not appropriate for the equipment. Back flushing of each drip field or zone shall occur at regular intervals, not to exceed 30 days.

Author: Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.60 Drip Dosing Requirements

(1) A dosing chamber shall be employed, sized and equipped to provide timed-dosing of the daily sewage flow with adequate reserve storage capacity for system malfunctions. The dosing chamber shall comply with the following:

(a) The dosing chamber shall have a minimum storage capacity above the high-water level of at least the peak daily sewage flow for systems of less than 2,500 gpd, or as designed by an engineer for larger systems, if approved by the Board. The storage capacity shall be calculated as the volume held between the high water alarm activation level and the invert of the pump tank inlet pipe.

(b) The dosing chamber shall be equipped with an audible visual or other approved high-water alarm set to provide notification to the owner/operator of a malfunction when the design high water level is exceeded and the emergency reserve capacity is being used. A low-water cutoff device shall be provided to prevent damage to the pump during low-water conditions.

(c) The dosing chamber shall be fitted with watertight access risers to grade that are secured against unauthorized entry. The chamber shall be vented through the access riser or by other approved method.

(2) Each drip irrigation field or zone shall be time-dosed at least 6 times per day (24 hours) at regular intervals. A programmable timer and control panel shall be employed to regulate the dosing frequency and volume, and to record sewage flow, the number of doses, and other pertinent dosing data.

Author: Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.61 Drip Field Requirements

(1) The drip irrigation field shall comply with the requirements of the drip tube manufacturer and the following:

(a) The drip line shall be color coded so that it is easily recognized as suitable for wastewater disposal. The drip line shall be warranted for protection against root intrusion and bacterial or fungal growth for a minimum period of 10 years.

(b) Drip lines shall have a minimum soil cover of 6 inches and a maximum depth of 12 inches from final grade, which shall be at least 12 inches above any restrictive horizon/layer, as defined in this Chapter of the Rules of

the State Board of Health. Drip lines shall be extended to the maximum length specified for the drip irrigation system, where feasible.

(c) The standard spacing for drip lines and drip emitters shall be 24 inches. The drip lines shall be laid level and shall run with the contour. The maximum length of a drip line and drip zone size, measured from the supply line to the return manifold, shall be specified and comply with the drip tube manufacturer's requirements.

1. For slopes exceeding 20%, the minimum spacing shall be 36 inches. However, this spacing due to slope shall not reduce the total linear footage of drip tubing required.

2. Any other spacing of the drip lines and emitters shall require prior LHD and Board approval.

(d) Vacuum breakers shall be placed at the highest elevation of a drip field or zone under protective cover and with grade level access. The maximum elevation difference, from lowest to highest point of a drip field or zone shall be 8 feet when using non-pressure-compensating drip emitters.

(e) All drip irrigation systems shall be equipped with pressure regulators or compensating devices to achieve uniform distribution over the entire drip field or zone in such a manner that the discharge rate of any 2 emitters shall not vary by more than 10%.

(f) The operating pressure necessary to fully pressurize a drip field or zone shall be within the pressure ranges specified by the drip tube manufacturer and shall be described in the drip irrigation manual. Pump selection shall take account of the operating pressure appropriate for the drip irrigation field, which shall be fully pressurized throughout the dose cycle, and the total dynamic head required for dosing and flushing.

(g) The drip line shall be installed by a method to prevent pulling, stretching, or crimping of the drip line; or smearing, compaction, or damage to soil. A trencher with moving blades shall not be used to install drip tubing in Group III or IV soils.

(h) All equipment and components susceptible to freezing shall be adequately protected.

Author: Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.62 Drip Approval

(1) A Permit to Install an Onsite Disposal Sewage System using a drip irrigation system may be granted under one of the following circumstances:

(a) A drip irrigation system that is designed by an engineer to comply with this Chapter of the Rules of the State Board of Health and with requirements of the drip tube manufacturer.

(b) A "packaged" drip irrigation system with a design flow of less than 1,200 gpd that has been pre-approved as a package under a Product Permit issued by the Board. The package shall be selected/specified by an engineer from those that have been approved by the Board.

1. For approval of a drip package(s), the applicant (a manufacturer of the drip tube or a secondary treatment device) shall submit to the Board for review and approval a request for a Product Permit. The application shall list the pretreatment device and all equipment (including manufacturer and model number) to be used with the drip package. In addition the application shall include a letter or other certification form each component manufacturer that stating that the component is appropriate for the intended use.

2. The system will be permitted as a package and must be installed as a package. The manufacturer of a pretreatment device who wishes to place a package drip field behind his/her treatment device must design his/her own drip package or have an agreement with an existing drip field (system) manufacturer to use an already approved package, and this arrangement must be specified in the product permit. Conversely, the manufacturer of the drip package may also hold a product permit by agreement with an advanced treatment system manufacturer.

3. The drip package applicant shall demonstrate to the satisfaction of the Board under what conditions (single or multiple zone) will the package be hydraulically stable and the conditions under which it may be used without modification. The design criteria of Rule 420-3-1-.57, Advanced Treatment System (ATS) Specifications, through 420-3-1-.61, Drip Field Requirements, must be met, and the proposed package must stipulate the design parameters below and show that the package will be hydraulically stable under these named conditions:

(i) Maximum linear feet per zone.

(ii) Maximum number of laterals per zone.

(iii) Maximum supply and return line allowed.

(iv) Maximum elevation between filter and zone valve.

4. The applicant must demonstrate the appropriateness of the system under these design criteria by demonstrating that the pressure at the pump and subtracting friction loss under the predicted flow for each component of the system from the pump outward, under discharge and flushing conditions is adequate.

5. The applicant must show that the pump selected is within its recommended operating parameters under these conditions and show that it is capable of maintaining adequate pressure in the field that will dispose of the effluent but not harm the emitters.

6. The system shall be capable of flushing each drip field or zone back to the pre-treatment tank at a minimum fluid velocity of 2 feet per second. Field flushing velocity shall be measured at the distal end of the drip tube.

7. If the site conditions, elevation to the field for example, are outside of the parameters set for the pre-approved package, the application package

shall be reviewed by the Board and may be approved after a receipt of a letter from the product permit holder stating that he/she is aware of the specific condition at the site and that the system will operate properly under those conditions.

Authors: Jimmy Coles, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.63 Drip Documentation and Warranty

For all drip irrigation systems, there shall be provided to designers, installers, and service personnel, a suitable manual that shall include instructions for the system's design, installation, operation, maintenance and the warranty that meets the requirements of 420-3-1-.24, State-Issued Product Permits. The manual shall be provided to the Board with a request for approval.

Author: Jimmy Coles, Thad Pittman
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.64 Use of a Grease Trap

(1) Although not prohibited by these Rules, a grease trap is not recommended for use in conjunction with an individual dwelling OSS. A commercial food preparation establishment or any establishment using comparable kitchen equipment shall install a grease trap on the kitchen and food preparation area waste line that complies with 420-3-1-.47 Septic Tank, Grease Trap and Holding Tank Standards and Specifications. An establishment which, by the nature of its operations or the product proposed, produces little grease waste may be excluded from this requirement, as shall be determined by the LHD.

(2) A grease trap and its EDF shall be located:

(a) In accordance with Rule 420-3-1-.45, Setback/Separation Distances and

(b) At an accessible location outside the building where it may be easily inspected, pumped, and maintained.

(3) Effluent from a grease trap may be disposed of as follows:

(a) By connecting to an EDF serving only the grease trap. The amount of EDF for the grease trap shall be determined from Table 3, or

(b) By connecting to the building sewer. Overall OSS design shall take into consideration the inclusion of grease trap effluent in a system.

Author: Randall Farris
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.

History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

Pumps

420-3-1-.65 OSS Requiring Pumping of Effluent

(1) An OSS requiring the pumping of effluent shall meet the following minimum requirements:

(a) The pump specified for the system shall:

1. Be capable of passing minimum ½-inch spherical solids, in the event of filter failure; unless:

(i) If an engineer, for design considerations, specifies a pump that will not pass ½-inch solids, adequate precautions shall be taken to prevent ½-inch or larger solids from entering the pump. In this case. at a minimum, the pump system shall not be placed in the primary septic tank but must be placed in a secondary pump chamber or in a filtered pump vault.

2. Be capable of being submerged;

3. Produce sufficient capacity at the calculated total dynamic head (TDH);

4. Have a variable level on-off pump activation device that is adjustable to meet specific application requirements; and

5. Be rated for effluent service by the manufacturer.

(b) Pipe specifications:

1. The discharge pipe shall be the same size as the discharge of the pump, or larger;

2. In order to ensure sufficient fluid velocity to carry any solids present (generally accepted to be 2 feet per second), the following pipe sizes shall be used: 1¼" pipe with flows of at least 10 gpm; 1½" pipe with flows of at least 13 gpm; 2" pipe with 21 gpm; 2½ " pipe with 30 gpm; and 3" pipe with 46 gpm; or manufacturers' specifications;

3. Pipe materials shall be Schedule 40 PVC, or equal, as required by local plumbing codes or by the International Plumbing Code;

4. Provisions shall be made for easy removal of the pump;

5. A full flow shut-off valve shall be installed; and

6. A check valve to prevent reverse drainage back into the pump chamber.

(c) The dosing tank/pumping chamber shall meet the following materials and construction specifications:

1. Be corrosion resistant;

2. Be able to withstand anticipated internal and external loads;

3. Have provisions for anti-buoyancy by design;

4. Not allow infiltration or exfiltration;

5. Provide access of adequate size, and be accessible from the surface to allow for installation and removal of the equipment, and to maintain the system;

6. Provide for safety by having access covers which are lockable, heavy enough to prevent easy access, or equipped with tamper-proof retainers; and

7. Have adequate reserve capacity.

(d) The pumping system shall have a high-water alarm, which shall:

1. Be installed on a separate electrical circuit from the pump;

2. Be rated for the installation location; and

3. Have the ability to be tested for proper operation.

(e) Disconnects, wiring and other electrical components shall be installed according to local electrical codes and, if none exist, to the National Electrical Code, the appropriate sections of which are incorporated in this Rule by reference.

Author: Randall Farris
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.66 Mounds

(1) A Mound System is an EDF constructed at a prescribed elevation in a prepared area of fill material and designed in accordance with the criteria found in a manual recognized by Department.

(2) The elevated mound system can sometimes be used in the presence of a soil of poor permeability, with a percolation rate 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 appropriate fill material placed on the surface of the ground. This 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 9 shows some of the construction detail of the Wisconsin Mound.

Author: Randall Farris, Lynn Scott
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.67 Lot Modification and Controlled Fill Systems

(1) In the event that, due to site conditions and/or characteristics of a given lot, a Conventional OSS cannot be used in accordance with the preceding requirements of these Rules, the LHD may consider approval of plans for the installation of a Controlled Fill OSS or certain Lot Modifications. Controlled Fill designs may be considered only on sites where the fill selection, placement, natural ground surface preparation and the entire Controlled Fill construction

process will be performed under the direct supervision of, and certified by, a professional engineer. The Controlled Fill OSS must be designed in accordance with the following requirements:

(a) Site Evaluation - Prior to placing the fill, the site shall be evaluated in accordance with the Site Evaluation Criteria of these Rules.

(b) Design Calculations – The engineer shall submit the design calculations for the following rates, sizes or specifications:

1. Flow Rate.

2. Fill Material Loading Rate -- This rate is applicable to Controlled Fill Systems utilizing Low Pressure Pipe (LPP). (See Table 11)

3. Basal Area Loading Rate -- The basal area loading rate (BALR) is based on the soil horizons in the top 12 inches of the natural ground surface, and is applicable to Drip and Low Pressure Pipe systems. The rates for Drip systems are found in Table 10; those for Low Pressure Pipe systems are in Table 12.

4. Hydraulic Linear Loading Rate – This rate applies to Low Pressure Pipe designs. (Nationally recognized Mound soil absorption system manuals, such as #15.24, University of Wisconsin-Madison, by J.C. Converse and E.J. Tyler, may be referenced for an understanding of this design factor and the slope correction factor). The Hydraulic Linear Loading Rate is an estimate of the amount of effluent in gallons per day (gpd) that will be dispersed per linear foot of Low Pressure Pipe and is dependent on the direction and rate of effluent flow away from the Controlled Fill bed. As a general guide sites which have extreme or severe limitations [re: permeability, bedrock, water table] within the upper horizons of the natural soil shall be designed with a Hydraulic Linear Loading Rate of 3-4 gpd/lf of Low Pressure Pipe. Sites which have moderate limitations shall be designed with a Hydraulic Linear Loading Rate of 5-6 gpd/lf of Low Pressure Pipe. Sites which have slight limitations [and those with creviced bedrock] will generally have a Hydraulic Linear Loading Rate of 8-10 gpd/lf of Low Pressure Pipe.

5. Slope Correction Factor -- This factor is necessary when the Controlled Fill design utilizes Low Pressure Pipe installed on a sloped lot and shall be applied using the rate found in Table 4a.

6. Distribution Area size -- The distribution area is the basic "footprint" of the EDF area within the Controlled Fill bed and is sized according to the type of EDF proposed.

(i) The distribution area for systems containing drip tubing will be sized to accommodate the amount of tubing indicated by Table 10, along with the required spacing of the drip lines.

(ii) The distribution area (gravel bed) for systems containing small diameter Low Pressure Pipe will be sized according to the following:

(I) the fill material loading rate found in Table 11 when compared with the texture of the proposed fill material; and,

(II) the projected hydraulic linear loading rate of the Low Pressure Pipe when based on the upper horizons of the natural ground surface; and,

(III) the projected flow (based on Rule 420-3-1-.36, Design Flow and Wastewater Concentrations.

(IV) the distribution area for Controlled Fill designs utilizing LPP shall have a minimum width of 3 feet.

(iii) The distribution area for other types of pipe (including 4-inch pipe with gravel) is based on:

(I) the projected flow; and,

(II) the amount of EDF required, based on the percolation rate and soil textures found in the upper horizons of the natural ground surface. [Exception: Controlled Fill designs for systems to be installed in very high shrink-swell soils (Vertisols, soils with vertic characteristics, etc.) shall be based on criteria found in this Rule Paragraph (1) (g). Specifications regarding trench widths, construction, materials, and distances between trenches, etc., are the same as required within these Rules for any EDF installation.]

7. Absorption Area size -- The absorption area includes the distribution area plus the required setbacks (2 feet for drip and Low Pressure Pipe; 5 feet for all other piping). These minimum distances are required between the shoulder of the fill (the beginning of the end or side slopes of the bed) and the nearest sidewall of the gravel bed containing the Low Pressure Pipe, the nearest drip tube/end, or the nearest EDF trench sidewall or end.

8. Basal Area [BA] size. -- The Basal Area is comprised of the "footprint" of the entire Controlled Fill bed over the natural ground surface and is sized according to the most restrictive soil horizon found within the top 12 inches of the undisturbed, natural ground surface. In addition to accommodating the required EDF amount in the distribution area and the absorption area setbacks, the basal area calculations must allow for a maximum slope of 3:1 on both ends and both sides (from the shoulders of the fill down to the natural ground surface). Additionally, basal area calculations for designs utilizing Low Pressure Pipe must include the linear loading rate of the EDF pipes, and a slope correction factor (if applicable). (Exception: The sideslope on the "upper" side of a sloping lot is not considered in the Basal Area sizing.)

(i) For EDFs containing drip tubing, the basal area is sized to accommodate the required amount of EDF, plus the absorption area, plus the required side and end slopes.

(ii) For EDFs containing small diameter Low Pressure Pipe, the basal area is sized to accommodate the loading rate of the upper horizons of the natural ground surface, according to the figures found in Table 12; or, to accommodate the total area encompassed by the distribution area, the absorption area, and the required side and end slopes. (The larger of these two calculations shall be used). Additionally, the Basal Area shall incorporate a determination of the Hydraulic Linear Loading Rate of the EDF pipes, and a Slope Correction Factor (if applicable). When the LLR is small (3-4 gpd/LF), the Controlled Fill bed should be long and narrow with a minimum Distribution Area size of 3 feet. When the Controlled Fill bed is placed on a sloped lot, the slope correction factor will result in a basal width containing more fill on the

downslope side than the upslope side. A nationally recognized manual shall be used for the LPP pressure distribution network design, with the pipe orifices closely spaced (4-6 sq.ft. per orifice) and positioned (ideally, or as close as possible) to serve a square configuration.

(iii) For EDFs that do not contain Low Pressure Pipe or Drip Tubing, the basal area is sized according to the following:

(I) The amount of EDF pipe as required in Table 3 or Table 3a, [Exception: Controlled Fill designs for systems to be installed in very high shrink-swell soils (Vertisols, soils with vertic characteristics, etc.) shall be based on criteria found in this Rule Paragraph (1) (g) when matching the percolation rate with the proposed number of bedrooms/sewage flow; and

(II) the required separation distances (5 feet from sidewall to sidewall) between the EDF trenches; and

(III) the required separation distance (5 feet) from the trench ends or outer sidewalls to the beginning of the Controlled Fill bed side/endslope ; and

(IV) the required sideslope/endslope lengths based on a 3:1 (maximum) slope,

(V) no reductions are allowed in the basal area size when based strictly on the type of pipe installed.

9. Controlled Fill Reductions -- Table 12, Table 13 and Table 13a list reductions for Controlled Fill designs which utilize pre-treatment of effluent to secondary standards prior to disposal in the Controlled Fill bed. The reductions affect:

(i) separation requirements between trench/bed bottoms and chroma 2 ASHES;

(ii) separation requirements between trench/bed bottoms and rock;

(iii) separation requirements between trench/bed bottoms and other restrictive layers;

(iv) the Distribution Area and Basal Area sizes when Low Pressure Pipe is used, since fill material and basal loading rate calculations are increased;

(v) the Distribution Area and Absorption Area of designs not using drip or Low Pressure Pipe. The Basal Area for these type designs receives no reduction since the effluent is not equally distributed.

10. Fill Material -- Soil used as fill material shall be approved by the design engineer. Tables 11, 13 and 14 may be used as a guide.

(i) Fill material suitable for use in Controlled Fill installations falls into 2 categories:

(I) Commercially Available Material.

I. Material that meets the appropriate ASTM standard for fine aggregate (concrete sand).

II. Others to be approved by the Board.

(II) Naturally occurring, such as the surface of some soils and pits located in areas having deep sandy to loamy deposits.

(ii) Consistency of Fill -- Uniformity of the fill material used for the bed construction is essential, as any variability will likely cause problems for the OSS. The fill shall be free of trash, debris and other objectionable material and shall be certified by the engineer as being consistent (with respect to texture and compaction) throughout the bed construction.

(iii) Compatibility of Fill -- Where possible, the fill material shall be compatible with the existing, in-situ soil.

(iv) Construction of the Controlled Fill Bed -- The natural ground surface must be properly prepared to receive the fill material. Trees within the proposed bed area shall be cut flush with the ground and stumps left in place. Where possible, large rocks shall also be left in place, as removing them can destroy soil structure. Brush and vegetation shall be removed, taking care not to compact the original soil surface, which must be scarified to a depth of 6 to 18 inches. (Clay soils may require a minimum scarification depth of 18 inches in order to obtain a proper soil interface). The scarification process shall be accomplished utilizing proper equipment so that the soil structure is not destroyed and the root mat is removed from the natural surface. (Recommended: a chisel plow or chisel teeth mounted on a tool bar attached to the backhoe bucket. Tillers, moldboard plows and backhoe bucket teeth are not recommended).

(v) Compaction and Placement of the Fill – The fill material shall not be moved, placed or disturbed, nor the bed constructed, if the material and/or the natural ground surface is wet. For fill material wet is indicated by the occurrence of prominent water films on surfaces of sand grains and structural units that cause the soil material to glisten. For natural ground surface wet is defined as the soils from the top 6 to 7 inches of the natural ground surface producing a ribbon when rolled the between the palms. The fill material shall be placed in lifts not exceeding 6 to12 inches, loose thickness, and compacted to a proper density so as to promote stability while allowing for the vertical movement of effluent. The fill shall be placed from the upslope side (if applicable) or from the bed edges, with care taken not to create ruts or compaction of the bed or the basal area. A track type tractor, or similar equipment, shall be used to move around and/or across the Controlled Fill site, but other vehicles may be used to install field lines as long as the fill is not excessively compacted. The final cover shall include a minimum of 6 inches of suitable topsoil material (properly crowned) placed over the fill material so that a suitable vegetative cover can be established. The Controlled Fill bed shall be seeded and mulched to avoid erosion.

(c) Engineer's Certification of the Bed Construction. Following the placement of the fill and construction of the bed, but prior to the installation of the EDF, the engineer shall certify the fill material in accordance with 420-3-1-.95 Engineer/Installer Certification Paragraph (2)a. This shall be accomplished through completion of the CEP 6 form which also contains the engineer's statement of certification regarding the system installation (including the absorption and distribution areas). Should a percolation test be performed in the completed bed, the percolation rate shall not be slower than 30 minutes per inch (45 minutes per inch for Controlled Fill designs in high shrink-swell soils) nor faster than 5 minutes per inch.

(d) Controlled Fill or Mound designs for sites with any limiting zone which will require trench bottoms to be located at 0 to 6 inches above the natural ground surface shall, as a minimum, have 6 inches of fill material below the trench bottoms.

(e) Controlled Fill designs on sites with less than 6 inches to average seasonal high extended saturation shall, as a minimum, be required to treat effluent to secondary standards prior to discharge into the Controlled Fill bed.

(f) Controlled Fill designs on sites with less than 12 inches to rock shall, as a minimum, be required to treat effluent to secondary standards prior to discharge into the Controlled Fill bed.

(g) Controlled Fill systems proposed for very high shrink-swell soils (Vertisols or soils with vertic characteristics) shall incorporate the following minimum basal area design criteria unless soil tests or site conditions reveal that a larger basal area is needed.

1. Controlled Fill with drip tubing:

(i) A maximum infiltration design rate of .05 gallons per day per square foot (0.05 gpd/sq.ft.) of tubing.

2. Small diameter Low Pressure Pipe:

(i) A maximum hydraulic linear loading rate (Hydraulic Linear Loading Rate) of 3 gallons per day per linear foot of Low Pressure Pipe (3 gpd/LF).

(ii) A maximum basal area loading rate of 0.075 gallons per day per square foot (0.075 gpd/ft ^{2}). This equates to a minimum basal area of 6000 sq.ft. for a flow rate of 450 gallons per day. A slower loading rate shall be used if site conditions demonstrate a need.

3. Other EDF pipes:

(i) The minimum EDF amount (and Basal Area sized to accommodate the EDF) when the effluent entering the Controlled Fill bed has received primary treatment shall be based on a minimum percolation rate of 180 minutes per inch (180 min/in). Should any portion of the area proposed for the Controlled Fill bed yield a higher percolation rate, then that figure (See Table 3a) shall be used for the design.

(ii) When the effluent entering the Controlled Fill bed has received secondary treatment, the minimum EDF amount, the Distribution Area sized to accommodate the EDF, and the Absorption Area (to the bed side/end slopes) may be reduced according to the figures in Table 12 or Table 13a. The minimum Basal Area "footprint" shall remain as calculated for a Controlled Fill design receiving non-treated effluent.

