ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT WATER DIVISION - WATER SUPPLY PROGRAM ADMINISTRATIVE CODE

CHAPTER 335-7-1 GENERAL PROVISIONS

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335-7-1-.01 Definitions.

When used in these regulations, the following words and terms shall have the meaning assigned to them as shown. Additional terms may also be defined in other chapters at the time of their use.

(a) Clean compliance history—for the purposes of microbiological monitoring, a record of no maximum contaminant level violations, no monitoring violations, and no coliform treatment technique trigger exceedances or treatment technique violations.0

(b) Coagulation--a process using coagulant chemicals and mixing to destabilize colloidal and suspended particles into floc.

(c) Combined Distribution System--the interconnected distribution system consisting of the distribution systems of wholesale systems and of the consecutive systems that receive finished water.

(d) Community Water System--a public water system which serves at least fifteen (15) service connections used by year-round residents or regularly serves at least twenty-five (25) year-round residents.

(e) Compliance cycle--the nine year calendar year cycle during which public water systems must monitor. Each compliance cycle contains three 3 year compliance periods. The first compliance cycle begins January l, l993 and ends December 3l, 200l.

(f) Compliance period--a three year calendar period within a compliance cycle.

(g) Confluent growth--a continuous bacterial growth covering the entire filtration area of a membrane filter, or a portion thereof, in which bacterial colonies are not discrete.

(h) Consecutive system--a public water system that receives some or all of its finished water from one or more wholesale systems. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems.

(i) Contaminant--matter which renders water unfit to use due to its physical, chemical, biological, or radiological properties.

(j) CT--the product of residual disinfection concentration (C) in milligrams per liter determined before the first customer and the corresponding disinfection contact time (T) in minutes.

(k) Department--the Alabama Department of Environmental Management as created under §§22-22A-1, et seq., Code of Ala. 1975.

(l) Director--the Director of the Alabama Department of Environmental Management or his designee.

(m) Disinfectant--any oxidant including but not limited to chlorine, chlorine dioxide, chloramines or ozone, added to water in any part of the treatment or distribution process, with the intent to kill or inactivate pathogenic micro-organisms.

(n) Disinfection--the process of applying an approved disinfectant to destroy, neutralize, or inhibit the growth of pathogenic micro-organisms.

(o) Dual sample set--a set of two samples collected at the same time and same location, with one sample analyzed for total trihalomethanes (TTHM) and the other sample analyzed for haloacetic acids (HAA5).

(p) Engineer--a person currently licensed by the Alabama State Board of Registration for Professional Engineers and Land Surveyors to provide engineering services.

(q) Enhanced softening--the improved removal of disinfection byproduct percursors by precipitative softening.

(r) EPA--the Environmental Protection Agency.

(s) Exemption--the process of allowing a water system to be excused from meeting an established drinking water standard for a specific length of time.

(t) Federal Act--the Safe Drinking Water Act, Public Law 93-523, including all amendments.

(u) Filtration--a process for removing particulate matter from water by passage through media.

(v) Finished Water-- water that is introduced into the distribution system of a public water system and is intended for distribution and consumption without further treatment, except as treatment is necessary to maintain water quality in the distribution system (e.g., booster disinfection, addition of corrosion control chemicals).

(w) Flocculation--a process to enhance agglomeration of smaller floc particles into larger more easily settleable particles through gentle stirring by hydraulic or mechanical means.

(x) GAC 10--granular activated carbon filter beds with an empty-bed contact time of 10 minutes based on average daily flow and a carbon reactivation frequency of every 180 days, except that the reactivation frequency shall be 120 days when used as a best available technology for compliance.

(y) GAC 20--granular activated carbon filter beds with any empty-bed contact time of 20 minutes based on average daily flow and a carbon reactivation frequency of every 240 days.