(h) The pipe distribution network for a Controlled Fill bed utilizing LPP shall be configured based on a recognized manual and shall allow for closely spaced orifices (4 to 6 sq.ft./orifice in a square, or nearly square, pattern), timed dosing of effluent (with frequent, small doses being utilized) and provision made for surge capacity. The low pressure pipe orifices are typically placed facing downward but may be placed upward with the use of orifice shields. Consideration should also be given to the use of pipe sleeves, half-pipe caps, etc.

(2) Lot modifications, including fills which occur without engineer supervision; fills occurring in wetlands, hydric soils or non-hydric soils which may exhibit shallow depths to ASHES (Average Seasonal High Extended Saturation); cuts; or cuts with fill (Deep Excavation with Fill or Cuts with Above Ground Fill) shall be subject to the following:

(a) Filled sites which do not contain any wetlands, hydric soils or soils indicating shallow depths (less than 6 inches) to ASHES may be evaluated according to the length of time the fill has been in place.

1. Sites on which fill (soils) has been in place for 3 or more years may be evaluated in accordance with the provisions of Rules 420-3-1-.71 through .86; however, multiple percolation tests and soil borings may be required, at the discretion of the local health department (LHD), to determine consistency and compaction of the fill throughout the proposed EDF area.

2. Sites where fill has been in place for less than 3 years must be evaluated by a Professional Soils Classifier (PSC) for confirmation of fill characteristics (consistency, uniformity, compaction, etc.) and identification of the soil characteristics underneath the fill. Additionally, the fill must be in place for a minimum period extending through at least one wet season during which average precipitation amounts were experienced. (The applicant is responsible for providing this documentation. The LHD may consider information from the National Weather Service in determining compliance with the normal/average wet season requirements).

(b) Applications that propose or involve the filling or modification of sites consisting of wetlands shall not be considered for review prior to receiving notification of approval for those activities from the appropriate regulatory authority, unless the site has been filled for a period of more than 5 years. (See this Rule Paragraph (2) (b) 3 for sites where fill has been in place for more than 5 years). When a wetland site has been filled and/or modified and the above conditions met, or a site (hydric or non-hydric) with less than 6 inches depth to ASHES has been filled, the LHD may consider results of a site evaluation which are based on the following criteria:

1. Fill must be in place for a minimum period extending through at least one wet season during which average precipitation amounts were experienced, with the site being monitored during this period. The monitoring may be accomplished by use of observation wells, representatively spaced, which are inspected on a weekly basis. The results of these observations shall be certified by a professional engineer, professional soils classifier, or a professional geologist. The applicant is responsible for providing documentation that verifies that average precipitation amounts were experienced during this period. The applicant is also responsible for providing documentation pertaining to the amount of time that the fill has been in place. This may be accomplished by, but is not limited to, one of the following methods.

(i) An estimation of the approximate age of the vegetation on the site (fill) determined by a botanist or forester.

(ii) The approximate age of the fill based upon the effects of soil development (or lack thereof), determined by a professional soils classifier.

(iii) A notarized letter or other document (sales invoice, construction

billing, etc.) indicating dates and appropriate information.

2. Sites containing fill which meets the requirements of this Rule Paragraph (2) (b) 1 above may be evaluated by a Professional Soil Classifier during the next (or any subsequent) wet season following the monitoring period. Special attention shall be given to identifying consistency, uniformity and compaction of the fill (unless the project was under the direct supervision of an engineer who can certify the acceptability of these characteristics) and to identifying any surface water that has perched in the fill. Sites on which there is evidence of surface water rising into, or perching within, the fill material shall be required to have pre-treatment of effluent to secondary standards and maintain a minimum separation distance of 12 inches between the noted water level and the proposed trench bottoms. If no water is observed, a Controlled Fill OSS may be designed in accordance with these Rules.

3. Fill which has been in place for more than 5 years on wetland sites, hydric soils, or sites which have shallow depths (less than 6 inches below the natural ground surface) to ASHES may be evaluated during the wet season and in accordance with the provisions of Rule 420-3-1-.71, Site Limitation Determination (SLD), through Rule 420-3-1-.86, Grid Staking for Soil Maps, however, multiple percolation tests and soil borings may be required (at the discretion of the LHD) to determine consistency and compaction of the fill throughout the proposed EDF area.

4. Proposed EDF sites that contain fill material other than soil shall not be considered for the installation of an OSS.

(c) When cuts of more than 12 inches in depth are performed within 25 feet of (and including) the proposed EDF, the following information (if applicable, as determined by the Local Health Department) shall be provided:

1. A report prepared and certified by a geologist, identifying the type(s) of rock formations, the susceptibility of surface water and/or groundwater to contamination by an OSS, and any effect which the cut may have on surface and subsurface drainage patterns with respect to the proper functioning of the OSS.

2. A high-intensity soil map prepared and certified by a Professional Soil Classifier, which addresses the impact which the cut may have on the proposed EDF, REDF, and the proposed test area or reported soil tests.

(d) Design proposals which use cuts with fill placed below the natural ground surface (Deep Excavation with In-Ground Fill) may be used on sites with slowly permeable soils overlying sand, loamy sand or sandy loam soils, where the construction of a conventional OSS below the more restrictive layer is not practical. On such sites, the slowly permeable soil within the bed may be stripped away, replaced with a suitable fill material (sand [S], loamy sand [LS] or sandy loam [SL] which is compatible with the underlying soil, and the EDF pipes installed, provided that the following conditions are met.

1. The site is not located within an area containing high shrink-swell soils.

2. The existing, underlying soils must be sand, loamy sand or sandy loam, and contain a minimum thickness of 36 inches, with the ASHES or

bedrock no closer than 12 inches to the top of this layer.

3. The design proposal shall provide for a minimum of 24 inches of suitable fill between the top of the existing S, LS or SL layer and the bottom of the EDF gravel trench or bed.

4. The design proposal is not for waste containing high-strength sewage.

5. The OSS design shall contain instructions for removal of the unsuitable material in such a manner as to prevent compaction or disturbance of the underlying material.

6. The OSS design shall contain instructions for preparing the top 6 inches of the existing, in-situ material (under the fill) to provide an acceptable interface with the fill material.

7. The OSS design shall provide a minimum separation distance 8 feet (on centers) between each EDF pipe (2 feet if small diameter, low-pressure pipe [LPP] is used).

8. The OSS design shall have a minimum separation distance of 10 feet (8 feet for Low Pressure Pipe), as measured from the side of the outer trench/bed walls, (or pipe ends) to the outer edges of the fill material (i.e., the sidewall of the cut soils).

9. Provisions have been made to intercept any sub-surface water outside the cut area from flowing into the filled area.

(e) Design proposals which use cuts with fill over the newly exposed surface (Surface Cut with Fill Above Ground) shall be subject to this Rule Paragraph (c) 1 and 2. In addition, the site must be evaluated under the provisions of Rule 420-3-1-.71, Site Limitation Determination (SLD) through Rule 420-3-1-.86, Grid Staking for Soil Maps. This type of design shall not be considered for sites with high shrink-swell soils.

(f) Design proposals which involve altering ["bench cut", etc.] a lot with severe (>25%) or extreme (>40%) slopes to accommodate an OSS are subject to the following requirements.

1. "Cut" material which has been "pushed over" the downslope side as fill material shall not be considered as the site for installation of an EDF.

2. The cut (benched) area, when proposed as the EDF site must be evaluated under the provisions of this Rule Paragraph (c) 1 and 2, and Rule 420-3-1-.71, Site Limitation Determination (SLD), through Rule 420-3-1-.86, Grid Staking for Soil Maps

3. Sites containing continuous "hard rock" at the newly exposed surface (the cut/benched area) shall not be considered for the installation of an EDF. Sites containing other restrictive rock types at the newly exposed surface may be considered for a Controlled Fill installation provided that the design includes the following:

(i) Pretreatment of effluent to secondary levels; and

(ii) A minimum separation distance of 24 inches between the trench bottoms and the newly exposed surface; and

(iii) Use of small diameter pipe (Low Pressure Pipe) providing low pressure disposal of effluent; and

(iv) A minimum separation distance of 50 feet from the point where the Controlled Fill side or end slope meets the newly exposed surface, to the end of the cut/benched area (i.e., the point where the cut meets the natural ground surface of the original slope.)

Author: Lynn Scott
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.68 Shallow Systems

(1) The following are modifications to OSS or sites that may be used singly or in combination to overcome selected soil and site limitations. Except as required in this Rule, the provisions for design and installation of shallow OSS shall be the same as for other OSS.

(a) Sites classified Severe as to soil depth, soil wetness or other applicable limiting factor may be reclassified as Moderate with respect to that condition by utilizing shallow placement of effluent disposal trenches within the naturally occurring soil. Shallow trenches may be used where:

1. The trench depth, plus the required minimum separation distance below the trench bottom of the naturally-occurring soils that are present, is above the most limiting factor applicable to the site.

2. The trench design and construction is such that the trench bottom will meet the vertical and horizontal separation requirements in Rules 420-3-1-.45,Setback/Separation Distances, 420-3-1-.46, Additional Setback/Separation for a Large System, and 420-3-1-.76, Soil Depth and Vertical Separation.

3. The long-term acceptance rate is based on the hydraulically limiting naturally occurring soil horizon within 24 inches of the ground surface, or to a depth of 18 inches below the trench bottom, whichever is deeper.

4. The aggregate sidewalls or top of the EDF product are below original grade, and

5. Soil cover above the original grade is placed prior to installation at a uniform depth over the entire EDF, and extends laterally five feet beyond any outermost effluent disposal trench side or end wall before the maximum side slope of 3:1 (33%) begins. The soil cover shall be a minimum 12 inch depth over the aggregate or EDF product.

6. Fill soil used as cover shall be, as determined by the licensed onsite sewage installer or the design engineer, a top soil that will support appropriate cover vegetation. It shall be a mineral soil material, preferably loose or friable but not excessively sticky or plastic. It shall be relatively free of debris and coarse fragments larger than gravel size. Content of gravel shall not exceed 35% by volume. Textures may range from groups 1 (I) through 4A (IVA). Texture

groups 4B (IVB) and 4C (IVC) shall not be used. Care must be taken to prevent compaction.

Author: Randall Farris
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.69 Non-Waterborne Systems: Pit Privies and Portable Toilets

(1) In remote areas of the State or in certain transient or temporary locations, the use of non-waterborne systems such as pit privies, portable toilets, and related sewage disposal systems may be approved. Due to their limited capacities, these systems shall be 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 LHD 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. Non-waterborne systems are prohibited in establishments. Conditions that may justify consideration of these systems include, but are not limited to, the following:

(a) Soil and site conditions are severe for an OSS; or

(b) Water under pressure is not available.

(2) Pit privy -- A pit privy is an OSS, as defined by these Rules and may not be constructed or used without a permit, the limiting terms, conditions, and a clearly defined effective period. Pit privy installation may be permitted only in remote locations, but installation may not be permitted for a dwelling or other building with indoor plumbing, and where water under pressure is located in the structure.

(a) A pit privy shall be located in compliance with 420-3-1-.45, Setback/Separation Distances .

(b) The excavation or pit shall be at least 3½ feet square, 5 feet deep, at least 18 inches above seasonal high groundwater indicators, be fitted with a restraining curb to prevent caving, and contain adequate openings to allow liquids to seep into surrounding soil. The pit shall be vented to permit escape of the gases of decomposition.

(c) The pit shall be located on a mound to provide drainage of roof water away from the pit, to prevent erosion, caving, or flooding.

(d) The floor shall rest on a suitable foundation, to prevent settling, sagging, erosion or caving. It shall cover the pit tightly, preventing entrance of flies.

(e) The seat riser shall be joined to the floor, forming a watertight and insect-tight joint. It 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.

(f) The foundation, floor and seat riser may not be made of wood. They shall be constructed of concrete or other impervious material that will not warp, crack or develop openings for the entrance of insects or leakage of excreta.

(g) The abandonment of a pit privy shall be accomplished by filling the pit with soil or other inert material to an elevation equal to the surrounding grade.

(3) In the absence of water under pressure, graywater shall be disposed of by an EDF pipe a minimum of 50 linear feet per dwelling. The EDF pipe shall not be installed closer than 50 feet from any surface water of the state.

(4) LHDs may approve portable toilets, or chemical 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. A portable toilet shall meet the following standards:

(a) The toilet shall be capable of being readily relocated as an intact unit and shall be self-contained.

(b) Waste receptacles shall be watertight, non-absorbent, acid resistant, non-corrosive, easily cleanable material.

(c) The floor and interior walls shall have a non-absorbent finish and be easily cleanable.

(d) The unit shall be provided at all times with toilet tissue, and units for male use provided with urinals. The number of toilet seats provided shall be in compliance with the International Plumbing Code.

(e) The unit shall be kept clean and deodorized, to prevent a nuisance due to odor, flies, mosquitoes, or other vermin. It shall be provided with a self-closing door and a privacy latch.

(f) The unit shall be placed on a firm base to prevent tilting.

(g) A contract with a certified pumper permitted under Rule 420-3-1-.34, Sewage Tank Pumping Permit, shall be provided for unit pumping. Pumping shall be at a frequency so as to prevent public nuisances or hazards. The LHD may specify the frequency of pumping.

Author: David Gray
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.70 Composting, and Incinerating Toilets

(1) Approved composting toilets may be used to handle waste for which they are designed. If there is other wastewater generated that the composting toilet is not designed to handle then an appropriate OSS must be used.

(2) The composting toilet must be certified to meet the appropriate NSF Standard by an organization that meets the requirements of Rule 420-3-1-.57, Advanced Treatment System (ATS) Specifications Paragraph (1).

(a) Components for the storage or treatment of waste shall be continuously ventilated.

(b) The disposal of a liquid from a composting toilet shall be to either a sanitary sewer system or an approved OSS.

(3) The design, construction, and installation of a gas-fired incinerating toilet shall conform to the current ANSI Z21.61. The materials, design, construction, and performance of an electric-fired incinerating toilet shall conform to the appropriate NSF Standard.

(a) The disposal of a liquid from an incinerating toilet shall be to either a sanitary sewer system or to an approved OSS.

Author: Randall Farris
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

SITE EVALUATION CRITERIA

420-3-1-.71 Site Limitation Determination (SLD)

(1) Site evaluations may be done using percolation test, soils morphology or the unified method as described in these Rules.

(2) The evaluation shall be completed by one of the following which shall be licensed/registered in the state of Alabama; an engineer, land surveyor, geologist, or soil classifier; and in some cases a Public Health Environmental Site Specialist (PHESS), as allowed by the respective licensing regulations. All sites on which an OSS is proposed shall be evaluated and rated using the following six (6) factors.

(a) Permeability: See Rule 420-3-1-.73, Soil Permeability.

(b) Depth to Average Seasonal High Extended Saturation (ASHES) see Rules 420-3-1-.74, Soil Testing Depth Requirements, and 420-3-1-.76, Soil Depth and Vertical Separation.

(c) Depth to rock or other restrictive layers see Rules 420-3-1-.74, Soil Testing Depth Requirements, and 420-3-1-.76, Soil Depth and Vertical Separation.

(d) Slope and landform limitations see Rule 420-3-1-.72, Slope and Landform Limitations.

(e) Potential for frequent flooding see Rule 420-3-1-.72, Slope and Landform Limitations.

(f) Presence of hydric soils see Rule 420-3-1-.72, Slope and Landform Limitations.

(3) The most limiting factor shall determine the suitability of the site for a conventional OSS and in some cases suggest a type of engineered system if needed.

(4) The limitation rating of each factor shall be determined from Table 15 and reported as slight (S), moderate (M), severe (V), extreme (X).

(a) Slight limitations allow the greatest flexibility where conventional systems can be used.

(b) Moderate limitations also allow conventional systems but with some modifications usually in the form of added fill material for cover.

(c) Severe limitations may require an engineered system or a least a very careful planning and installation.

(d) Extreme limitations require an engineered system and possibly advanced treatment. Sites with extreme limitations may also be unacceptable for OSS.

(5) All soil and site conditions, site limitations, restrictive layers, and soil test and evaluation results are subject to verification by the ADPH.

(6) This rule and the following Rules provide clarification and additional information for Table 15 and the flow chart.

(a) 420-3-1-.72, Slope and Landform Limitations.

(b) 420-3-1-.74, Soil Testing Depth Requirements.

(c) 420-3-1-.75, Minimum Testing Standards and Interpretations.

Author: David Gray
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.72 Slope and Landform Limitations

(1) Slope limitations ratings are found in Table 15, and Rule 420-3-1-.67, Lot Modification and Controlled Fill Systems, for options of manipulating steep slopes to overcome Severe or Extreme Ratings.

(a) An engineer is required if slope is over 25% even if a conventional system can be installed.

(2) Prior to any cutting and/or filling operations, refer to Rule 420-3-1-.67, Lot Modification and Controlled Fill Systems.

(3] Sites dissected by gullies or ravines within 25 feet of EDF and/or REDF shall be rated extreme and are unsuitable for OSS sites.

(4) Sites with caves, sinkholes, and similar depressions within 300 feet of the EDF or REDF shall be rated extreme. The LHD may consider allowing OSS locations less than 300 feet upon receipt of a report prepared and certified by a geologist. This report shall specifically address the susceptibility of contamination of both surface and groundwater by an OSS based on the existing conditions. However, no part of the system shall be allowed with 50 feet of the rim on any sinkhole or sinkhole prone area.

(5) Any site rated extreme because of wetlands, hydric soils, frequent flooding or ponding is considered unsuitable for an EDF location Rule 420-3-1-.67, Lot Modification and Controlled Fill Systems. A minimum setback from an OSS to these features shall be 25 feet unless surface water is present for significant periods (when obvious indicators are present demonstrating long term inundation).

Author: David Gray
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.73 Soil Permeability

(1) Permeability shall be determined as part of a site evaluation by one or more of the following methods:

(a) Actual percolation testing per this Rule through 420-3-1-.80, Simulated Wet Season Testing Procedure.

(b) The unified method (with Munsell) in Rule 420-3-1-.81, Unified System for Site Evaluation;

(c) The soil morphology method in Rule 420-3-1-.82, Soil Morphology Method or;

(d) Rules 420-3-1-.83, Kinds of Soil Maps, through 420-3-1-.86, Grid Staking for Soil Maps.

(2) The percolation method, when used, shall be performed and certified by an engineer, land surveyor, geologist, or soil classifier, in accordance with their respective licensing board rules and in accordance to Rule 420-3-1-.77, General Percolation Procedure.

(a) Permeameter test may be substituted for percolation test in which case it will be performed in accordance with the manufacturers guidelines and procedures.

(3) The unified soils classification method, when used, shall be performed and certified by an engineer or geologist according to Rule 420-3-1-.81, Unified System for Site Evaluation.

(4) The soil morphology method, when used, shall be performed and certified by a soil classifier or public health environmental soil specialist (PHESS) currently employed by the ADPH, according to the Rule 420-3-1-.82, Soil Morphology Method.

(5) The detailed soil mapping method, when used, shall be performed and certified by a soil classifier according to Rules 420-3-1-.83, Kinds of Soil Maps, through 420-3-1-.86, Grid Staking for Soil Maps.

(6) Soil absorption (application) rates for an EDF may be based on actual percolation results or assigned rates determined by using one of the other three methods of site evaluation. Although similarities exist, each method has specific procedures, soil groupings, terminology, and application ranges to be used and reported exclusively by the appropriate professional as set forth in this Chapter of the Rules of the State Board of Health.

(7) When assigned or actual permeability (percolation) rates or other test results are in dispute, the LHD or the Board may make a conclusive determination using whatever method it deems appropriate to settle the dispute.

(8) Test results or assigned rates obtained from natural soil, along with all other evaluation factors shall be used to determine the design and size of the system. However, test results or assigned rates in fill material may not necessarily be the only criteria for determining the type or size of an EDF. Other requirements may apply as deemed appropriate by the LHD or the Board.

(9) The LHD or the Board may require additional pits, borings, or other tests as necessary if there is any indication that the soil or site may be significantly different from that which was reported. Other tests may include, but are not limited to, saturated hydraulic conductivity tests (such as constant

head permeameters), or wet season testing and/or monitoring of saturated conditions.

Author: David Gray
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.74 Soil Testing Depth Requirements

(1) The maximum testing depth shall be determined by the minimum required separation distance below the deepest proposed trench bottom to any restrictive layer in the soil. See Rule 420-3-1-.76, Soil Depth and Vertical Separation, and Table 15.

(2) Sites that do not meet the minimum conventional requirements for permeability and vertical separation shall be evaluated at the 12-inch depth in the natural soil for basal area determination prior to adding fill material. See Rule 420-3-1-.67, Lot Modification and Controlled Fill Systems.

(3) A site having more permeable soils located below slowly permeable clay layers (but not a restrictive layer, see Table 15 footnote 4), and which can still meet the required separation distance above the average seasonal high extended saturation or other limiting layers, may be considered for an EDF. However, trench bottoms shall not exceed 60 inches below the natural surface.

(4) The LHD may require observation pits where questions arise about soil conditions or where soils are difficult to evaluate with manually operated equipment.

(5) The following actions shall be taken by the LHD when site evaluation results that are found by the LHD or Board to be incomplete, in obvious error, non-representative of the conditions present on the site, or in conflict with other accepted information (i.e., applications, soil maps/reports):

(a) Withhold the application for further information, which may include, but not limited to, a re-evaluation by the appropriate professional or additional professionals, as needed.

(b) Deny the permit without conditions or until the requirements of the appropriate rules can be met.

Author: David Gray
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.75 Minimum Testing Standards and Interpretations

(1) The minimum number of test holes required according to Table 16.

(2) Test holes shall be located in the EDF, and in the REDF when required, with the exception of soils mapping which shall be done in accordance with Rules 420-3-1-.83 Kinds of Soil Maps through 420-3-1-.85 Required Map Information.

(3) Multiple testing locations for the same area shall be a minimum of 30 feet apart. Each boring and its respective percolation hole shall be 5-15 feet apart.

(4) When 2 or more tests from the same area produce significantly different results (more than 20 min/inch or the extreme of another soil group)

(a) Relocate the proposed disposal area and retest/reevaluate as necessary to confirm that the site is consistent or

(b) Calculate the amount of disposal field using the higher or highest result(s).

(5) Soil evaluators may average test results on projects where 3 or more percolation tests have been conducted if they can be considered representative for the site conditions.

(6) Pits are preferred to borings except where a High Intensity Map has been provided. Boring diameters for soil maps shall be no less than 1.5 inches in diameter. Pits may be required for any site where the LHD determines that a more detailed evaluation is needed.

Author: David Gray
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.76 Soil Depth and Vertical Separation

(1) A minimum separation between the deepest trench bottoms and the average seasonal high extended saturation (ASHES) shall be required (See Table 15 for specific depth requirements).

(2) The depth to the ASHES is approximated by the highest occurrence of 2% or more contemporary redoximorphic features. (See Table 15 note 3). The minimum vertical separation (MVS) is based on chroma 2 or less (Munsell or equivalent) colors (more than 2% by volume). However, because saturation often occurs above these gray colors for shorter durations, the trench bottoms shall be at least the same elevation or higher than the top of this zone. (If there is sufficient evidence to suspect saturation occurs even higher than any obvious redox features for a significant period, groundwater monitoring may be required for a minimum of one normal wet season).

(3) When the soil evaluator encounters difficulty in determining the depth of the ASHES, he or she should consult with the LHD or a soil classifier.

(4) When actual monitoring is required to make a determination of the ASHES, a proposed plan shall be submitted to the LHD and the Board for review and approval.

(5) The Board reserves the right to make the final decisions concerning ASHES and useable soil depth.

(6) Disposal trenches shall not be installed below the elevation of contemporary ASHES indicators without an approved drainage plan prepared

jointly by an engineer and a soil classifier. The site is required to have a suitable outlet accessible by gravity.

(7) Other soil features that may occur in or below the soil and restrict the downward movement of water or hinder acceptable treatment and renovation of effluent shall be considered a restrictive layer. These features may include, but are not limited to, the following:

(a) Bedrock, hard and soft. (When restrictive rock layers are discontinuous or tilted such that the critical depths are highly variable, use the 50% rule. Any horizon with greater than 50% bedrock is unsuitable.)

(b) Some parent material layers with poor or massive structure and without adequate conducting pores (slowly or very slowly permeable).

(c) Fragipans, plinthic horizons that have 15% or more by volume plinthite, or similar features with inherent dense or brittle qualities.

Author: David Gray
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.77 General Percolation Procedure

(1) This section does not apply to soils found in Table 17. A site may be evaluated using the percolation method by first boring a hole or digging a pit to establish the depth of the ASHES or other restrictive feature. The test hole depth is determined from Rule 420-3-1-.74, Soil Testing Depth Requirements, (See Table 15). For minimum number of tests required, see Table 16.

(2) A valid percolation test shall require that the bottom of the test hole be within 6 inches of the proposed trench bottom depth and a minimum of 12 inches in the natural soil. (Testing fill material is an obvious exception to this requirement.)

(3) A minimum of 2 percolation tests shall be required for each EDF, and one percolation shall be done in the REDF for lots of less than 15,000 sq. ft. The test holes shall be located no closer than 30 feet and dug to the same depth. More tests can be performed at different depths or if needed to locate a better area for the EDF.

(4) One percolation test and 1 boring shall be required for each additional 700 gpd flow, or portion thereof, for establishments or large-flow systems after the minimum 2 percolation tests and 2 borings for the initial 500 gpd.

(5) Percolation tests shall not be conducted in stump holes, large root channels, fractured rock, or in association with any other factors that might cause test results to be non-representative of the actual site conditions. No soil additives shall be used in the percolation testing process.

Author: David Gray
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.

History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.78 Soil Boring Procedure (for Percolation Testing)

(1) Soil borings or pits shall be dug from 5 to 15 feet from the anticipated percolation test location in accordance with the following:

(a) Soil borings shall be dug to a minimum depth of 42 inches to determine the limiting zone depth, unless prevented by rock or until chroma 2 or less redox is present. The soil boring or pit shall be deeper than the percolation test depth by the minimum required separation distance (MVS).

(b) The minimum diameter of soil borings shall be 3 inches. Soil material from a boring shall be laid out in a manner consistent with its natural condition just prior to the boring process.

(c) Pits shall be a minimum of 60 inches deep unless prevented by rock or until chroma 2 or less redox is present, and constructed in such a fashion as to be easily accessible and safe for the evaluator. Pits are excluded from an organized layout of the removed soil material.

(d) The depth from the surface to the groundwater or saturated soil shall be reported if encountered.

(e) The depth from the surface to ASHES indicators shall be reported if encountered.

(f) The depth from the surface to any other restrictive layer, if encountered, shall be reported and the type or nature identified in Rule 420-3-1-.76, Soil Depth and Vertical Separation. If there is uncertainty about whether a feature qualifies as a restrictive layer, consult with the LHD.

(g) Soil colors shall be reported using the Munsell color standard or equivalent (hue, value, and chroma numeric designations). Report all colors observed, including primary and secondary colors for each layer.

(h) The depth from the natural surface to the upper and lower boundaries of each layer shall be reported.

(i) All measurements shall be reported in inches.

Author: David Gray
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.79 Percolation Test Procedure

(1) The percolation test hole shall be dug or bored to the appropriate testing depth according to Rule 420-3-1-.74, Soil Testing Depth Requirements, but not less than 12 inches deep. The diameter of the hole shall be 6 to 12 inches (except when a permeameter is used it may be as appropriate.)

(2) 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. It is recommended that a 2-inch layer of coarse sand or gravel be added to the hole to protect the bottom from scouring.

(3) A percolation test hole shall be filled with clear water to a minimum depth of 12 inches. Water shall be added to the test hole to maintain the 12-inch depth as often as necessary over a minimum period of 4 hours and preferably overnight, in order to saturate the surrounding soil.

(4) Percolation test measurements shall be made no later than 8 hours following the saturation process. The drop of the water surface shall be measured from a stable reference point at or above the surface, not inside the test hole, at 30-minute intervals until the completion of the test.

(5) After the saturation process, the testing professional shall adjust the water level to a depth of approximately 6 inches over the bottom of the hole. From a stable reference point outside the test hole, the depth to the water surface shall be measured at 30-minute intervals for a period of 4 hours, or until a minimum of 3 readings have essentially the same drop. (The total variation in drop between 3 readings shall be no more than 1/8 inch.

(6) Water shall be added as necessary to maintain the 6 inches of water above the bottom. The drop in the water elevation occurring in the last 30-minute interval shall determine the percolation rate, provided that the absorption rate has stabilized. If there is more than 1/8 inch variation in drop between the last 3 readings, the test shall continue to be made at additional 30-minute intervals until the rate has stabilized. The rate shall be considered stabilized when the last 3 readings are the same (not exceeding 1/8 inch) after the minimum 4-hours saturation period.

(7) Soils that have a moderate to high shrink-swell capacity (plasticity index above 30 and a liquid limit greater than 50) shall require a minimum of 24 hours of constant saturation prior to testing. See Rule 420-3-1-.80, Simulated Wet Season Testing Procedure.

(8) The LHD or the Board may require additional saturation time if sufficient swelling has not occurred.

(9) For soils that absorb the first 6 inches of water in less than 30 minutes following saturation, measurements on the water surface shall be made at 10-minute intervals over a period of one hour. The drop of water surface that occurs in the final 10 minutes shall be used to compute the percolation rate. (Generally, these are coarse textured soils. If this situation occurs in other soils, the test should be relocated.

(10) The percolation rate shall be reported as the number of minutes required for the water surface to drop 1 inch in the test hole after the rate is stabilized.

(11) A copy of all field notes for each percolation test attempted shall be provided to the LHD upon request.

Author: David Gray
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.

History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.80 Simulated Wet Season Testing Procedure

(1) When percolation testing is used for evaluation, the following procedure is the minimum requirement whenever a simulated wet season test is required. Any proposed procedure for simulated wet season testing that varies significantly, especially being less stringent, requires individual review and approval by the Board.

(a) The LHD shall be notified at least 48 hours prior to the beginning of (including the saturation period) a simulated or actual wet-season percolation test.

(b) Percolation test holes shall be prepared according to Rule 420-3-1-.77, General Percolation Procedure, except for the saturation period.

(c) A 12-inch column of clean water must be maintained for at least 24 hours instead of the standard 4-hour saturation period. Then follow the otherwise regular procedures in Rule 420-3-1-.77, General Percolation Procedure, for completing the test.

(d) Keep a log of the procedures, times, and checks made on the process, and submit them with the test results to the LHD.

(e) Listed in Table 17, under different type of evaluation method allowed in this Chapter of the Rules of the State Board of Health, are examples of soil groupings or classifications that, under normal conditions, are extreme for conventional OSS. Sites that contain these type soils require wet-season or simulated wet-season testing for consideration of an advanced system if percolation or similar testing is employed. This list does not exclude other soils or site conditions that, for whatever reason, may require this same testing.

Author: David Gray
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.81 Unified System for Site Evaluation

(1) An engineer or geologist may evaluate and certify the results for large and small flow developments using the unified system method. Certification shall consist of the signature and/or seal of the respective evaluator.

(2) The percolation test method may be used in combination with this method to aid in evaluating a site.

(3) The engineer or geologist shall be familiar with the unified system method and proficient at using it in the field. Lab analysis may be substituted for estimates at any time but is required above Class III soils (estimated permeability more than 60 min/inch). However, in the case where the results from this method conflict with an evaluation by a representative of the local or the State Health Department, the decision of the Board shall be considered final.

(4) A minimum of 2 pits or 2 borings shall be required in the proposed site for the disposal field and 1 pit or 1 boring shall be required in the REDF for lots of less than 15,000 sq ft. Additional holes may be dug for exploratory purposes. One pit or 1 boring shall be required for each additional 700 gpd flow, or portion thereof, for establishments or large-flow systems after the minimum number of pits or borings for the initial 500 gpd.

(5) Soil borings shall be dug to a minimum depth of 42 inches to determine the limiting zone depth, unless prevented by rock or until chroma 2 or less redox is present. The soil boring or pit shall be deeper than the percolation test depth by the minimum required setback distance. The minimum diameter of the soil boring shall be 3 inches.

(6) When pits are used, they shall be a minimum of 60 inches deep unless prevented by rock or until chroma 2 or less redox is present, and constructed in such a fashion as to be easily accessible and safe for the evaluator. The vertical section of the pit wall shall be at least 12 inches wide, from the ground surface to the floor of the pit, shall be scraped and picked to provide a fresh face (picked zone) for observations and note-taking.

(a) The soil in the picked zone must be moist so that the proper colors can be observed and noted. If additional moisture is needed, apply water with a spray bottle. All colors recorded shall be from samples moist and unmixed.

(7) The upper and lower depths of each layer (see (8) below) of soil shall be recorded in inches from the present surface of the ground. Each layer shall be given a numerical identification, beginning with the surface as #1, numbering consecutively with depth.

(8) The color(s) and texture of each layer shall be recorded, using unified designations, starting with the surface and continuing to the minimum required depth.

(9) Any other pertinent information about the site, including percent slope, shall be reported. From this information, the location, depth, and amount of EDF can be proposed in report form or on official forms to the LHD for review.

(10) When soil borings are used to evaluate a site, a 3-inch minimum diameter hand operated soil bucket auger shall be used. However, a 2-inch minimum diameter soil probe may be used if the sample can be obtained with horizons in their natural condition with appropriate depths and can be left virtually intact for the LHD's inspection. If there is an indication that problems may exist which would not allow for the proper evaluation of the soil using soil borings, then pits or other appropriate testing methods may be required, as determined by the LHD.

(11) Soil colors shall be determined using a Munsell chart or equivalent. Soil colors may occur as:

(a) Only one color;

(b) One dominant color with secondary colors (mottles);

(c) Several colors with approximate equal coverage (mottled). To the extent possible all colors should be recorded, with the dominant color first.

(12) The depth to the ASHES is determined from Rule 420-3-1-.76, Soil Depth and Vertical Separation. EDF trench bottoms shall have a minimum separation distance above the ASHES or other restrictive layer as established in Table 15. If there is uncertainty about whether a feature qualifies as a restrictive layer, consult with the LHD.

(13) Once the upper and lower depths of each layer are determined and colors are noted, the permeability can be assigned for each layer. Use Table 18 to assign soil permeability classes based on the Unified System: (Reference: FHA No 373, Engineering Soil Classification for Residential Development).

Author: David Gray
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.82 Soil Morphology Method

(1) A public health environmentalist soil specialist (PHESS) or a soil classifier may evaluate and certify the results for individual lots including those in a large flow developments using the soil morphology method. Certification shall consist of the signature and/or seal of the respective evaluator.

(2) The PHESS shall be currently employed by the ADPH; conduct these evaluations only in counties approved by the Board for this program; and adhere to the requirements in the site evaluation manual issued by the Board.

(3) The percolation test method may be used in combination with this method to aid in evaluating a site.

(4) The PHESS or soil classifier shall be familiar with the Soil Morphology method and proficient at using it in the field. It shall be at the discretion of the PHESS or soil classifier to decide if a lab analysis is necessary. However, in the case where the results from this method conflict with an evaluation by another representative of the local or the State Health Department, the decision of the Board shall be considered final.

(5) A minimum of 2 pits or 2 soil borings shall be dug in the area proposed for the onsite system. Additional holes may be dug for exploratory purposes. One pit or 1 boring shall be required for each additional 700 gpd flow, or portion thereof, for establishments or large-flow systems after the minimum number of pits or borings for the initial 500 gpd.

(6) Soil borings shall be dug to a minimum depth of 42 inches to determine the limiting zone depth, unless prevented by rock or until chroma 2 or less redox is present. The soil boring or pit shall be deeper than the percolation test depth by the minimum required setback distance. The minimum diameter of the soil boring shall be 3 inches. Pits shall be dug to a minimum of 60 inches deep, unless prevented by rock or until chroma 2 or less redox is present, and constructed in such a fashion as to be easily accessible and safe for the evaluator.

(7) If a pit is used, a vertical section of the pit wall at least 12 inches wide, from the ground surface to the floor of the pit, shall be scraped and picked to provide a fresh face (picked zone) for observations and note-taking.

(8) The soil in the picked zone must be moist so that the proper colors can be observed and noted. If additional moisture is needed, apply water with a spray bottle. All colors recorded shall be from samples moist and unmixed.

(9) The upper and lower depths of each discernable layer of soil or soil material shall be recorded in inches from the present surface of the ground. Each layer shall be given an alphabetical letter designation as appropriate. Subscripts are helpful but not required.

(10) The color(s) and the texture (USDA) of each layer shall be recorded. Any other pertinent information about the soil or the site, including percent slope, and landform position shall be reported. From this information, the location, depth, and amount of EDF can be proposed in report form or on official forms to the LHD for review.

(11) When soil borings are used to evaluate a site, a 3-inch minimum diameter hand operated soil bucket auger shall be used. However, a 2-inch minimum diameter soil probe may be used if the sample can be obtained with horizons in their natural condition with appropriate depths and can be left virtually intact for the LHD's inspection. If there is an indication that problems may exist which would not allow for the proper evaluation of the soil using soil borings, then pits or other appropriate testing methods may be required, as determined by the LHD.

(12) Soil colors shall be determined using a Munsell chart or equivalent. Soil colors may occur as:

(a) Only one color;

(b) One dominant color with secondary colors (mottles, or redoximorphic features);

(c) Several colors with approximate equal coverage (mottled). To the extent possible, all colors should be recorded, with the dominant color first.

(13) The depth to the ASHES is determined from Rule 420-3-1-.76, Soil Depth and Vertical Separation. EDF trench bottoms shall have a minimum separation distance above the ASHES or other restrictive layer as established in Table 15. If there is uncertainty about whether a feature qualifies as a restrictive layer, consult with the LHD.

(14) Once the upper and lower depths of each layer are determined and colors are noted, the permeability can be assigned for each layer. Use Table 19 to assign soil permeability classes based on the USDA System.

(15) When the soil texture groups are in question, percolation tests may be performed in accordance with Rule 420-3-1-.77, General Percolation Procedure, (not applicable to soils in Table 17.) If the lot owner or developer questions the results of the soil morphology method and percolation testing is performed, it shall be at the owner's expense.

Author: David Gray

Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.83 Kinds of Soil Maps

(1) The minimum number of soil observations made during the soil survey will depend upon the variability of the relief and the complexity of the soils present.

(2) Preliminary Maps -- These maps may be made using a wide variety of scales, but not smaller than 1:24,000. They usually provide sufficient information to make decisions about further land development. Minimum size delineation is approximately 3 acres. A preliminary map can usually be obtained from the published soil survey, which is available in most counties. A preliminary soil map is a required part of the Phase 1 Site Preparation Plan. The map may be used in Phase 1 of the Site Preparation Plan process and can come directly from the published survey, or be made by a soil classifier. Because they are sometimes inaccurate it is recommended that preliminary maps from published surveys be reviewed, and checked for accuracy onsite~~,~~ by a Professional Soil Classifier. The preliminary maps from published surveys may not be used in the place of maps required for site evaluation in Phase 2.

(3) Low Intensity Maps -- These maps show the location and extent of soils and landscape features sufficient for most large-flow planning, but are not site specific enough for individual onsite determinations. Base maps are 1" = 300' scale or larger. Generally 1 soil observation hole per 3 acres is a minimum. Low intensity maps are excellent planning tools for subdivision development and other areas where onsite systems will be used.

(4) High Intensity Maps -- This is the minimum level of intensity for soil maps when used in lieu of other evaluations or tests, i.e., percolation. The map scale shall be 1" = 100' or larger. High-intensity soil maps can be used for individual lots or in subdivision development prior to the establishment of lot lines. A minimum of 4 borings per acre is required to define the soils. When a grid system is not used, boring location shall be dictated by the landscape or in a manner to best define the soils that occur. All holes shall be flagged and numbered. When a high intensity soil map is used to evaluate a site for an OSS on an individual lot, the following shall apply:

(a) The lot corners shall be staked and flagged and the lot lines flagged at regular intervals in wooded or un-cleared area. If necessary, the owner shall mow or otherwise clear the site to facilitate the mapping process.

(5) Extra High-Intensity Studies. This is an intensive soil morphological study that is site specific. Usually the OSS has already been determined or is limited to a certain area on the lot. A minimum of 2 holes is required per site. Soil descriptions shall be provided and the soil classified to the series level whenever possible. Map boundaries are not necessarily required at this level of evaluation.

Author: David Gray

Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.84 Minimum Requirements for Soil Surveys and Maps

(1) Soil surveys/maps shall conform to the National Cooperative Soil Survey (NCSS) Standards.

(2) Soils shall be classified according to U.S. Soil Taxonomy to the series level and map units shall generally consist of consociations. Complexes may only be used under very limited conditions when two or more dissimilar soils or soils and rock cannot be separated.

(3) Soil series boundaries shall be plotted on a map at a scale dictated by the intended mapping intensity.

(4) A high-intensity survey requires a carefully prepared base map on which the soil classifier will accurately locate soil boundaries. A minimum of a 1-foot contour interval topographic base map is required for slopes 2% or less and a 2-foot contour for 2-4% slope. A 5-foot interval is usually acceptable for slopes greater than 4%. A grid map with 100' (maximum) spacing is strongly recommended (with or without a topographic) map and under certain conditions may be required (See Rule 420-3-1-.86, Grid Staking for Soil Maps.)

Author: David Gray
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.85 Required Map Information

(1) All maps shall be reviewed by the LHD and/or the Board for accuracy and completeness. Exact soil series identification is less important than proper interpretation. The following information is required for all maps:

(a) A title block or caption that states the project or client name;

(b) The date of the survey;

(c) A north arrow for orientation;

(d) The scale of the map;

(e) The mapping intensity (i.e., preliminary, high intensity);

(f) The signature, stamp or seal, address, and telephone number of the soil classifier; and

(g) A special symbols legend, if needed, defining special features identified on the survey map (i.e. springs, rock outcrops, wells, sinkholes, gullies, etc.)

(2) The information listed below is required in table form with detailed maps for each boring:

(a) The name of the soil series (or closest series with similar interpretations);

(b) The percent slope or slope range class;

(c) The depth to redoximorphic features (see notes below Table 15);

(d) The depth to other restrictive layers;

(e) The assigned or adjusted permeability rate and depth at which it occurs (adjusted absorption rates shall include a brief explanation justifying the change from the official soil series table);

(f) The USDA soil texture designation for the critical horizon (the proposed disposal field depth); and

(g) Additional notes and information as appropriate.

(3) Soil maps shall be color coded with green for slight, yellow for moderate, orange for severe, and red for extreme.

(4) The Board may require or choose to allow a high intensity or extra high-intensity soil map for a special study on a parcel or lot where conditions may be severe or extreme for a Conventional OSS or where an advanced OSS is needed.

Author: David Gray
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.86 Grid Staking for Soil Maps

(1) Grid staking is required for the following:

(a) A site that is thickly wooded or otherwise un-cleared, where vision is obstructed; or

(b) The landscape lacks sufficient relief to be adequately depicted on a 1 or 2-foot contour interval base map; or

(c) If for any reason grid staking is needed for adequate ground control by the soil classifier.

(2) Grids shall be laid out at a minimum of a 100-foot spacing and flags or stakes shall be numbered.

(3) Staked lots shall have numbered surveyed stakes at each corner.

Author: David Gray
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

MISCELLANEOUS

420-3-1-.87 Signatories to a Permit Application and Report

(1) The application for a Permit to Install/Repair, a State-Issued Performance Permit, State-Issued Product Permit, Septic-Tank Pumper's Permit, Tank Manufacturers Permit, Certificates of Financial Viability, or a Variance shall be signed by a responsible person, as indicated below:

(a) In the case of a private dwelling, by the property owner; or his/her authorized agent.

(b) In the case of a corporation, by a principal executive officer of at least the level of vice president;

(c) In the case of a partnership, by a general partner;

(d) In the case of a sole proprietorship, by the proprietor; or

(e) In the case of a municipal, state, federal or other public entity, by either a principal executive officer or ranking elected official.

(2) A report required by a permit and other information requested by the Department shall be signed by a person described in this Rule paragraph (1), or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(a) The authorization is made in writing by a person described in this Rule, paragraph (1);

(b) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity; and

(c) The written authorization is submitted to the Department.

(3) If an authorization under this Rule is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of said paragraph shall be submitted to the Department prior to, or together with, a report or other information signed by the newly authorized representative.

(4) In addition to the statement required in this Rule, there are statements required of design engineers in Rule 420-2-1-.93, Professional Signatures and Seals.

Author: Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

Variances

420-3-1-.88 Hardship Variance

(1) In order to avoid undue hardship and promote the effective and reasonable application and enforcement of these Rules, the State Health Officer (SHO), as agent for the Board, may grant variances from requirements of these Rules. Any person may request a hardship variance from specific provisions of

these Rules by submitting a request to the Board. Hardship variances may not be granted at the local level. The SHO may grant a variance upon finding that strict application of a particular Rule would cause the applicant undue hardship, which might result from conditions peculiar to the site or situation under consideration, which conditions could not reasonably have been anticipated or avoided in the writing of these Rules

(a) The hardship variance process shall not be used as an alternative to the permitting process. That is, the full process of seeking a permit shall be carried out, and a determination of non-compliance with these Rules arrived at by the LHD or the Board, expressed in the form of a permit denial, before a request for a hardship variance will be considered.

(b) A hardship variance shall not be granted in order to allow for the least expensive option in a situation where a reasonably more expensive option would require no variance.

(2) The SHO may consider granting a blanket variance for a recurring and widespread condition that could not have been foreseen, avoided or controlled in the writing of these Rules.

(3) Variable factors such as seasonal loadings, nature of wastes, water table conditions, topography, soil, geology, land use and other factors affecting the situation may be taken into account in determining the degree of variance, if any, which may be allowed.

(4) A hardship variance shall not be granted until the ADPH is satisfied that:

(a) The hardship was not caused or abetted by the action or inaction of the applicant;

(b) No reasonable alternative exists or can be devised for the treatment and disposal of the sewage; and

(c) Action taken under the variance will not adversely affect the health of the applicant's household or the public, or degrade a water of the State.

(5) A hardship request shall be submitted through the LHD for review and action. The LHD and public health area environmental director shall make findings of fact regarding the variance request and shall:

(a) Determine, based on the findings of fact and the relationship of those facts to these Rules, whether or not the request merits approval or should be denied. If, in the opinion of the LHD, the variance request should be denied, it shall be denied at the local level.