(z) Groundwater Source--a source of water that is obtained from wells or springs and not directly influenced by surface water. 335-7-1-.01

(aa) Ground Water Under the Influence--any water beneath the surface of the ground with (1) significant occurrence of insects or other macro-organisms, algae, or large diameter pathogens such as Giardia lamblia, Cryptosporidium or (2) significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions. Direct influence must be determined for individual sources in accordance with criteria established by the Department. The Department determination of direct influence may be based on site-specific measurements of water quality and/or documentation of well construction characteristics and geology with field evaluation.

(bb) Haloacetic acids (five) (HAA5)--the sum of the concentrations in milligrams per liter of the haloacetic acid compounds (monochloroacetic acid, dichloracetic acid,

trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid), rounded to two significant figures after addition.

(cc) Initial compliance period--the first full three-year compliance period which starts January 1, 1993 and ends December 31, 1995.

(dd) Level 1 assessment-- is an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment. It is conducted by the system operator or owner. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g., whether a ground water system is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The system must conduct the assessment consistent with any State directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system.

(ee) Level 2 assessment-- is an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment. A Level 2 assessment provides a more detailed examination of the system (including the system's monitoring and operational practices) than does a Level 1 assessment through the use of more comprehensive investigation and review of available information, additional internal and external resources, and other relevant practices. It is conducted by an individual approved by the State, which may include the system operator. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g., whether a ground water system is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The system must conduct the assessment consistent with any State directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system. The system must comply with any expedited

actions or additional actions required by the State in the case of an E. coli MCL violation.

(ff) Locational running annual average (LRAA)--the average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

(gg) Maximum Contaminant Level (MCL)--the maximum permissible level of a contaminant in drinking water, which is delivered to any user of a public water system.

(hh) Maximum residual disinfectant level (MRDL)--the level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects. MRDLs are enforceable in the same manner as maximum contaminant levels.

(ii) Maximum Total Trihalomethane Potential--the maximum concentration of total trihalomethanes produced in a given water containing a disinfectant residual after seven days at a temperature of 25°C or above.

(jj) Monitoring Trigger--a level established by EPA for each individual contaminant to be utilized to require more frequent monitoring for that contaminant.

(kk) Monitoring Waiver--the process by which a public water system is allowed to reduce or eliminate required monitoring during a specific monitoring period.

(ll) National Drinking Water Standards--drinking water standards adopted by EPA pursuant to the Federal Act.

(mm) Non-community Water System--a public water system that is not a community water system. A non-community water system is either a "transient non-community water system" or a "non-transient non-community water system (NTNC)."

(nn) Non-transient non-community Water Systems (NTNC)--a public water system that is not a community water system and that regularly serves at least 25 of the same individuals at least six months per year. 335-7-1-.01

(oo) Permit--written authorization granted by the Department to construct, install, and operate a public water system and to furnish and supply water for human consumption or use.

(pp) Person--any individual, firm, partnership, corporation, local governmental unit, party, company, association, federal agency, state agency, or any other public or private legal entity.

(qq) Public Water System--a system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least fifteen (15) service connections or regularly serves an average of at least twenty-five (25) individuals at least sixty (60) days out of the year. A public water system includes any source, collection, treatment, storage and distribution facilities under the control of the operator of such system and used primarily in connection with such system, and any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. A public water system is either a community water system, a non-community water system, or a non-transient non-community water system.

(rr) Raw water--water which has received no treatment nor the application of treatment chemicals.

(ss) Repeat compliance period--any subsequent compliance period after the initial compliance period.

(tt) Sanitary defect—a defect that could provide a pathway of entry for microbial contamination into the distribution system or that is indicative of a failure or imminent failure in a barrier that is already in place.

(uu) Sanitary survey--an onsite review of the water source, facilities, equipment, operation and maintenance of a public water system for the purpose of evaluating the adequacy of such source, facilities, equipment, operation and maintenance for producing and distributing safe drinking water.