(b) If the LHD considers the request to merit approval, the LHD shall forward the request, along with applicable findings of fact and its specific recommendations as noted in this Rule, to the Bureau of Environmental Services (Bureau) within 30 calendar days. The Bureau will review the request for possible granting or denial by the SHO. The request shall include the following as applicable:

1. A cited reference to the specific Rule(s) from which a hardship variance is requested;

2. The reasons and circumstances in support of the request;

3. The expected duration of the hardship variance request;

4. A statement by a qualified third party (i.e., physician, social worker, pastor, engineer, etc.) on letterhead, supporting the request and citing specific reasons;

5. Test results conducted at the property, including tests based on the requirements of these Rules;

6. Suggested conditions that might be included with a granting of the hardship variance that would limit the detrimental impact on the public health or the environment;

7. Other supporting data and information; and

8. Other information as the Bureau may require.

(6) A hardship variance which is granted may include conditions or time limitations, as determined by the SHO. The hardship variance may include an expiration date or condition upon which it will no longer be valid.

(7) A person may make a written request to reinstate or extend a prior or existing hardship variance. The SHO may reissue or extend the variance upon determining that it ought not to endanger public health or the environment.

(8) As noted herein, a hardship variance request may be denied by either the LHD, acting on behalf of the Board, or by the Board on a case-by-case basis. The LHD shall notify an applicant as soon as possible in writing of a variance request which it denies, and the Board shall make similar notification as a result of a Board decision.

(9) The Board may revoke a hardship variance upon finding that:

(a) The grantee is in violation of a requirement, condition, schedule or limitation of the variance;

(b) Operation under the variance is threatening public health or the environment; or

(c) The variance was obtained, or is being continued, as a result of a fraudulent or misleading representation or act.

(10) The denial or revocation of a variance, in whole or in part, may be appealed within 15 days of the adverse decision and must be done in accordance with Chapter 420-1-3 of the Rules of the State Board of Health.

(11) The granting of a hardship variance in whole or in part may likewise be appealed by any affected person.

(12) If a man-made or natural disaster or other unfortunate circumstance creates conditions where certain requirements of this Chapter of the Rules of the State Board of Health cannot be complied with and where the public health is better served by less than full compliance the Board may authorize the suspension of certain of these Rules for specifically affected

persons, sites or conditions, and may institute a provisional regulatory plan until the disaster is abated.

(13) Variances granted because of site conditions shall be legally recorded.

Authors: George Allison
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.89 Repair, Replacement and Inspection of an Existing OSS

(1) The Local Health Department is empowered by Code of Alabama, Title 22, Chapter 26 to investigate reports of failing or inadequate onsite sewage systems. The LHD may require the owner or responsible entity to abate an unsanitary condition caused by a failing OSS or an unapproved sewage discharge.

(2) Procedures for Applying, Permitting and Installing a Repair/ Replacement OSS.

(a) Before an existing OSS may be repaired, the owner, his authorized agent or the responsible person shall apply for a Permit to Install/Repair.

1. Verbal authorization to repair a conventional OSS for a single-family residence may be given by the LHD provided the OSS is more than 5 years old, the repair authorization is documented in the file and application for the Permit to Install/Repair is submitted within 10 days.

(b) The Local Health Department may exercise discretion when evaluating repairs/replacements, supervising the nature and location of repair/replacement work to be performed and inspecting completed repair/replacement work.

1. When evaluating the site and repairing or replacing a failing EDF, the applicable sections of these Rules shall be followed as guided by the following definitions:

(i) A repair is a corrective action taken to repair or replace a failing or damaged component of a legally installed OSS, including the EDF, if none of the OSS design parameters have changed. In this case the failing component may be repaired but the system does not have to be brought up to current standards unless in the opinion of the LHD there is an overriding environmental or health reason to require it. Recommended or required periodic maintenance, such as pumping the tank, cleaning the filter or replacing a pump, is not considered a repair.

(ii) A replacement is a corrective action taken when a design parameters such as flow or loading has changed, the system is being completely relocated or replaced; or the system was never properly permitted. A replacement is considered a new system.

2. When an OSS fails and cannot be repaired in a timely manner, sanitary sewer services shall be used, including systems operated by

Management Entities, subject to approval of system officials, if the public services are within 500 feet, as measured along proposed building sewer of the failed system.

3. Before final repairs to an Engineered OSS may be undertaken, an engineer shall submit to the LHD a repair plan that addresses the cause of failure.

4. The owner/responsible entity, an engineer, an installer and the Health Department shall collaborate on the evaluation of a failing large-flow OSS. The engineer shall submit a plan for repairing or replacing the system to the Health Department. If the system has been issued a State-Issued Performance Permit, the permit shall be reviewed by the Department, and any necessary modifications shall be made in accordance with Rule 420-3-1-.29, Requirements for State-Issued Performance Permits.

(c) Repaired or replaced systems are subject to the same inspection requirements and installer documentation as new systems.

(d) An additional replacement area is not required for repairs to an existing OSS, unless it is determined that the initial installation and/or permit did not comply with the Rules.

Authors: Lynn Scott, Lem Burell, Larry Hayes
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.90 Inspection of an Existing OSS

(1) When requested by the homeowner, their agent, or a lending institution representing the owner or buyer, a physical inspection of an existing OSS may be performed by the LHD. Documentation of the physical inspection may be provided to the requesting party upon completion of the inspection.

(2) Evidence that an existing OSS is failing or will fail when used may be reason for the LHD to provide an unfavorable evaluation.

(3) Evidence that an existing OSS was installed without the issuance of a Permit to Install and/or an Approval for Use on or after March 18, 1982, may be reason for the LHD to refuse to evaluate the existing OSS. The LHD may require a professional Site Evaluation and Application for Permit to Install be submitted by the owner. It may require the existing OSS to either be brought into compliance with current Rules or require replacement of the OSS.

(4) The inspection of an existing OSS and subsequent documentation does not imply any guarantee that the OSS will function satisfactorily.

(5) Before providing evaluation documentation, the LHD shall receive evidence that the septic tank of an existing OSS has been pumped within the last 3 years. This maintenance service should include the cleaning of the effluent filter for tanks with filters.

(6) When an existing OSS has not been used for more than 2 weeks, additional information or site investigation may be required by the LHD.

(7) The owner, agent or financial institution shall be responsible for securing the services of a site evaluation professional or AOWB licensee when such service is determined to be needed by the LHD.

(8) Similar inspection services, such as those provided by a home inspector or an AOWB licensee, shall not imply that the service was provided under authority of these Rules nor shall they imply that the system complies with these Rules.

Author: Lem Burell
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

Certifications

420-3-1-.91 Site Evaluators Certification

Prior to issuance of the Permit to Install/Repair, the site evaluator shall certify that:

"The attached soil tests were conducted as specified in the Onsite Sewage Treatment and Disposal, Chapter 420-3-1, and are true and accurate as presented."

Authors: Lynn Scott, Lem Burell
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.92 Applicant Certification

(1) For a permit application for small flow development/systems, the following statement shall be included:

"By signing this application, I am stating that the information in this part is complete, true and correct; and that the OSS will be installed according to the design as approved by the ADPH and will be maintained according to the manufacturer's recommendation, the operation and maintenance plan, and the Permit. I understand that the property named in this application shall not be further divided, or the system thereon modified in any way, without approval by the Health Department. I acknowledge that the person who installs (repairs) and certifies this onsite system must be a licensed installer or individual who is in compliance with the provisions of state law, specifically Act 99-571 (Code of Ala., 1975, Title 34, Chapter 21A, Sections 1-26), as enacted, and as implemented. I do hereby give permission to the health department to enter onto the property, at reasonable hours, for the purpose of processing this application.

(2) For a permit application for large flow development/systems, the following statement shall be included:

"I acknowledge that I will develop this project according to Chapter 420-3-1, Onsite Sewage Treatment and Disposal Rules. When applicable, I will notify subsequent lot owners that any modification of or building development

on the lots not in accordance with the approved SPP must receive prior approval from the Local Health Department."

Authors: Lynn Scott, Lem Burell
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-2-1-.93 Professional Signatures and Seals

It is the responsibility of any person(s) preparing or submitting an application to ensure that all studies, engineering reports, plans and specifications, soils reports and other technical submittals required by State law or these Rules, are prepared according to applicable licensure law and regulation, and that they include the professional's signature and seal as required by the applicable licensure laws.

Authors: Lynn Scott, Lem Burell
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.94 Designers Certification

(1) For Engineered Systems the design engineer (see Rule 420-3-1-.35, Engineer Design Required) shall certify the design of the system to meet applicable performance standards. The certification shall be as follows:

"I certify that the design features of the OSS at the address above have been designed, specified, or approved by me, and conforms to design principles applicable to such projects. In my professional judgment, this system, when properly constructed, operated and maintained, will achieve the established performance standards and comply with applicable statutes of the State of Alabama and the ADPH."

(2) For Conventional Systems the professional shall certify the system as follows

"I hereby certify that the information contained in this part of the application, including all related attachments, is complete, true and correct."

Authors: Lynn Scott, Lem Burell
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.95 Engineer/Installer Certification

(1) Prior to issuance of the Approval for Use, the installer shall submit a CEP 5 form supplied by the Health Department that contains specifics requested about the system and contains the following statement:

"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 (insert date)_____,20 ____ and is in compliance with Chapter 420-3-1 Rules covering onsite sewage disposal systems and, when appropriate, plans and specifications for the project. I further certify that I am in full compliance with Act 99-571 (HB 547), as enacted by the Legislature of the State of Alabama in its 1999 Regular Session, and as implemented."

(2) Prior to issuance of the Approval for Use, the engineer shall submit a CEP 6 form supplied by the Health Department that contains specifics requested about the system and contains the following statement:

"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 (insert date)_____ and is in compliance with Chapter 420-3-1 Rules covering onsite sewage disposal systems and, when appropriate, plans and specifications for the project."

(a) For mounds and controlled fill systems the engineer shall certify to the following.

"I hereby certify that the fill material (texture, amount, and compaction) and the bed construction (original ground scarification, fill placement and bed dimensions) were accomplished in accordance with the approved design and in compliance with these Rules."

Authors: Lynn Scott, Lem Burell
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.96 Periodic Report Certifications

All reports required to be submitted to the Department by the permit and other information requested by the Department shall include the certification below and shall be signed by either the responsible person or his/her duly authorized representative as specified in Rule 420-3-1-.87, Signatories to a Permit Application and Report.

"I certify under penalty of law that this document and its attachments were prepared under my direction or supervision, in accordance with the system designed to ensure that qualified personnel properly gather and evaluate information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations."

Authors: Jimmy Coles

Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.97 Tank Testing Certification

The person witnessing tank tests per Rule 420-3-1-.49, Tank Testing and Quality Control, shall sign the following statement and it shall be a part of the tank application.

"I certify that structural and water tightness test were conducted in accordance with Department guidelines and applicable statutes of the State of Alabama and the ADPH and the results of the test are reflected accurately."

Authors: Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

Onsite Management and Other

420-3-1-.98 Onsite Management Entities

(1) Anyone operating a Decentralized Cluster System as defined by these Rules and the Onsite Wastewater Management Entities Act (§22-25A-1 *et seq.,* Ala. Code (2001)) is an Onsite Management Entity and, as such, shall meet the requirements of this Rule.

(a) Small-Flow Decentralized systems that are Management Entities and that do not require Financial Certification may be permitted by the LHD.

(2) Onsite Management Entities are responsible for the following:

(a) Establish procedures and guidelines for operation and management of the decentralized cluster system. Such procedures and guidelines shall not conflict with Board of Health Regulations or § 22-25A-1 *et seq.*, Ala. Code (2001);

(b) Construct or install new systems which have been approved and permitted by the Department or Alabama Department of Environmental Management (ADEM) and oversee their construction and installation;

(c) Perform routine system inspection, operation, and maintenance using appropriately trained or licensed personnel as required by all established and applicable statutes and rules for the type of decentralized cluster system used, or contract these services;

(d) Manage septage handling and disposal so as to comply with all established and applicable statutes and rules;

(e) Maintain all records, perform database maintenance, bookkeeping, billing, payment processing and other administrative acts as required to manage the Entity;

(f) Obtain easements for access to property for maintenance or repair, when needed, or to acquire land when necessary;

(g) Administer an internal enforcement program with appropriate sanctions; and

(h) Comply with the conditions of certifications or conditions of operational permits as well as the applicable rules of the State Board of Health, administrative orders and state, federal and local laws, rules and regulations.

(3) Each Onsite Management Entity, unless exempted pursuant to § 22-25A-5(3) Ala. Code (2001), shall apply for and obtain from the Department a Certificate of Financial Viability. Applications for the Certification shall include the following:

(a) General Information on the applicant in detail to allow the Department to identify the applicant, the nature of the ownership of the system, the location and technical specifics of the system and other systems managed by the applicant, including compliance of the applicant.

(b) Financial information on the client in enough detail to allow the Department to ascertain the financial status and the appropriate rate structure for the Entity.

(c) A list of licenses, certificates or other operating authority applicable to the system issued by any federal, state or local authority.

(d) Tariffs enumerating and defining the classifications of service available to subscribers, worksheets for rates.

(e) Evidence of the following:

1. Title to all physical assets of every decentralized cluster system managed and operated by the Onsite Management Entity shall be held in trust and shall not be subject to any liens, judgments or encumbrances;

2. Escrow or trust fund meeting the requirements of the Department into which a the designated sum certain of the periodic rates, as approved by the Department, when collected from the rate payers is deposited and from which the Management Entity shall only pay such expenses as shall occur on an annual or greater occasion.

3. A surety bond, letter of credit or other instrument in the minimum sum of the greater of $100,000.00 or a sum calculated as mandated by the Department.

(i) Each Onsite Management Entity shall maintain the financial status under which it was issued the Certificate of Financial Viability. Failure to do so may result in a civil or administrative action or both pursuant to § 22-25A-6 *et seq.*, Ala. Code (2001).

(ii) The financial instruments and mechanisms provided pursuant to § 22-25A-8 *et seq.*, Ala. Code (2001) shall remain in force and be non-cancelable until such date as the Entity shall be issued a new Certificate of Financial Viability by the Department,

(iii) The Department may declare such financial instrument forfeited when any required operating permit is expired or revoked, or when it is determined by the Department that the economic viability and continued

existence of the Entity is in jeopardy, or that the Entity is not meeting its obligations to its customers.

(4) A new application for a Certificate of Financial Viability, along with any proposed rate changes, shall be submitted by the Onsite Management Entity every two years from the date of issuance of the first operational permit issued to the Entity, or any time an application is submitted for a new operational permit or an application is submitted for the modification of an existing operational permit. The Department shall approve rate changes, if fair and reasonable, as determined by the Department, considering the costs of operation and maintenance of the system and similar costs in the industry within the State of Alabama.

(a) The Department is authorized to collect from the Onsite Management Entity a fee for review of applications for Certification of Financial Viability in the amount of $250 per application. The fee is non-refundable and shall be paid in advance of review.

(5) Each Onsite Management Entity shall apply for and obtain from the Department or ADEM an operational permit for each decentralized cluster system that it operates. Applicants to the Board or Local Health Department shall submit a CEP-3 Form and information as required by this Regulation.

(a) Unless the Management Entity is exempted pursuant to § 22-25A-5(3) *et seq.*, Ala. Code (2001), the operational permit shall require the Entity to maintain the financial status under which it was approved, and failure to do so will be a permit violation.

(b) The Department is authorized to collect from the Onsite Management Entity a fee for review of an application for an operational permit, a fee for modification of an existing operational permit, and a fee for the renewal of an operational permit in the amount of $250 per application. The fee is non-refundable and shall be paid in advance of review.

(6) Violation or failure of an Entity to comply with law or conditions of certifications or conditions of the operations permit, the Board's Rules or administrative orders, may result in revocation of certification or revocation of the operational permit, and also may result in civil penalties of not less than $100, or more than $5,000, per compliance failure or violation. The total penalty assessed for an order issued by the Department shall not exceed $10,000. Each day of non-compliance constitutes a separate violation.

(a) Civil penalties may be assessed for any compliance failure or violation occurring within three years prior to the date of issuance of an order or notice or commencement of civil action pursuant to the Onsite Wastewater Management Entities Act § 22-25A-1 *et seq.*, Ala. Code (1975).

(7) If the Department proposes to forfeit, suspend or modify the certification of any onsite Management Entity, it shall notify the affected Entity in writing of the following:

(a) Intent of the Department to suspend, forfeit or modify;

(b) The grounds upon which the suspension, forfeiture or modification is based;

(c) The commencement date and duration of the suspension, forfeiture, or modification;

(d) Actions, if any, which the affected Management Entity may take to avoid suspension, forfeiture, or modification or to receive certification in the future;

(e) Additional conditions which the Department may impose or information it requests; and

(f) The opportunity and method for requesting a hearing prior to final Departmental action to suspend, forfeit or modify certification.

(8) The Department shall comply with the Alabama Administrative Procedures Act and Alabama Administrative Code, Chapter 420-1-3, Hearing of Contested Cases when seeking to forfeit, suspend or modify the certificate or operational permit of any Onsite Management Entity.

Authors: Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.99 Location of Onsite Sewage Systems in Environmentally Sensitive Areas

(1) Additional requirements not set forth in these Rules may be established by LHDs for areas that are determined to be environmentally sensitive. These requirements shall be established in on of the following two ways:

(a) The County Board of Health shall adopt additional requirements in accordance with the Administrative Procedures Act.

(b) The LHD may propose additional requirements. The Area Environmental Director shall concur with the proposal and submit the proposal to the Board for approval.

Authors: George Allison
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.100 Recording Requirements

(1) A plat recorded after the effective date of this Rule for lots that will have OSSs on them shall have the following statement on the plat;

"The lot(s) on this plat are subject to approval or deletion by the (name of county) LHD. The approvals may contain certain conditions pertaining to the onsite wastewater treatment system(s) that could restrict the use of the lot(s) or obligate owners to special maintenance and reporting requirements. These conditions are on file with the said health department and are made a part of this plat as if set out hereon."

(a) All the items that are required on the surveyed plat on record in the LHD do not have to be on the recorded plat as long as the statement above is on the recorded plat.

(2) The owner of any lots that are reduced in size below the minimums in Rule 420-3-1-.09, Minimum Lot Size Requirements for Sites Using an OSS, or for any reason has an Engineered OSS on the lot, and that is not part of a large-flow development with a recorded plat containing the statement in paragraph (1) above shall execute and record the covenant to run with the land (CEP 7) before the Approval for Use may be issued by the LHD.

(3) All required recordings shall be done before an Approval for Use is issued by the LHD.

Author: Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.101 Standards for the Use or Disposal of Domestic Septage

Septage shall be disposed of in compliance with Alabama Administrative Code, Chapter 420-3-6, Septage Management.

Authors: Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.102 Recreational Building Development or Similar Projects

(1) A site may be designated a Recreational Vehicle Park by the LHD if it meets the following conditions.

(a) Lot or lots shall be rented for the purpose of parking a Recreational Vehicle (RV) on a short term basis of no more than 30 days out of a calendar year to persons in transient.

(b) The RVs shall not be rendered less than completely mobile by removing wheels or attaching permanent or semi-permanent structures.

(c) There must be an office on or close to the property that is manned during normal business hours to accommodate the renting out of the property.

(d) The lots and all appurtenances and utilities including the wastewater treatment and disposal systems shall be owned and operated by a responsible person as defined by these Rules.

1. The responsible person shall provide individual or community sewer that meets the requirements of ADPH or ADEM rules or a central sanitary station into which the RVs can discharge their waste for ultimate disposal off site. The method of off-site disposal must be approved by the LHD. There must be 1 station for each 50 vehicles that the park is designed to accommodate.

2. The siting and design of a sanitary station or OSS shall be approved by the LHD. If ultimate disposal is to be through an OSS permitted by ADPH

the design shall take into account the chemicals that are used in RV holding tanks. The design of sanitary dump stations shall include a sanitary method of transfer from the RV to the station.

3. The design for each sanitary station or OSS shall be as that for dwellings except that the design and planning shall be based on a daily wastewater discharge of a minimum of 50 gallons per vehicle that the park can accommodate when full. The peaking factor may be higher than this depending on the nature of the park, and this shall be taken into consideration by the design engineer. The park shall not allow more than the number that it was designed for to be in the park at any one time. The stations shall only receive sewage.

4. Except for the onboard sewage storage tank built into the RV, there shall be no other form of sewage disposal or storage in the park than that approved by the ADPH or ADEM.

(2) If the RV park meets the conditions of paragraph (1) of this Rule it must be determined to be a large or small-flow development based on flow only. If lots are sold or rented under conditions other than those described in paragraph (1) of this Rule, the development shall be considered to be a small- or large-flow development as defined by these Rules, and as such, it must meet all the requirements in these Rules, including Rule 420-3-1-.98, Onsite Management Entities, if it is applicable.

Authors: George Allison, Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006. Amended: filed October 19, 2006; effective November 23, 2006.

420-3-1-.103 Appeals

(1) A person who after proper application, is denied a permit, license, or authorization; or who has been given notice of an intent to suspend, revoke or withdraw a permit, license, or authorization; or who is denied the renewal of a permit, license or authorization shall be given notice of the facts or conduct which warrants the intended action and within 10 days following the receipt of the notice may contest such action or decision by applying in writing for an informal hearing to the Health Officer, or his/her designee, of the county from which notice was issued.

(2) A person who is issued a permit, license or authorization with any terms or conditions with which he does not agree may also within 10 days of the issuance of such permit, license or authorization apply in writing for an informal hearing to the Health Officer, or his/her designee, of the county from which the action was taken.

(3) If the person is not satisfied with the decision by the staff of the Board following the informal hearing, he/she may make further appeal for a formal hearing to the Board within 15 days following notice of the unfavorable determination, as provided in Chapter 420-1-3, Hearing of Contested Cases.

(4) The person contesting any action or decision of the Board or Health Officer, or his/her designee, shall not act in violation of such action or decision during the hearing process, unless the action or decision is stayed or reversed by competent authority.

Authors: George Allison, Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.104 Other Approvals Not Implied

(1) Approval of a lot, subdivision, building development or method of sewage disposal by the Board or its agent does not constitute or imply approval by a municipality, county or other entity having planning, zoning or other legal jurisdiction. Similarly, approval of a like plan by another entity does not negate the requirement for approval of an OSS by the Board or its agent.

(a) LHDs may regulate according to another jurisdiction's more stringent requirements, provided that a properly executed memorandum of understanding is forwarded through the environmental chain of command for review by the Department's Office of General Counsel and is approved by the State Health Officer.

(b) LHDs may also cooperate with other jurisdictions in dealing with common areas of regulation that are subject to a coordinated effort, such as the existence of zoning requirements. This should be by a memorandum of understanding, forwarded through the environmental chain for legal review and approval by the State Health Officer.

Author: Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.105 Disclaimer

(1) This Chapter of the Rules of the State Board of Health does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this Chapter to establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use.

(2) A person performing in full compliance with this Chapter of the Rules of the State Board of Health may advertise or claim that a particular person, product, procedure (method) or service is approved or permitted by the Board, if such approval or permit has been formally granted and is current. However, no person shall state or imply that a person, product, procedure or service, proprietary or otherwise, is endorsed by the Board, the ADPH or its agent; nor shall a person state or imply a guarantee by the Board, the ADPH or its agent as to the performance or effectiveness of a person, product, procedure or service, proprietary or otherwise.

(3) A statement or implication of endorsement or guarantee by the Board, the ADPH or its agent as to a person, product, procedure, or service, proprietary or otherwise, which exists as of the effective date of this Chapter of the Rules of the State Board of Health, shall be void as of that date and shall be withdrawn.

Authors: George Allison, Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.106 No Guarantee Implied

Issuance of a permit to construct, operate or repair an OSS and subsequent approval of either the installation or repair by an agent of the Board shall not be a guarantee or warranty that the system will function satisfactorily for a given period of time. Due to variables influencing system function which are beyond the scope of this Chapter of the Rules of the State Board of Health, neither the Board nor its agents shall assume liability for damages which are caused, or which may be caused, by malfunction or failure of an OSS.

Authors: George Allison, Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.107 Repeals

The Alabama Administrative Code, Chapter 420-3-1, adopted on July 20, 1988, and amended on November 20, 1991, June 17, 1992, February 19, 1997, and November 18, 1998, is repealed. Policies or procedures relative to onsite sewage treatment and disposal, as promulgated and adopted by the Board, and which are in conflict with this Chapter of the Rules of the State Board of Health, are repealed.

Authors: George Allison, Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.108 Severability

The parts, sections, paragraphs and provisions of this Chapter of the Rules of the State Board of Health are severable. Should a portion thereof be ruled unconstitutional or unenforceable by a court, that ruling shall not affect other provisions of this Chapter not ruled upon.

Authors: George Allison, Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

420-3-1-.109 Penalty For Violation

A person who violates or refuses to comply with these Rules shall be subject to punishment according to law.

Authors: George Allison, Jimmy Coles
Statutory Authority: Code of Ala. 1975, §§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; 22-27-1, et seq.
History: Repealed and New Rule: Filed October 20, 2005, effective March 19, 2006.

Appendix A

Table 1

Flow and Organic Loading

Generator	Design Unit	Design BOD/TSS lbs/day	Design Flow gpd
DWELLINGS (Rule) 2/			
Dwelling (8 bedrooms or fewer)	per bedroom	0.4 (min)	150 (300 min)
9 or more bedrooms to a single system	per person	0.2 (min)	75 (min)
ESTABLISHMENTS (guidelines) 3/			
Airports (not including food service)			
(not including food service)	per passenger	0.02	5
Airport	per employee	0.05	15
Office	per employee	0.05	25
Marinas			
with bathhouse or showers or toilets	per boat slip	0.15	10
Motels			
no cooking facility	per bedroom	0.40	120
cooking facility	per bedroom	0.80	175
Movie Theater (no food preparation)	per seat	0.02	4
Restaurants	per seat	0.2	50
Restaurants			
Interstate or through highway	per seat	0.7	100-180
Interstate rest areas	per person	0.01	5
Service station	per vehicle serviced	0.01	10
Factories & office buildings	per person per 8-hr shift		
No Shower		0.06	15
With Shower		0.08	25
Laundromats, 9 to 12 machines	per machine	0.3	500
Stores Shopping centers exclusive	per 1000 sq ft. of		
of food preparation	floor space	0.1	200
Institutions/Establishments			
Churches (no food service)	per seat	0.002	3
Hospitals	per bed	0.7	300
Schools (with or without cafeteria)			
with shower	per person	0.06	16
with out shower	per person	0.04	10
Boarding schools	per person	0.2	75
Nursing homes	per bed	0.3	200
Assisted Living	per bed	0.2	100
Community colleges	per student and faculty	0.04	15
Recreational Establishments			
Theaters, auditorium type	per seat	0.02	5
Picnic areas	per person	0.01	5
Camps, day no meals served	per person	0.05	5
Camps resort day & night			
with limited plumbing	per space	0.05	50
Luxury camps			
With flush toilets	per camp site	0.1	100
Sanitary station	per camp site	0.05	50

Appendix A

Footnotes to Table 1:

1. Organic loadings are prior to septic tank. It may be assumed that he tank will remove a maximum of 40 % of the BOD & TSS load of sewage and 30% of high-strength sewage. This is an assumed loading rate for field sizing and should not necessarily be used for treatment design.
2. Estimated flows for residential systems assume a maximum occupancy of two persons per bedroom for systems handling fewer than 9 bedrooms. Large-Flow systems require engineer design, including occupant loading. Where residential care facilities will house more than 2 persons in any bedroom, estimated flows shall be increased by 50 gallons and 0.2 lbs BOD per each additional occupant.
3. If there are combinations of establishments such as a convenience store with food outlet all contributors must be combined to estimated sewage flows and BOD loadings.
4. See Rule 420-3-1-.44 Disposal of Effluent From Clothes Washing Machines and Residential Spas

Table 2

EDF REDUCTIONS ALLOWED FROM THE STANDARD GRAVEL FIELD FOR TREATMENT

PERCOLATION RATES min/in	**SOIL GROUP** Table 3 Classifications	**EDF REDUCTION ALLOWED**
5 to 15	Group 1 Sand, Loamy Sand	50%
16 to 30	Group 2 Sandy Loam, Loam	40%
31 to 60	Group 3 Sandy Clay Loam, Silt Loam, Silty Clay Loam, Clay Loam	30%
61 to 120	Group 4 Sandy Clay, Silty Clay, Clay	20%
121- 240	Group 5 Shrink-Swell Clays and Poorly Structured Soils	10%

Appendix A

Table 3

Minimum Requirements for Conventional Gravel EDFs by Texture Group and Percolation Rate (2)

Soil Texture Group/Perc Rate	Field Size for Sewage Treated to Primary Standards Based on 0.2 lbs BOD/day/bedroom (1)						Field Sizing for Establishments w/ Primary Effluent lbs-BOD/sq ft/day	Field Sizing for Establishments or Large Flow System with / without Secondary Effluent gal / sq ft / day
	Primary EDF			Separate Washer Line (1)				
	Square feet per Bedroom	Linear feet/bedroom		Sq feet per Bedroom Req/Reduc	Linear feet/bedroom			
		24" Width	36" Width		24" Width	36" Width		
Group 1 5 10 15	200	100	67	50/40	25	17	0.00120	1.50 / 0.75
Group 2 16 25 30	250	125	83	63/50	32	21	0.00096	1.00 / 0.60
Group 3 31 40 45 50 55 60	300	150	100	75/60	38	25	0.00080	0.714 / 0.500
Group 4 61 65 70 75 80 85 90 95 100 105 110 115 120	330 350 370 390 410 430 450 480 510 540 570 600 650	165 175 185 195 205 215 225 240 255 270 285 300 325	110 117 123 130 137 143 150 160 170 180 190 200 217	163/130	82	55	0.00073 0.00069 0.00065 0.00062 0.00059 0.00056 0.00053 0.00050 0.00047 0.00044 0.00042 0.00040 0.00037	0.568 / 0.455 0.536 / 0.429 0.507 / 0.405 0.481 / 0.385 0.457 / 0.366 0.436 / 0.349 0.417 / 0.333 0.391 / 0.313 0.368 / 0.294 0.347 / 0.278 0.329 / 0.263 0.313 / 0.250 0.288 / 0.231
Group 5 Perc >120	Unsuitable for Conventional EDF (Shrink-Swell Clays and Poorly Structured Soils)							
Group 6 Perc <5	Unsuitable for Conventional EDF (Very Coarse Sands, Extremely Gravelly, and Fragmental Soils) except as allowed in Table 15.							

(1) This is equivalent to 2 people per bedroom at 0.2 lbs per person with consideration that the septic tank will reduce the BOD by approximately 40% or 0.4 lbs - 0.16 lbs = 0.24 lbs to the field per bedroom, it may be assumed that the septic tank will remove 30% of the BOD when dealing with high-strength sewage.

(2) See Rule 420-3-1-.37, Gravel Field Standard EDF Sizing for Dwelling, for further explanation.

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Table 3a

Minimum Requirements for Conventional Gravel EDF's by Texture Group and Percolation Rate (2)

Soil Texture Group/Perc Rate	Field Size for Sewage Treated to Primary Standards Based on 0.2 lbs BOD/day/bedroom (1)						Field Sizing for Establishments w/ Primary Effluent lbs-BOD/sq ft/day	Field Sizing for Establishments or Large Flow System with / without Secondary Effluent/without gal / sq ft / day
	Primary EDF			Separate Washer Line (1)				
	Square feet per Bedroom	Linear feet/bedroom		Sq feet per Bedroom Reg/Reduc	Linear feet/bedroom			
		24" Width	36" Width		24" Width	36" Width		
Group 5b								
121	680	340	227				0.000353	0.245 / 0.221
130	710	355	237				0.000338	0.235 / 0.211
135	740	370	247	208/166	104	70	0.000324	0.225 / 0.203
140	770	385	257				0.000312	0.216 / 0.195
145	800	400	267				0.000300	0.208 / 0.188
150	830	415	277				0.000289	0.201 / 0.181
155	860	430	287				0.000279	0.194 / 0.174
160	890	445	297				0.000270	0.187 / 0.169
165	920	460	307	253/202	127	84	0.000261	0.181 / 0.163
170	950	475	317				0.000253	0.175 / 0.158
175	980	490	327				0.000245	0.170 / 0.153
180	1010	505	337				0.000245	0.165 / 0.149
185	1040	520	347				0.000231	0.160 / 0.144
190	1070	535	357				0.000224	0.156 / 0.140
195	1100	550	367	298/238	149	99	0.000218	0.152 / 0.136
200	1130	565	377				0.000212	0.147 / 0.133
205	1160	580	387				0.000207	0.144 / 0.129
210	1190	595	397				0.000202	0.140 / 0.126
215	1220	610	407				0.000197	0.137 / 0.123
220	1250	625	417				0.000192	0.133 / 0.120
225	1280	640	427	343/274	172	115	0.000188	0.130 / 0.177
230	1310	655	437				0.000183	0.127 / 0.155
235	1340	670	447				0.000179	0.124 / 0.112
240	1370	685	457				0.000175	0.122 / 0.109
Group 6 Perc <5	Unsuitable for Conventional EDF (Very Coarse Sands, Extremely Gravelly, and Fragmental Soils) except as allowed in Table 15							

Appendix A

Table 4

Slope
Spacing of Trenches
Based on Width of Trench
And Slope

Slope	Trench Spacing (Side Wall to Side Wall)*	Minimum Trench Depth**	Minimum Cover
26-30	6 feet	28"	16"
31-40	7 feet	33"	21"

* The distances between trenches are measured between adjacent sidewalls.
** If the minimum trench depth is measured on the downhill side of the trench the minimum cover as listed in the table should be assured.

Appendix A

Table 4a

Mound Slope Correction Factor for Downslope and Upslope CF bed sides

Slope %	Downslope Factor	Upslope Factor
00	1.00	1.00
01	1.03	0.97
02	1.06	0.94
03	1.10	0.92
04	1.14	0.89
05	1.18	0.86
06	1.22	0.85
07	1.27	0.83
08	1.32	0.80
09	1.38	0.79
10	1.44	0.77
11	1.51	0.75
12	1.57	0.73
13	1.64	0.72
14	1.72	0.71
15	1.82	0.69
16	1.92	0.66
17	2.04	0.66
18	2.17	0.65
19	2.33	0.64
20	2.50	0.62
21	2.70	0.61
22	2.94	0.60
23	3.23	0.59
24	3.57	0.58
25	4.00	0.57

Appendix A

Table 5

Minimum Setback/Separation distance for Components of Onsite Systems

Structure or Topographic Feature	Minimum Horizontal Distance (ft) To EDF	To Tank, Treatment Device, Pump Chamber, Receptacles & D-Box	Other Components of OSS
Another EDF	10	10	5
Basement	15	5	5
w/drain	25	5	5
Building foundation	5	5	5
Drainage way – Natural or Man-made*	25	10	N/A
Embankment or Cut*	25	5	N/A
Hydric soils and non-ponded wetlands	25	25	N/A
Interceptor drain and storm water diversion			
(feature located up-slope)	10	5	N/A
(feature located side-slope)	15	5	N/A
(feature located down-slope)	25	5	N/A
Potable (drinkable) water line**	5	5	5
Property line	5	5	N/A
Sinkholes & Caves***:	300	300	300
Surface water	50	25	10
Swimming pool (in-ground)	10	5	N/A
Wells and Potable Springs # (not to include ground water monitoring wells)	100	50	5

* Engineer may design system and reduce setback distance to a specified distance with acceptable justification, such as use of an ATU or use of solid or culvert pipe.
** May be less than 5 feet provided encapsulation of solid effluent line (pressurized or non-pressurized) for five feet from water line/well/spring.
***: Geologist may reduce setback distance with written documentation of geological investigation and specific setback distances set.
\# The minimum setback distance for an EDF to wells or springs for subdivision lots recorded prior to October 18, 1978, and for other lots established prior to March 18, 1982, shall be 50 feet with every effort made to exceed that distance.

This Table applies to small systems only see Table 6 and Table 7 for separations requirement for large systems

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Table 6

Additional Minimum Setback/Separation Distances for EDF Large (>1,200 gpd) Systems

Structure or Topographic Feature	Minimum Horizontal Distance (ft)
Public water supply source utilizing a shallow (under 50 feet) groundwater aquifer	500
Other public water supply, unless determined to utilize a confined aquifer	200
Private water supply source	200
Property line	25
Surface water of the State	200

Table 7

Additional Minimum Setback/Separation Distances for Collection Sewers, Force Mains, and Supply Lines Large (>1,200 gpd) System

Structure or Topographic Feature	Minimum Horizontal Distance (ft)
Public water supply source, unless constructed to International Plumbing Code standards; then	100 50
Private water supply source, unless constructed to International Plumbing Code standards; then	50 25
Property line	5
Basement	10
Surface water of the State, unless constructed to International Plumbing Code standards; then	50 10
Top of slope embankment or cut of 2 feet or more vertical height	10
Interceptor drain, storm drain, and storm water diversion	5
Swimming pool	10
Other EDF	5

Appendix A

Table 8

Septic Tank Capacities for Single-Unit Dwellings[1]

Number of Bedrooms	Effective Liquid Capacity (gal)
4 or fewer	1,000
5	1,500
Each additional bedroom add	250

1 Capacities listed provide for a single system to serve combined household wastes from standard plumbing fixtures and appliances commonly used in a dwelling, including, dishwasher, shower, bathtub, and automatic clothes washer. See Rule 420-3-1-.44, Disposal of Effluent From Clothes Washing Machines and Residential Spas.

Table 9

TEST REQUIREMENT FOR STRUCTURAL PROOFING

	Effective Depth*	**30**	**40**	**50**	**60**	**70**	**80**	**90**
Vacuum Test	***Inches of Water***	**33.4**	**40.8**	**48.2**	**55.6**	**63.0**	**70.4**	**77.8**
	Inches of Mercury	**2.5**	**3**	**3.6**	**4.1**	**4.7**	**5.2**	**5.7**
Hydrostatic Test	***Inches of Water In Standpipe***	**15.9**	**18.1**	**20.3**	**22.6**	**24.8**	**27.1**	**29.3**

*Effective depth is the depth between the bottom of the tank and the invert of the outlet

Appendix A

Table 10

Infiltration Rates for Drip Irrigation Systems

PERC RATE min/inch	SOIL GROUP U.S.D.A. Textures	DRIP FIELD gpd/sq.ft.
<5		0.45
5	Group I	0.45
10	Sand, Loamy Sand	0.45
15		0.45
20		0.4
25		0.4
30	Group II	0.4
35		0.4
40	Sandy Loam, Loam	0.4
45		0.4
50		0.3
55	Group III	0.3
60		0.2
65	Sandy Clay Loam,	0.2
70	Silt Loam, Clay	0.1
75	Loam, Silty Clay	0.1
80	Loam	0.1
85		0.1
90		0.1
95		0.075
100	Group IV	0.05
105		0.05
110	Sandy Clay, Silty	0.05
115	Clay, Clay	0.05
120		0.05
>120		0.05

EXAMPLE: Three-Bedroom House

1. Total flow in gpd (gallons per day)/ infiltration rate = required total area (sq.ft.).

Total area (sq.ft.) / 2' (2 foot spacing is the standard used to determine total square footage required) drip tube spacing (ft) = required length of drip tubing (LF) (linear feet) For slopes greater than 20%, the spacing between the drip lines shall be increased to 36 inches or more.

eg. 3 bedroom house with 50 min/in perc. Rate:

Required total area (sq.ft.) = $\frac{450}{0.3}$ = 1,500 square feet

Required length of drip tubing (LF) = $\frac{1,500}{2}$ = 750 LF

Appendix A

Table 11

Fill Material Loading Rate for Controlled Fill Systems
Using Small Diameter, Low Pressure Pipe

SOIL TEXTURE USDA	PERC RATE Min/inch	LOADING RATE Maximum gpd/sq.ft.
Sand	< 20	1.0
Loamy Sand	=/< 20	0.8
Sandy Loam	20 to 30	0.6
Sandy Clay Loam	30 to 45	0.4

Example for a three-bedroom home

1. Total flow in gpd / infiltration rate = required distribution area (sq.ft.).

eg. 3 bedroom house; Controlled Fill bed with loamy sand fill:

Required total area (sq.ft.) = $\frac{450}{0.8}$ = 563 square feet

Appendix A

Table 12

Basal Area Infiltration Rates for Controlled Fill Systems Using Small Diameter, Low Pressure Pipe

PERC RATE min/inch	SOIL GROUP See Table 3 &Table 3a	LOADING RATE gpd/sq.ft.	LOADING RATE w/secondary treatment gpd/sq.ft.
5 to 15	Group I	1.0 to 0.8	2.0 to 1.6
16 to 30	Group 2	0.8 to 0.6	1.6 to 1.2
31 to 60	Group 3	0.6 to 0.4	1.2 to 0.8
61 to 90	Group 4	0.4 to 0.2	0.6 to 0.3
91 to 120	Group 4	0.2 to 0.1	0.3 to 0.15
121 to 180	Group 5	.075	0.125 to 0.1
> 180	Group 5	.050	*.075

Example for a three-bedroom Home with 120 min/in percolation rate
Total flow in gpd (gallons per day)/ infiltration rate = required basal area (sq.ft.).
450 gpd / 0.1 = 4,500 sq.ft. basal area required

Appendix A

Table 13

Reductions for Controlled Fill Systems with LPP/drip Receiving Effluent Treated to Secondary Standards

EDF Separation Requirement (Trench to Restrictive Layer)

Pipe Type	Chroma 2 ASHES	Rock	Other Restrictive Layers
Drip	12 inches	12 inches	6 inches
LPP	12 inches	12 inches	6 inches

LPP Fill Loading Rates

Fill Texture	Loading Rate When Effluent is Pre-treated
Sand	2.0 gpd / sq.ft.
Loamy Sand	1.5 gpd / sq.ft.
Sandy Loam	1.0 gpd / sq.ft.
Sandy Clay Loam	0.6 gpd / sq.ft.

The above table for LPP receiving secondary effluent gives reductions of 12 inches for chroma 2 ASHES and 6 inches for rock.
Additionally, loading rates are increased for the various texture classes of fill material listed

.

Appendix A

Table 13a

Reductions for Controlled Fill Systems with piping other than Drip or LPP Receiving Effluent Treated to Secondary Standards

PERCOLATION RATES min/in	SOIL GROUP according to Table 3 or 3a	EDF* REDUCTION ALLOWED
5 to 15	Group I	50%
16 to 30	Group 2	40%
31 to 60	Group 3	30%
61 to 120	Group 4	20%
>120	Group 5	10%

Separation Requirement (Trench to Restrictive Layer)

Chroma 2 ASHES	Rock	Other Restrictive Layers
12 inches	12 inches	6 inches

- Applies to Effluent Distribution Trenches Only. Basal Area "footprint" remains the same as calculated for a Controlled Fill bed without pre-treatment of effluent. Only the Distribution Area and Absorption Area are reduced, while the sideslopes and endslopes will be longer with less slope. (< 3:1)

Appendix A

Table 14

Controlled Fill Material Guide
(For determining suitable fill material when Naturally Available Fill is used _1)

Evaluation Method	Suitable	Unsuitable
Percolation	5-30 Min/Inch *	<5 or >30Min/Inch *
Unified	I - SW, SP, SM II – SM-SC, SC	III, IVA, IVB, IVC
Morphology	1 – S, LS 2 – SL, L, light SCL	3, 4A, 4B, 4C

_1/ this guide is intended for soils in their naturally occurring condition or soil material that has not been compacted or worked while wet.
_2/ 45 Min/Inch maximum when used in high -shrink-swell soils

Appendix A

Table 15

LIMITATION	SLIGHT	MODERATE		SEVERE		EXTREME		
SYSTEM	Conv.	Conventional		Conv/Eng* (c/e)		ENGINEERED		
							AT Required	
1.Percolation 1/ (Min/In)	5-30	31-60	61-90	91-120	*1-<5	121-240	>240	<1
24" MVS	≥ 48	48 - 36		36 - 6				
2a. MVS 2/ from redox 3/ 6/	24"		18"	36" (c) *24" (e) w/AT		18"	12"	24" w/AT
2b. MVS from Hard Rock 6/	18"					18"	12"	
18" MVS	≥ 42	42 - 30		30 - 6				
2c. MVS from other RL 4/	12"					12"	6"	
12" MVS	≥ 36	36 - 24		24 - 6				
3.Min depth from NGS to ASHES or RL 5/	1. 24" trench depth +12"(24") MVS = **36" (48")** 2. 12" trench depth +12"(24") MVS = **24" (36")** (with 12" additional cover for # 2)					Same separation except for breaks allowed as specified in other parts of these rules (Not necessarily from NGS)		
4. Slope (%)	0-15	16-25		*26-40 (e)		>40 (OSS not allowed)		
5.Flooding Frequency Chance/Year	None	Rare < 5%		Occasional 5-50 %		Frequent > 50% (OSS not allowed)		
6. Landforms (Slope Positions)	Summit Shoulder Back & Other Linear or Convex	Lower Back Foot & Other Slightly Concave		Toe Head Depressions & Other Concave		Swamp, Wetland, Floodplain Hydric Soil Area (OSS generally not allowed in these areas)		

Appendix A

1/ Percolation rates may be either actual measurements or assigned/estimated rates, depending on the method used (Refer to .73, Soil Permeability).

2/ MVS (Minimum Vertical Separation) from R/L (restrictive layers).

3/ Redox (Redoximorphic Features) – The presence of chroma 2 or less colors (Munsell or equivalent) is universally accepted as indicating saturated and anaerobic conditions for a significant period of time during most years. In some soils additional redox features are often encountered above chroma 2 or less colors (i.e., chromas of 3 and/or 4 in combination with higher chroma concentrations, plinthite, manganese staining on peds, etc.) If indications of significant saturation occur higher than 24 (18)* inches above chroma 2s, the trench bottoms shall be positioned no deeper than where these additional contemporary redox features occur, but in no case less than 24 (18)* inches above 2% or more chroma 2 or less. (See Rule 420-3-1-.76, Soil Depth and Vertical Separation, for the definition of significant saturation duration and problem soils as related to redox features other than chroma 2 or less). *(See Table 15 for the correct MVS based on percolation rate).

4/ Other restrictive layers may include but are not limited to the following: dense and/or brittle layers, slowly or very slowly permeable parent material, continuous weathered rock layers (Cr), or greater than 50% consolidated bedrock by volume. When restrictive rock layers are discontinuous or tilted such that the critical depths are highly variable, use the 50% rule. Any horizon with greater than 50% consolidated rock shall be considered a restrictive layer.

5/ NGS – Natural Ground Surface – That portion of a soil which is normally exposed to the atmosphere, has been subjected to plant and animal activity for a significant period of time and has accumulated some degree of organic matter usually accompanied by the development of soil structure.

6/ All vertical separation requirements (MVS) greater than 12" may be reduced to 12" with the addition of advanced treatment (AT) of effluent with the exception of soils with percolation rate less than 5 min/inch.

Appendix A

Table 15a

Flow Chart For Site Evaluation:

Limiting Factor ↓	Possible Methods/Alternatives and Options.
Hydric Soil No Yes→ ↓	Move to non-hydric area. Acquire or lease additional property. See Rule 430-3-1-.67.
Frequent Flood. No Yes→ ↓	Move to non-frequently flooded area; Acquire or lease additional property. (Non OSS site)
High Shrink-Swell Soils No Yes → ↓	See Rule 430-3-1-.67.
Slope > 40% No Yes→ ↓	Move to a less steep area; Acquire or lease additional property. See Rule 430-3-1-.67
< 36" to /2 or less No Yes→ ↓	Controlled Fill, Mounds, Drip Technology, etc.
< 30" to Hard Rock No Yes→ ↓	Controlled Fill, Mounds, Drip Technology, etc.
< 24" to other restr. Layers No Yes→ ↓	Controlled Fill, Mounds, Drip Technology, etc.
Perc < 5 min/in No Yes→ ↓	1to<5 min/inch may be treated as conventional with 36" MVS.
Perc>120 min/in No Yes→ ↓	Controlled Fill, Mounds, Drip Technology, etc.
Candidate For Conventional Onsite System→	Pipe and Gravel Trenches; Other products as approved by the Board.

Appendix A

Table 16

Method	Number Tests	Location on Lot	Test in REDF (req for lots < 15,000 sq ft
Percolation	2 percs & 2 borings	In proposed primary area -	1 perc & 1 boring
Unified	2	In proposed primary area -	1
Morphology	2	In proposed primary area -	1
High Intensity Map	2 per lot or 4 per acre	Holes located as required in Rule .83	Holes located as required in Rule .83

Table 17

SOILS REQUIRING SYSTEMS PER 420-3-1-.67, Lot Modification and Controlled Fill Systems, (Percs Not Accepted For Sizing)

METHOD	SOIL TYPE OR CLASSIFICATION
Unified	Soil Class IVC (CH or MH w/ LL > 50%)
Soil Morphology	Soil Group 4C (Very High Shrink-Swell Clays)
Soil Mapping	Vertisols, Vertic Subgroups, Other Very High Shrink-Swell Clays
Percolation	Percolation results may vary from 20-1200 min/in depending on moisture content

Appendix A

Table 18
UNIFIED METHOD

Soil Class	Unified System Symbol	% Fines Clay/Silt	% Liquid Limit	% Plastic Index	Estimated Permeability Min/Inch
IA	SP, SW, GP, GW	<12			<1-<5*
I	SM, SP-SM, GM	12-20		>4	5-15
II	SC, SC-SM, SM	21-35		4-7	16-30
III	SC, SC-SM, CL, ML, CL-ML	36-60	< 50	4-7	31-60
IVA	CL, ML, CL-ML	50-70	< 50	7-15	61-90
IVB	CL, ML, CL-ML	> 70	< 50	7-20	91-120
IVC	CH, MH	> 70	> 50		> 120

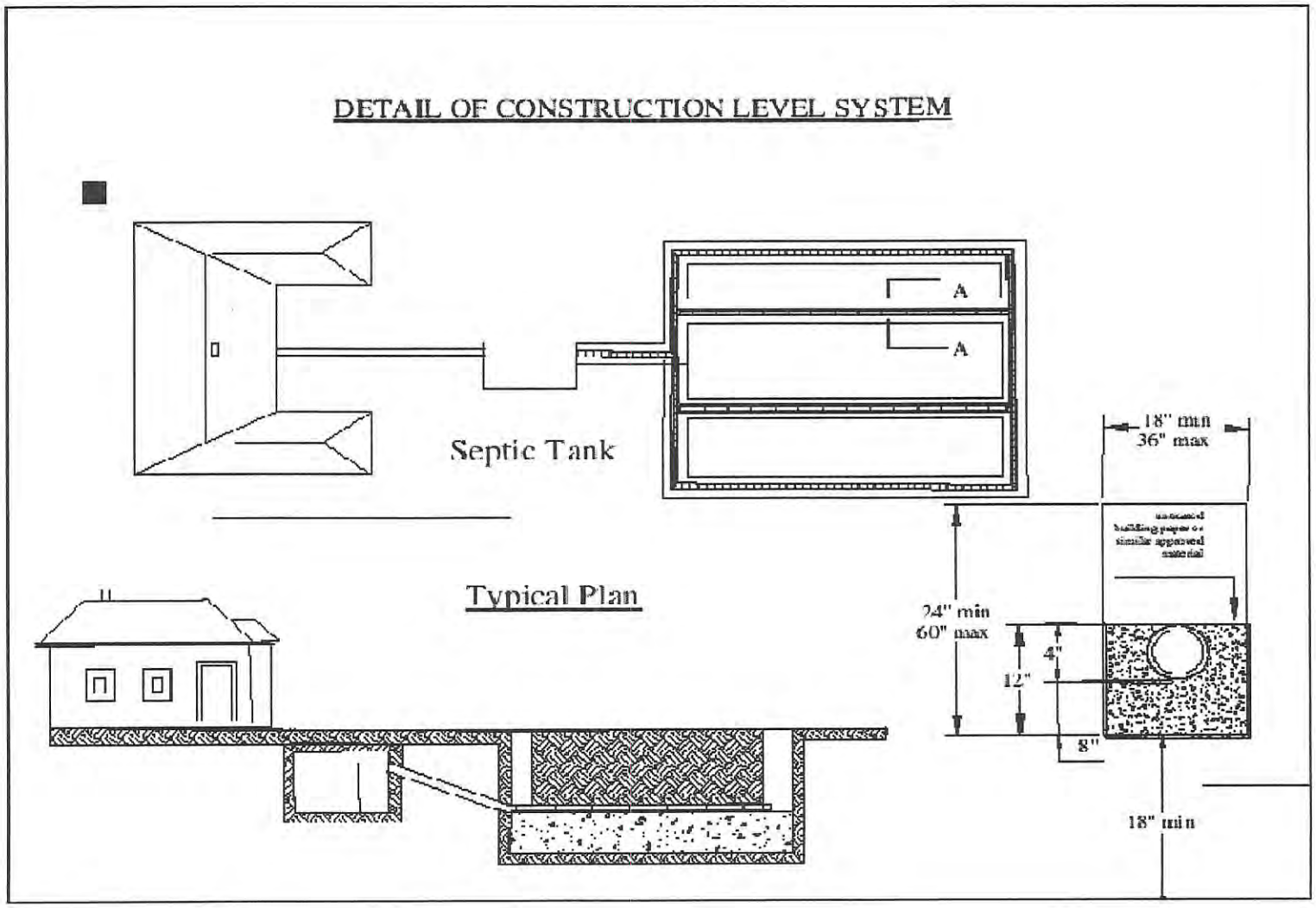
<1 = uncoated sand – 1- <5 = coated sand

Table 19
Soil Morphology Method

Soil Groups	Min/Inch
1A cos, s (uncoated/coated)*	<1-<5*
1 s, ls	5-15
2 sl, l (<20% clay)	16-30
3 scl, sc, cl, l, sicl, sil (20-40% clay)	31-60
4A sc, sic, c (low s/s, kaolinitic)	61-90
4B sc, sic, c (moderate s/s, mixed)	91-120
4C sc, sic, c (high s/s, smectitic)	>120

Appendix B

Figure 1



Appendix B

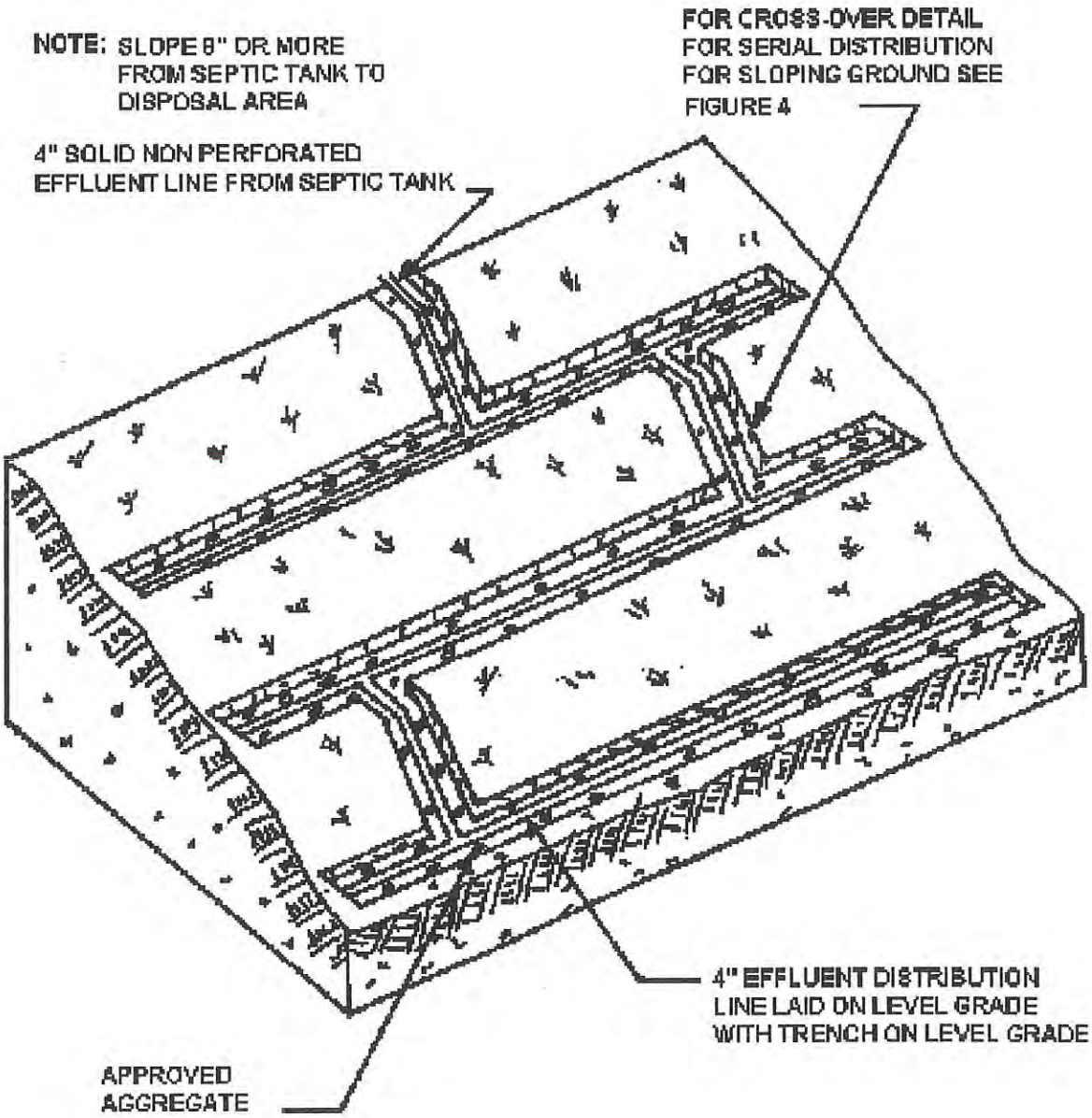
Figure 2

SERIAL DISTRIBUTION SYSTEM

LINE 100 FEET OR LESS IN LENGTH

MINIMUM OF ONE CROSS-OVER REQUIRED

NOT TO SCALE



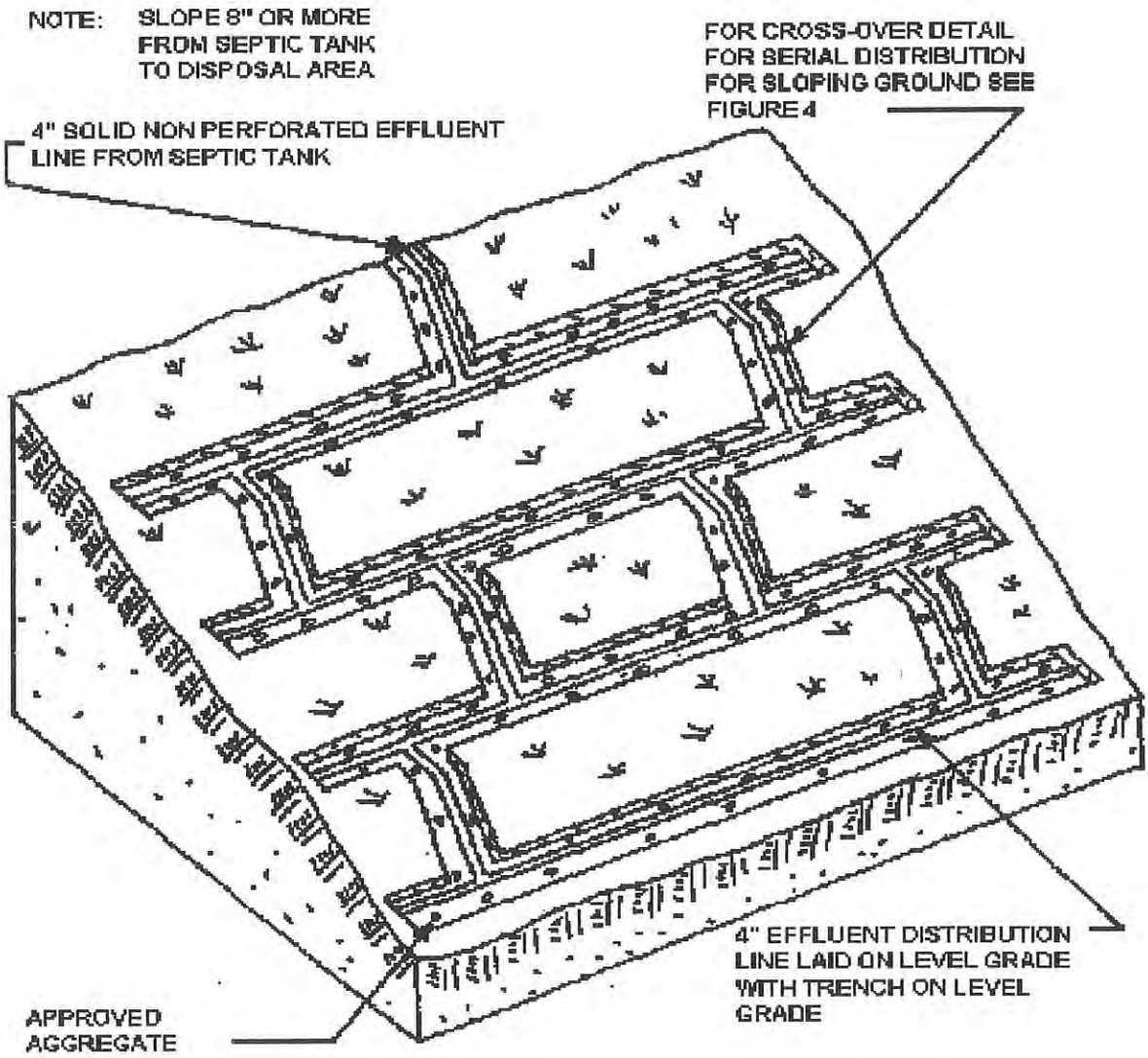
Appendix B

Figure 3

SERIAL DISTRIBUTION SYSTEM

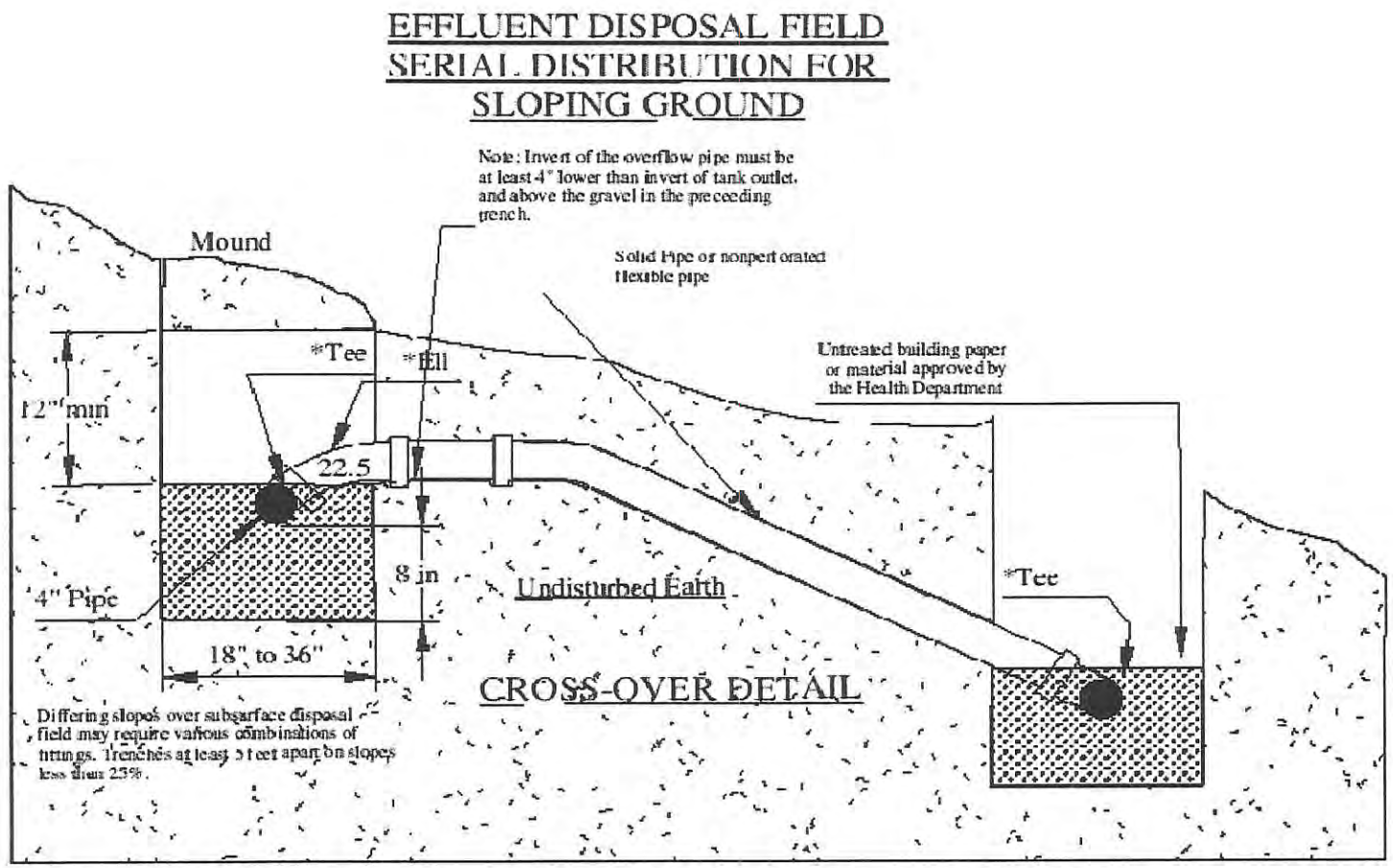
LINE OVER 100 FT. IN LENGTH
TWO CROSS-OVERS REQUIRED PER 100 FEET

NOT TO SCALE



Appendix B

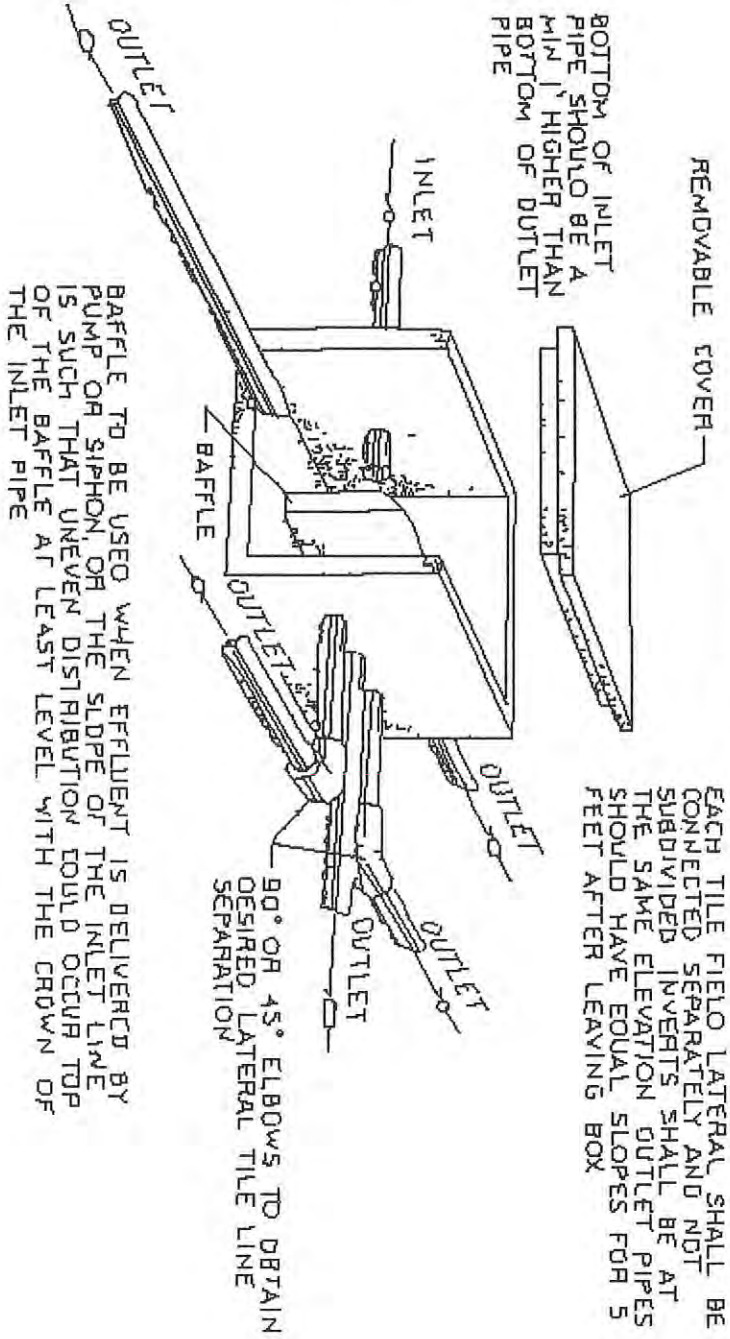
Figure 4



*MINIMUM REQUIRED FITTINGS LINES 100 FT. OR LESS IN LENGTH SEE FIGURE 2
LINES OVER 100 FT. LENGTH SEE FIGURE 3

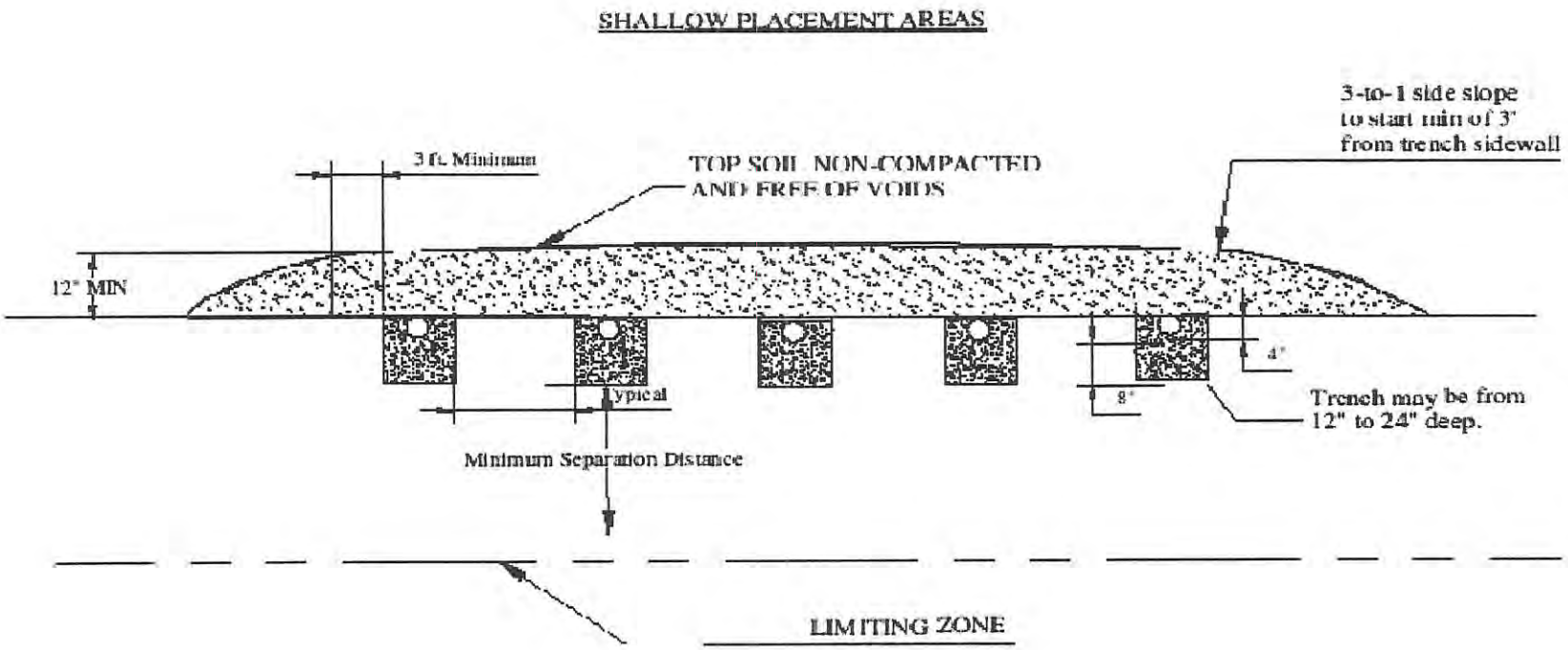
Appendix B

Figure 5



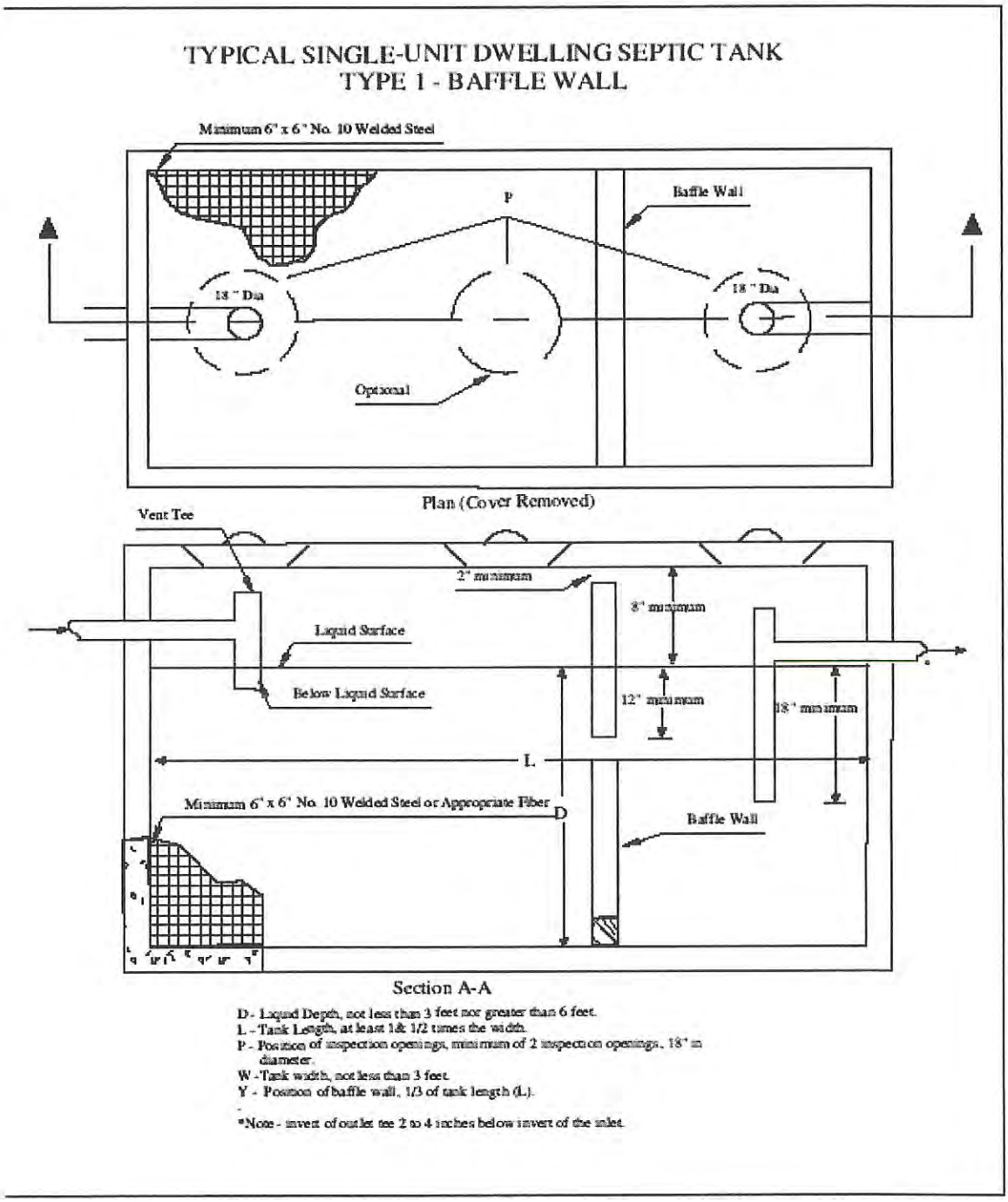
Appendix B

Figure 6



Appendix B

Figure 7

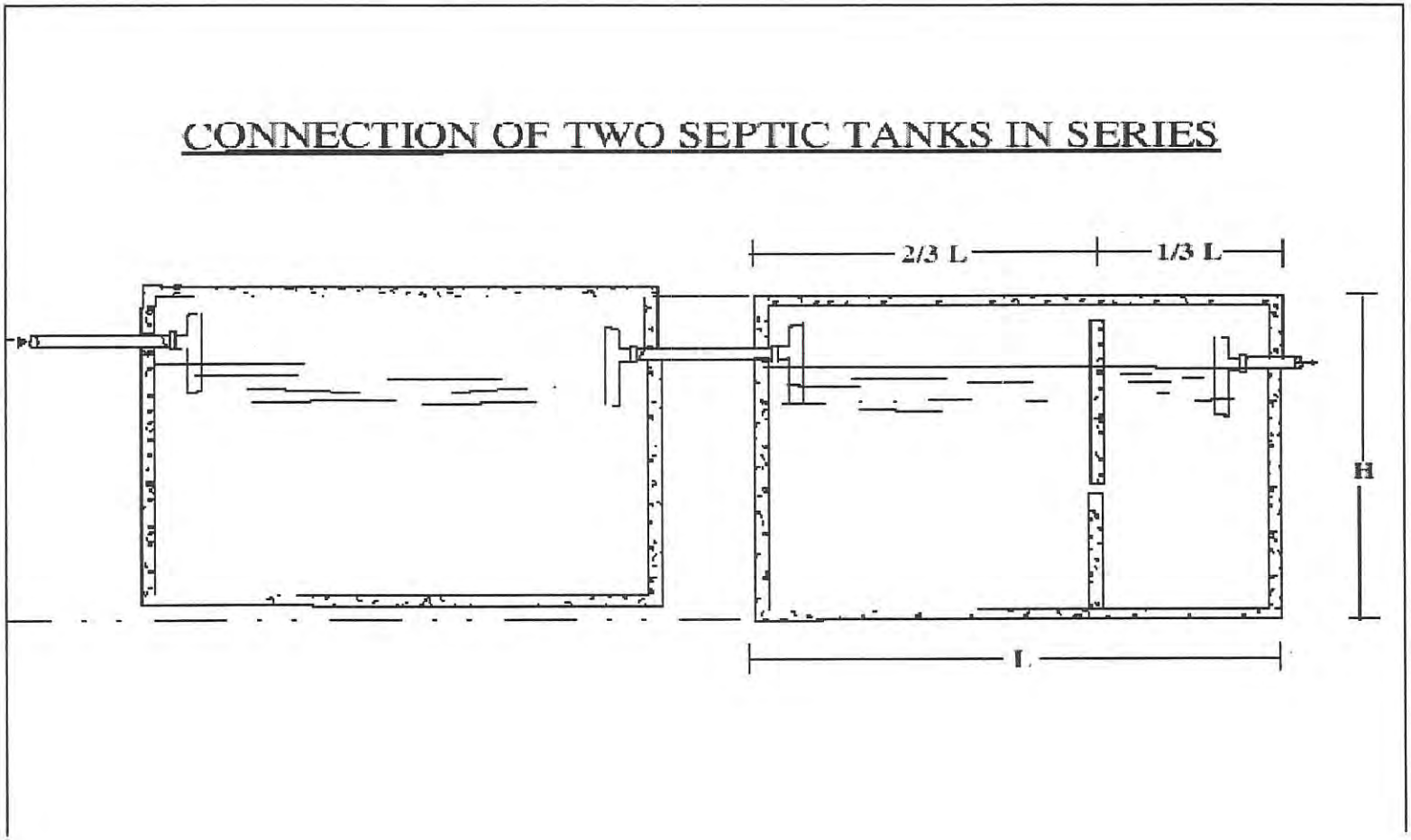


D - Liquid Depth, not less than 3 feet nor greater than 6 feet.
L - Tank Length, at least 1& 1/2 times the width.
P - Position of inspection openings, minimum of 2 inspection openings, 18" in diameter.
W - Tank width, not less than 3 feet.
Y - Position of baffle wall, 1/3 of tank length (L).

*Note - invert of outlet tee 2 to 4 inches below invert of the inlet.

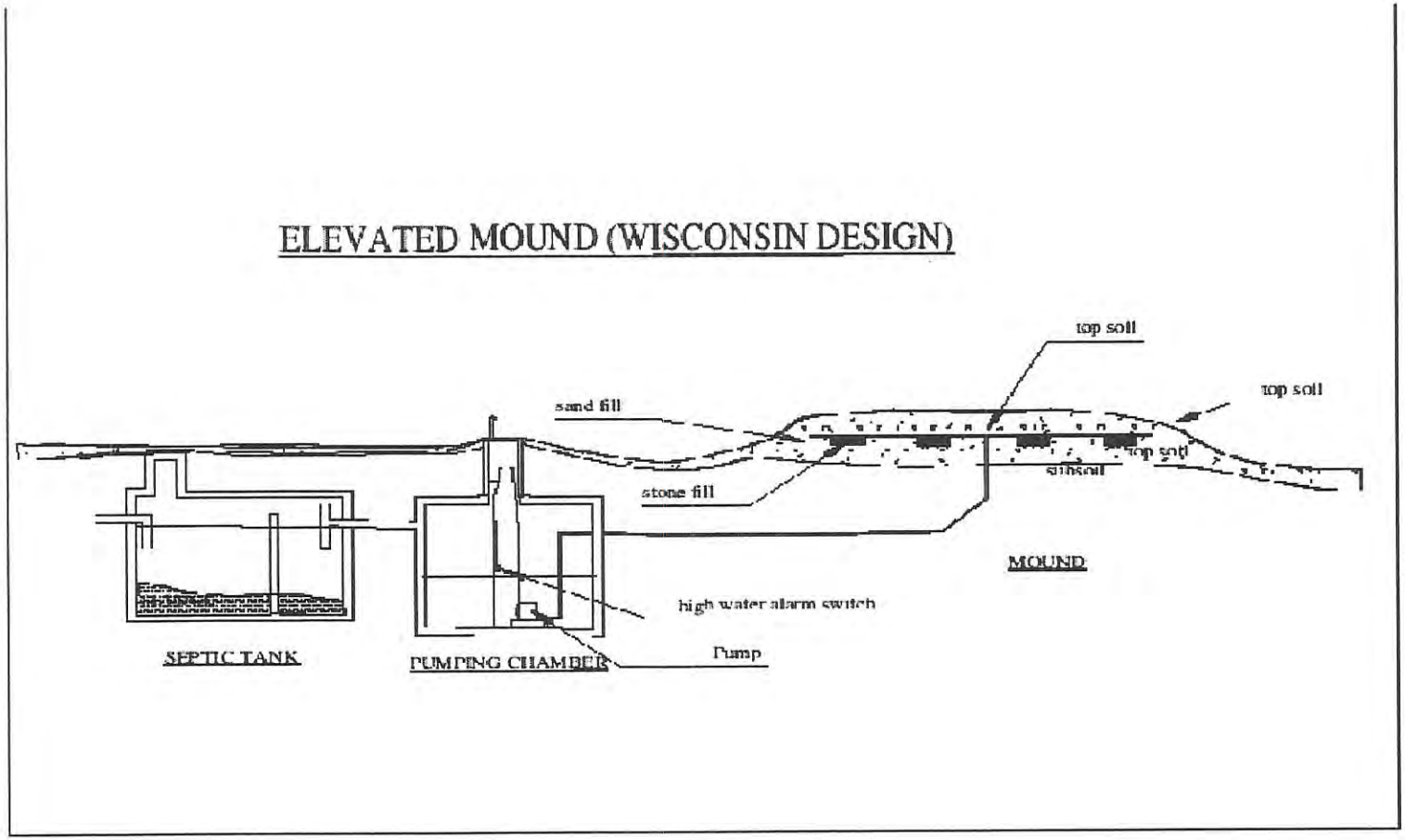
Appendix B

Figure 8



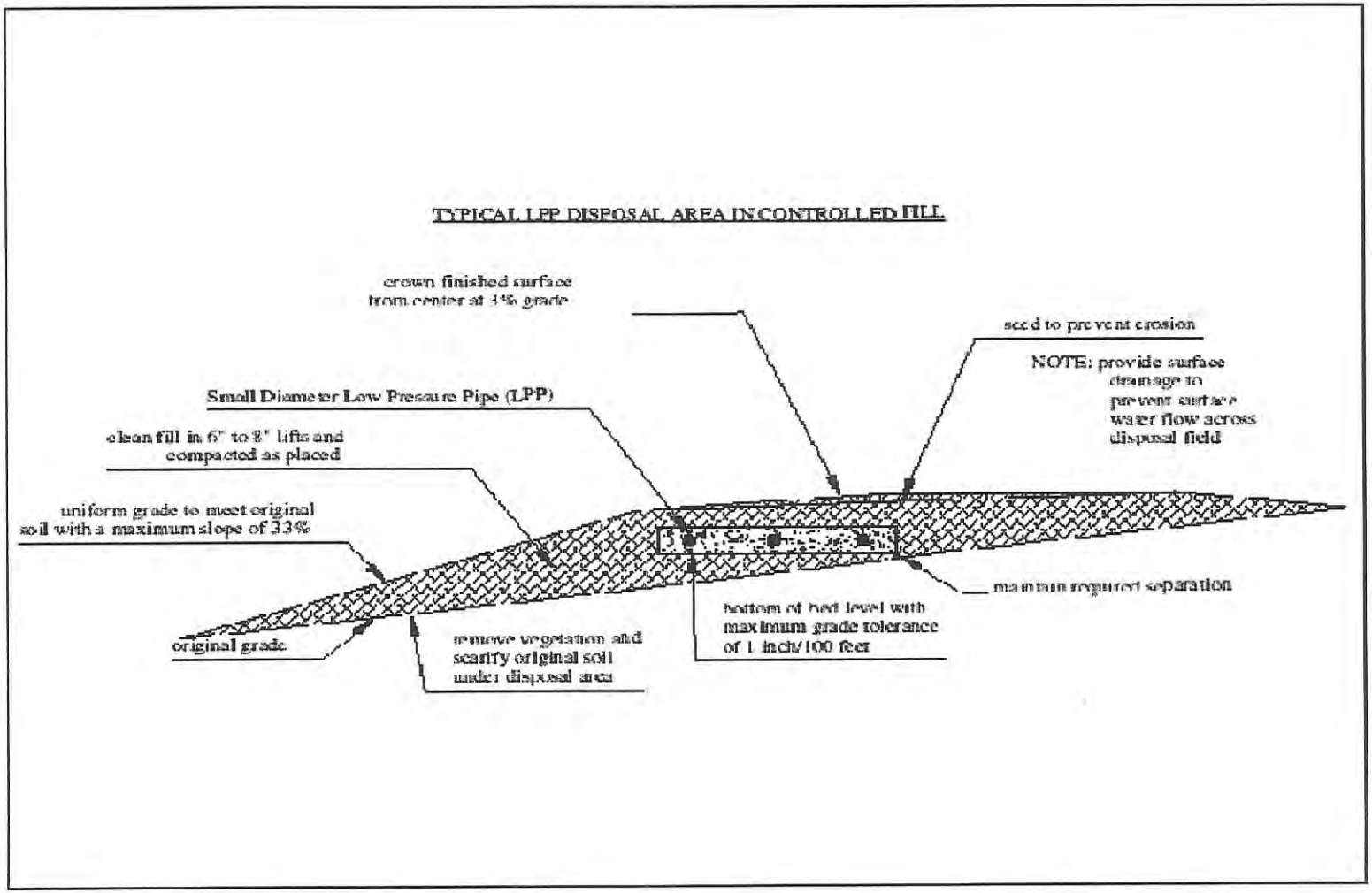
Appendix B

Figure 9



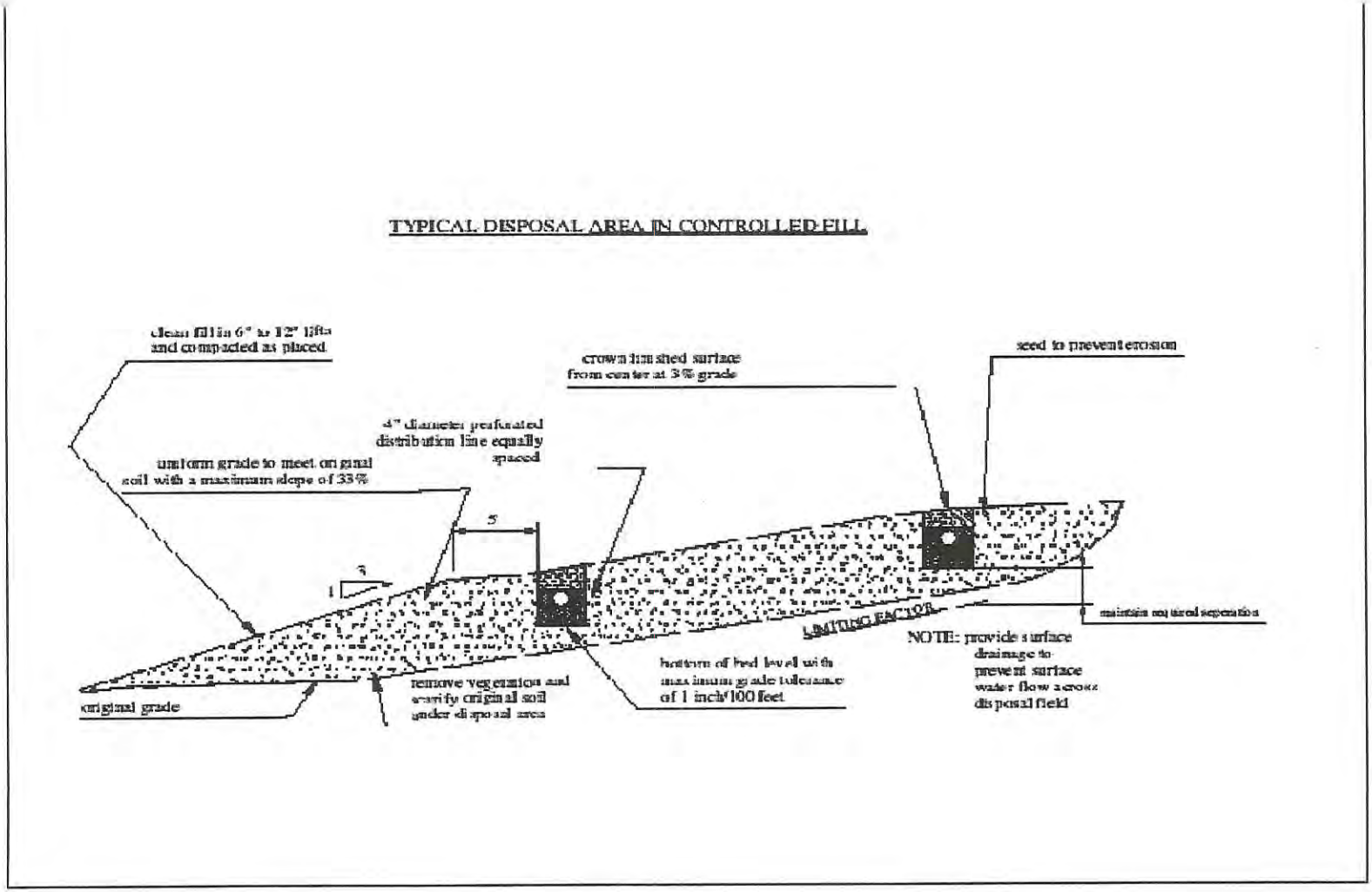
Appendix B

Figure 10



Appendix B

Figure 11



Appendix C

CEP 5

INSTALLER'S ONSITE SEWAGE DISPOSAL

SYSTEM CERTIFICATION

Name of Company/Installer:_____
Address:_____
Telephone Number:(_____)

Owner's Name:_____ Permit No._____
Address:_____
Telephone Number:(_____)

Location of This Installation: Lot_____ Block_____
Section_____Subdivision_____
Other_____
_____

Installation Date:_____Installation: New _____Repair_____

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 Size of Gravel-less Pipe: ( )8", ( )10"
( ) Other Manufacturer _____
Model/Configuration _____
_____

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 (insert date)_____,20 _____ and is in compliance with Chapter 420-3-1, Rules covering onsite sewage disposal systems and, when appropriate, plans and specifications for the project. I further certify that I am in full compliance with Act 99-571 (HB 547), as enacted by the Legislature of the State of Alabama in its 1999 Regular Session, and as implemented.

Signature_____ Date_____ Registration No. _____

Appendix C

CEP 6

ENGINEERS ONSITE SEWAGE DISPOSAL
SYSTEM CERTIFICATION

Company Name:_____
Engineer _____
Address:_____
Telephone Number:(_____)

Owner's Name:_____ Permit No._____
Address:_____
Telephone Number:(_____)

Location of This Installation: Lot_____ Block_____
Section_____Subdivision_____
Other_____
_____

Installation Date:_____Installation: New _____Repair_____

System Description _____
_____
_____
_____

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 (insert date)_____,20 _____ and is in compliance with Chapter 420-3-1 Rules covering onsite sewage disposal systems and, when appropriate, plans and specifications for the project.

Signature_____ Date_____ Registration No. _____

ENGINEERS FILL MATERIAL CERTIFICATION
(if applicable)

I hereby certify that the fill material (texture, amount, and compaction) and the bed construction (original ground scarification, fill placement and bed dimensions) were accomplished in accordance with the approved design and in compliance with these Rules.

Signature_____ Date_____ Registration No._____

Appendix C

CEP 7

COVENANTS TO RUN WITH THE LAND

WHEREAS, _____, is the owner of certain real property situated in _____ County, Alabama, described in Exhibit "A", also described as, all property which is recorded in ***Map Book/Deed Book _____, Page _____, or Fiche _____, Frame _____, in the Probate Office*** of _____County, Alabama, hereto and incorporated herein fully:

WHEREAS, the owners have requested and the _____ County Board of Health has approved the construction and use of the onsite sewage system by the owners to serve a _____, (type establishment)

WHEREAS, the approval of the _____ County Board of Health for the onsite sewage system is granted upon the condition that the owners and their successors in title that it or they will satisfy these covenants.

NOW, THEREFORE, in consideration of the premises, the owner, _____hereby grant and convey as encumbrances on land described as Exhibit "A" the following restrictions and covenants to run with the land as hereinafter described:

That the undersigned owners, _____, its successors, assigns and subsequent purchasers of the onsite sewage system located at _____ shall own the system subject to the conditions in the onsite disposal permit or permits issued by the _____ County Department of Public Health and the State of Alabama Dept of Public Health. and will also comply with the provisions of the Alabama Administrative Code Chapter 420-3-1. And are hereby notified that the property described herein or the onsite sewage disposal system may restrict the use of the lot and obligate the owner to special maintenance and reporting requirements.

That the whole of the land described in Exhibit "A" shall not be subdivided without approval of the _____ County Health Officer.

No repair, alteration or addition will be made to the approved onsite sewage system without written approval of an engineer (P.E.) and the _____ County Health Officer.

These covenants shall run with the land and be binding on all present owners and future owners or occupants of said facility and the property on which the onsite sewage system is situated until such time as the system is no longer required by the _____County Board of Health through its Health Officer.

Dated this the _____day of _____, 20_____

_____

OWNERS/AUTHORIZED REPRESENTATIVE SIGNATURES

_____

HEALTH OFFICER/AUTHORIZED REPRESENTATIVE

Appendix C

STATE OF ALABAMA

COUNTY OF _____

I, the undersigned Notary Public in and of the County in said State, hereby certify that _____, whose name is signed to the foregoing instrument, and who is known to me, acknowledges before me this day, that being informed of the contents hereof, has executed the same voluntarily on the day of the same bears date.

_____

NOTARY PUBLIC

My Commission Expires _____

NAME OF MANAGEMENT ENTITY:

CEP-8

ALABAMA DEPARTMENT OF PUBLIC HEALTH

In cooperation with the

ALABAMA PUBLIC SERVICE COMMISSION

P.O. Box 304260
Montgomery, Alabama 36130-4260

APPLICATION

FOR

CERTIFICATE OF

FINANCIAL VIABILITY

TO OPERATE

DECENTRALIZED

WASTEWATER CLUSTER SYSTEMS

THE AREA BELOW IS FOR OFFICIAL USE ONLY

DATE RECEIVED: _____

DOCKET NUMBER: ADPH-_____

FEE PAID: _____

Appendix C

DEFINITIONS

1) DECENTRALIZED CLUSTER SYSTEMS:

An onsite system for treating and disposing of the domestic wastewater generated by more than one dwelling or establishment, where the system is managed by a responsible person, functioning as an onsite management entity.

2) DOMESTIC WASTEWATER:

Wastewater from single family and/or multiplex residential structures and other wastewater of similar composition not including wastewater generated by industrial process.

3) ONSITE MANAGEMENT ENTITY:

A public or private business entity certified by the Alabama Department of Public Health (ADPH) to hold permits from the ADPH or the Alabama Department of Environmental Management and which exercises sole responsibility for the operation and maintenance of one or more decentralized cluster systems.

Appendix C

INSTRUCTIONS FOR FILING
APPLICATION FOR CERTIFICATE OF FINANCIAL VIABILITY
TO OPERATE DECENTRALIZED WASTEWATER CLUSTER SYSTEMS

I. PURPOSE:

This application is a regulatory support requirement as set forth by Act No. 2001-973 of the Onsite Wastewater Management Entities Act. Act No. 2001-973 establishes regulations of wastewater onsite management entities, public and private, for managing decentralized cluster wastewater systems in Alabama and to provide public health and environmental protection through permitting these entities through enforcement of the permit and rules promulgated by the State Board of Health and to require the continued financial stability and ability to perform of entities proposing to provide services.

II. WHO MUST SUBMIT:

All management entities that operate a decentralized cluster wastewater system in Alabama shall apply for and obtain certification of financial viability from the Department of Public Health (Department). A new application for a Certificate of Financial Viability to Operate Decentralized Wastewater Cluster Systems, along with any proposed rate changes, shall be submitted by the onsite management entity every two years from the date of issuance of the operational permit. Rate changes shall be approved by the Alabama Department of Public Health, if fair and reasonable, as determined by the Department considering the costs of operation and maintenance of the system and similar cost in the industry within the State of Alabama.

III. WHEN AND WHERE TO SUBMIT:

Please submit an original, four (4) paper copies and two electronic copies on separate 3.5" floppy diskettes or CDs (in Microsoft Word or Rich Text format) of completed application along with applicable fees made payable to the **Alabama Department of Public Health** to the address shown below:

Alabama Department of Public Health
Bureau of Environmental Services
The RSA Tower
201 Monroe Street, Suite 1250
Montgomery, AL 36104

Appendix C

GENERAL INSTRUCTIONS

I. Complete each question fully and accurately even if it has been answered in a previous application. Enter the word "None" where this truly and completely states the fact.

II. For any item that is not applicable to the applicant, enter the words "Not Applicable" or "N/A."

III. Indicate negative amounts (such as decreases) by enclosing the figures in parentheses ().

IV. Provide attachments and enclosures explaining accounts or items as necessary. Provide projections where actual information does not yet exist.

V. Do not make references to applications of previous years or to other reports in lieu of required entries.

SIGNATORIES TO APPLICATION

The application shall be signed by a responsible person, as indicated below:

A. In the case of a corporation, by a principal executive officer of at least the level of vice president;

B. In the case of a partnership, by a general partner;

C. In the case of a sole proprietorship, by the proprietor.

GENERAL FEES

The Department is authorized to collect from the Onsite Management Entity, a fee for review of an application, for a Certificate of Financial Viability in the amount of two hundred fifty dollars ($250) per application. The fee is due and payable in advance of review.

Appendix C

PART I -- GENERAL INFORMATION

A. Type of Application:

Please check the appropriate box below

☐ Initial Application

☐ Renewal Application for Docket Number: ADPH-_____

B: Applicant:

_____
Name of Onsite Management Entity)

_____
(Street Address or Post Office Box)

_____
(City/State/Zip Code)

_____ _____
(Daytime Area Code & Phone Number) (Facsimile Number with Area Code)

_____
(E-mail Address)

C: Person to Be Contacted with Respect to this Application:

_____
(Name and Title)

_____
(Street Address or Post Office Box)

_____
(City/State/Zip Code)

_____ _____
(Daytime Area Code & Phone Number) (Facsimile Number with Area Code)

_____
(E-mail Address)

D: Please list all systems pertaining to this application (attach additional sheets if needed).

1. _____
(System Name)

_____ _____
(ADPH Operational Permit Number) (ADEM Operational Permit Number)

_____
(Street Address of Business or Post Office Box)

_____
(City/State/Zip Code)

_____ _____
(Daytime Area Code & Phone Number) (Facsimile Number with Area Code)

_____
(E-mail Address or Website URL)

Appendix C

2. _____
(System Name)

_____ _____
(ADPH Operational Permit Number) (ADEM Operational Permit Number)

_____
(Street Address of Business or Post Office Box)

_____
(City/State/Zip Code)

_____ _____
(Daytime Area Code & Phone Number) (Facsimile Number with Area Code)

_____
(E-mail Address or Website URL)

3. _____
(System Name)

_____ _____
(ADPH Operational Permit Number) (ADEM Operational Permit Number)

_____
(Street Address of Business or Post Office Box)

_____
(City/State/Zip Code)

_____ _____
(Daytime Area Code & Phone Number) (Facsimile Number with Area Code)

_____
(E-mail Address or Website URL)

4. _____
(System Name)

_____ _____
(ADPH Operational Permit Number) (ADEM Operational Permit Number)

_____
(Street Address of Business or Post Office Box)

_____
(City/State/Zip Code)

_____ _____
(Daytime Area Code & Phone Number) (Facsimile Number with Area Code)

_____
(E-mail Address or Website URL)

A. **Please describe below the services to be provided and method by which bills will be rendered for each system.**

_____

_____

_____

Appendix C

B. Geographic areas to be served by each system (attach service area maps):

_____

_____

_____

Beginning date of service for each system:

_____

_____

_____

C. Provide an attachment listing the names and addresses of the water companies serving each system.

D. Attach tables that list the most recent year's pertinent operating data (number of employees, customers, treatment facilities, miles of sewer main, average design flow, etc.) for each system.

E. Applicant is:

[ ] Condominium Trust
[ ] Individual
[ ] Limited Partnership
[ ] General Partnership
[ ] Privately-owned Corporation
[ ] Homeowners Association
[ ] Political Subdivision of the State
[ ] Other (identify): _____

F. The physical location where the applicant's books and records will be kept:

_____
(Street Address)

_____
(City/State/Zip Code)

_____
(Contact Person's Name)

_____ (Daytime Area Code & Phone Number)

_____ (Facsimile Number with Area Code)

_____
(E-mail Address)

Appendix C

G. States in which applicant is currently providing service:

_____

_____

_____

H. Key Management of Entity

List the names, titles, and responsibilities of all key management presently employed.

Name	Title	Responsibility

I. Ownership:

If applicant is a corporation, attach a list of the names and addresses of its board of directors, officers, and any person owning 15 percent or more of its stock.

If applicant is not a corporation, attach a list of the names and addresses of all owners or partners.

J. Organizational Documents:

If the applicant is a **corporation**, attach the following:

a) Certificate of Incorporation
b) Articles of Incorporation
c) Bylaws
d) Board Resolution approving wastewater activities

If the applicant is a **partnership**, attach a copy of the partnership agreement.

If the applicant is a **Limited Liability Company** (LLC), attach articles of organization and Board Resolution approving wastewater activities.

If the applicant is a **Condominium Trust**, attach the pertinent documents, including the Board Resolution approving wastewater activities.

If the applicant is a **Homeowners Association**, attach the pertinent documents, including the Board Resolution approving wastewater activities.

K. Utility Practices and Procedures

Attach the practices and procedures of the applicant, showing deposits and charges associated with providing service, including the standard practices the applicant will follow when dealing with its customers (such as billing practices, conditions of disconnection, etc.). NOTE: Underline or highlight changes to previously filed documents.

L. Please attach a copy of all insurance declaration statement(s).

PART II – FINANCIAL INFORMATION

Financial Status of Applicant

Please provide a copy of Applicant's most recent year's audited balance sheet, income statement, cash flow statement, statement of capitalization and retained earnings, credit report, and budgets.

If applicant is an individual, please provide financial statements, credit report, and copies of the last three income tax returns. Include a listing of all sources of funding for wastewater system(s).

Describe means or method by which facilities are financed. Include the terms and conditions of all loans, contractual commitments, and any debt servicing requirements. Include copies of Conveyance of Gifts in Aid to Construction or any other donation of assets.

Attach itemized cost to Applicant for all facilities and equipment.

Provide copy of two-year projected cash flow statement and/or market feasibility study.

Please list below all financial accounts (including account names and numbers, name and address of financial institutions).

_____

_____

_____

_____

Alabama Law (Act No. 2001-973) requires all Applicants to provide ADPH an instrument or mechanism in an amount sufficient to continue management of the system for a period of 10 years

should the Applicant cease to exist or fail to fulfill its obligations to its customers. This requirement can be met by means of a performance bond, pledge of assets, letter of credit, or other similar instrument or mechanism. **Please attach the pertinent document(s) necessary to meet this requirement. Include supporting data in the form of a 10-year itemization of the system's financial requirements.**

PART III – LICENSES

Attach a copy of each certificate, license or other operating authority applicable to Alabama issued to Applicant by any federal, state or local authority. These licenses should include, but are not limited to, business licenses, contractor's licenses, trade licenses, etc.

Attach a copy of each certificate indicating successful completion of operator qualification training.

PART IV – REGULATORY COMPLIANCE

Please explain below any compliance problems noted by regulatory or environmental agencies within the last two years. Please attach copies of warning letters, notices of violations, administrative orders, and other enforcement documents. Also, include the systems responses and related costs to same.

_____

_____

_____

_____

_____

_____

_____

PART V -- TARIFFS

Each applicant shall include a tariff as follows:

A. A tariff consisting of the rates, charges, rules, and regulations. Please note any proposed changes to rates. **Note: Rates are subject to ADPH approval.**

B. Each Applicant shall provide tariffs enumerating and defining the classifications of service available to subscribers. Attach a copy of the form of contract governing service to be furnished by applicant to its subscribers.

C. Each Applicant must provide worksheets for rates, detailing the data and calculations used to arrive at rates (cost-based).

D. All tariffs shall be in loose-leaf form of size eight and one-half inches by eleven inches and shall

be plainly printed or reproduced on paper of good quality.

E. A margin of not less than three-fourths inch without any printing thereon, shall be allowed at the binding edge of each tariff sheet.

F. Tariff sheets are to be numbered consecutively by section, sheet, and revision number. Each sheet shall show an issue date, effective date, a revision number, section number, sheet number, name of the company, and the name of the tariff and title of the section in a consistent manner.

PART VI – REPRESENTATION

Applicant's Attorney or Registered Agent in Alabama, if any:

_____
(Name and Title)

_____
(Street Address of Business or Post Office Box)

_____
(City/State/Zip Code)

_____
(E-mail Address)

_____ _____
(Daytime Area Code & Phone Number) (Facsimile Number with Area Code)

Applicant understands that filing this application does not constitute operating authority. Applicant also will submit such additional materials as the ADPH may require and will pay fees as required under Act No. 2001-973.

CREDIT AUTHORIZATION

Appendix C

* * * * * *

1. To all corporate and consumer reporting agencies and to all creditors and depositories of the undersigned:

Please be advised that the undersigned, and each of them, has made application to:

The Alabama Department of Public Health (Grantor)

requesting a **Certificate of Financial Viability** to provide wastewater services in the State of Alabama. Therefore, the undersigned, and each of them, hereby authorizes you to provide credit report, financial information and/or a disclosure or balance to Grantor or any agent. The undersigned also authorizes you to disclose your deposit or credit experiences with the undersigned to Grantor or to third parties.

2. In addition, the undersigned, and each of them, hereby authorizes Grantor to disclose to any third party, or any agent or employee thereof, information regarding the deposit or credit experience with any of the undersigned.

3. A photographic or carbon copy of this authorization bearing a photographic or carbon copy of the signature(s) of the undersigned may be deemed to be equivalent to the original thereof and may be used as a duplicate original.

* * * * * *

BY:

_____
Applicant (please print or type name)

Authorized Agent's Signature	Other Authorized Agent's Signature
Social Security Number or Federal Tax ID	Social Security Number or Federal Tax ID
Address	Address
City, State, Zip Code	City, State, Zip Code
Date	Date

Appendix C

CERTIFICATION

STATE: _____

COUNTY: _____

I certify that I have reviewed the Application for Certificate of Financial Viability to Operate a Decentralized Wastewater Cluster Systems and all attached documentation;

Based on my knowledge, the application does not contain any untrue statements of a material fact or omit to state a material fact necessary to make the statements made in light of the circumstances under which such statements are made, and is not misleading with respect to the period covered by this application;

Based on my knowledge, the financial statements and other financial information included with this application, fairly presents, in all material respects, the financial condition, results of operations and cash flows of the applicant as of, and for, the periods presented in this application.

_____ _____
(Signature) (Date)

_____
(Title)

_____ _____
(Signature) (Date)

_____
(Title)

_____ _____
(Signature) (Date)

_____
(Title)

Sworn to and subscribed before me on this the

_____ day of _____, 20_____. (SEAL)

_____
(Notary Public)

My Commission Expires: _____

Appendix C

CEP-9

ALABAMA DEPARTMENT OF PUBLIC HEALTH
P.O. Box 304260
Montgomery, Alabama

In cooperation with the

ALABAMA PUBLIC SERVICE COMMISSION

APPLICATION

TO

AMEND

CERTIFICATE OF

FINANCIAL VIABILITY

TO OPERATE

DECENTRALIZED

WASTEWATER CLUSTER SYSTEMS

THE AREA BELOW IS FOR OFFICIAL USE ONLY

DATE RECEIVED _____

FEE PAID _____

PART I – GENERAL INFORMATION

A. Management Entity Name and Certification Number:

Entity _____

Certification Number: ME_____

B. Applicant:

_____
(Name of Onsite Management Entity)

_____
(Street Address or PO Box)

_____
(City, State, & Zip Code)

Phone Number: _____ Fax Number:_____

_____
(E-mail Address)

C. Person to be Contacted with Respect to this Application:

_____
(Name and Title)

_____
(Street Address or PO Box)

_____
(City, State, & Zip Code)

Phone Number: _____ Fax Number:_____

_____
(E-mail Address)

D Physical Location where applicant's books are kept:

Attach as separate sheet

E. Update owner and or officer of Management Entity if any change.

_____

_____

_____

F. Type of Application:

Application to amend Certificate of Financial Viability to add (check one)

Treatment System [ ] $250 fee must be included

Additional customers to Existing Treatment System [ ] No fee required with no change in treatment capacity.

PART II – TREATMENT SYSTEM

G. Treatment System

_____
(System Name)

_____
(Street Address or PO Box)

_____
(City, State, & Zip Code)

Type of Treatment _____

County System Located:_____

Treatment System Status: Existing [ ] Planning Stage [ ] Under Construction [ ]

Operating Permit by:ADPH [ ]ADEM [ ] Other _____
Permit Number: _____
Average Design Capacity: _____gpd
Date System Ownership is transferred to Entity _____

Phone Number: _____ Fax Number:_____

Projected date of beginning service for new treatment systems: _____

H. Attach an engineering report that includes: (for new treatment systems only)

1. A to scale boundary plat of the site prepared by a land surveyor which at a minimum will include the location of the disposal field.

2. A minimum of a low intensity soil map of the proposed disposal field prepared by a professional soil classifier to determine the most limiting factor at the site. It is recommended that entire site be mapped for planning purposes. The following five factors shall be evaluated and reported as a minimum for the disposal field:

(a)Permeability (percolation)

(b)Depth to average seasonal high extended saturation

(c)Depth to rock or other restrictive layers

(d)Slope, topography and landscape position

(e)Flooding frequency.

(f) Hydric soils

3 A description of, and reasons for, any existing or proposed modifications to the disposal area, such as existing or proposed cut or fill areas, embankments, or areas which have received, or will receive, extensive grading or modification, and a detailed evaluation of how these modifications may impact the placement/operation of an OSS or EDF replacement area on the lots(s);

4. A characterization of the wastewater strength and flow.

5. A description of the proposed treatment system to be used.

PART III – CUSTOMERS ADDED

I. List only subdivisions/establishments that are being added or amended.
(Attach service area maps if not previously submitted.)

Subdivision/Establishment name: _____

Check one:
[ ] This is an approved Subdivision/Establishment to which customers are being added.

[ ] New Subdivision/Establishment being added.

Number of Customers Previously Approved: _____
Number of Customers Being Added: _____
Total Customers Paying at present: _____ Fee _____/month.
Collection System Standard used _____

Date Infrastructure was deeded to Entity:_____
Notes _____
_____
_____

Subdivision/Establishment name: _____

Check one:
[ ] This is an approved Subdivision/Establishment to which customers are being added.

[ ] New Subdivision/Establishment being added.

Number of Customers Previously Approved: _____
Number of Customers Being Added: _____
Total Customers Paying at present: _____ Fee _____/month.
Collection System Standard used _____
Date Infrastructure was deeded to Entity:_____
Notes _____
_____
_____

Subdivision/Establishment name: _____

Check one:
[ ] This is an approved Subdivision/Establishment to which customers are being added.

[ ] New Subdivision/Establishment being added.

Number of Customers Previously Approved: _____
Number of Customers Being Added: _____
Total Customers Paying at present: _____ Fee _____/month.
Collection System Standard used _____
Date Infrastructure was deeded to Entity:_____
Notes _____
_____
_____

Subdivision/Establishment name: _____

Check one:
[ ] This is an approved Subdivision/Establishment to which customers are being added.

[ ] New Subdivision/Establishment being added.

Number of Customers Previously Approved: _____
Number of Customers Being Added: _____
Total Customers Paying at present: _____ Fee _____/month.
Collection System Standard used _____
Date Infrastructure was deeded to Entity:_____
Notes _____
_____
_____

Part IV – OTHER INFORMATION

J. Attach copies of :

Current Financial Statement [ ] or, Last Tax Return [ ]

K. Attach copies of all contracts pertaining to the System being requested.

L. Update change in Representation:

Attorney or Registered Agent in Alabama

_____
(Name)

_____
(Firm Name)

_____
(Street Address or PO Box)

_____
(City, State, & Zip Code)

Phone Number: (____)_____ Fax Number (____)_____

_____
(E-Mail Address)

Applicant understands that filing this application does not constitute operating authority. Applicant also will submit such additional material as the ADPH or APSC may require and will pay fees as required under Act No 2001-973. Applicant further understands that the Certification of Financial Viability is not an ADPH or ADEM discharge permit however such a permit and appropriately certified operators are a prerequisite to operating the wastewater system.

CERTIFICATION

STATE OF ALABAMA

COUNTY OF _____

I the undersigned being duly sworn and in my capacity as

_____ do hereby certify that I have reviewed the Application to Amend the Certificate of Financial Viability to Operate Decentralized Wastewater Cluster Systems and all attached documentation;

Based on my knowledge and belief, the application does not contain any untrue statements of a material fact or omit to state a material fact necessary to make the statements in light of the circumstances under which such statements are made, and is not misleading with respect to the period covered by this application;

Based on my knowledge and belief, the financial statements and other financial information included whit this application, fairly presents, in all material respects, the financial conditions, results of operations and cash flows of the applicant as of, and for, the periods presented in this application and all attached documentation.

_____ Date: _____

(Signature)

_____

(Title)

Sworn to and subscribed before me _____ the undersigned Notary Public this the ____ day of _____, _____.

SEAL

_____

My Commission Expires; _____