(vv) Seasonal system—a non-community water system that is not operated as a public water system on a year-round basis and starts up and shuts down at the beginning and the end of each operating season.

(ww) Sedimentation--a process using gravity or separation for removal or concentration of solids prior to filtration.

(xx) Segmental Water System – An apartment complex or business mall that is a consecutive water system that serves at least 25 individuals or has at least 15 service connections and obtains water from a permitted public water system. This type system serves less than 3300 population, does not contain pumps nor storage facilities, has a greater amount of plumbing lines that distribution lines and has no back siphonage potential or cross-connections. The designation of this type water system is based on assurances that monitoring and operation by the parent system is sufficient to demonstrate consistent satisfactory water quality and there is no threat to public health.

(yy) Service Connection--the point at which the water distribution main and the water service pipe are connected to serve water to a residence or water customer. A typical service connection is, but not limited to, the service line, backflow prevention device and meter.

(zz) Supplier of Water--any person who owns, operates, controls, directs, or is responsible for a public water system.

(aaa) Surface Water Source--a source of raw, untreated water that is open to the atmosphere and subject to surface water runoff or direct atmospheric contamination; or groundwater which is subject to direct influence of surface water.

(bbb) Technical, Managerial & Financial Capacity--the overall capability or wherewithal of a water system to consistently produce and deliver satisfactory drinking water and consistently meeting all Departmental regulations. Technical means the physical infrastructure of the water system including water source(s), treatment facilities, water storage, distribution and service connections. Managerial means the management and operational structure of the water system, including but not limited to accountability, staffing and organization, and effective linkages to customers and regulatory agencies. Financial means the financial resources of the water system, including but not limited to revenue sufficiency, credit worthiness, and fiscal controls.

(ccc) TNTC--"Too Numerous To Count" means that the total number of bacterial colonies exceeds 200 on a 47-mm diameter membrane filter used for coliform detection.

(ddd) Total Organic Carbon (TOC)--total organic carbon in mg/L measured using heat, oxygen, ultraviolet irradiation, chemical oxidants, or combinations of these oxidants that convert organic carbon to carbon dioxide, rounded to two significant figures.

(eee) Transient non-community Water System--means a non-community water system that does not regularly serve at least 25 of the same persons over six months per year.

(fff) Treated Water--water to be used by a public water system which has received the application of approved water treatment chemicals.

(ggg) Treatment Technique--a required treatment process, procedure, or activity necessary to provide deliverance of safe drinking water.

(hhh) Trihalomethane (THM)--one of the family of organic compounds, named as derivatives of methane, wherein three of

the four hydrogen atoms in methane are each substituted by a halogen atom in the molecular structure.

(iii) Total Trihalomethanes (TTHM)--the sum of the concentration in milligrams per liter of the trihalomethane compounds: chloroform, dibromochloromethane, bromodichloromethane and bromoform, rounded to two significant figures.

(jjj) Uncovered finished water storage facility--a tank, reservoir, or other facility used to store water that will undergo no further treatment to reduce microbial pathogens except residual disinfection and is directly open to the atmosphere.

(kkk) Unregulated Contaminant--any contaminant with established monitoring requirements but with no prescribed maximum contaminant level adopted.

(lll) Variance--the process by which a public water system is allowed to deviate from established regulations.

(mmm) Virus--a virus of fecal origin which is infectious to humans by waterborne transmission.

(nnn) Volatile Synthetic Organic Chemical (VOC)--a group of organic chemical compounds considered to be probable human carcinogens for which maximum contaminant levels and monitoring requirements have been adopted by the Department.

(ooo) Water Dispensing Machine--a device that complies with National Sanitation Foundation (NSF) standards for drinking water equipment, obtains all of its water from a permitted public water system, and dispenses unit servings of piped water to the public.

(ppp) Waterborne Disease Outbreak--the significant occurrence of acute infectious illness, epidemiologically associated with the ingestion of water from a public water system which is deficient in treatment, as determined by the appropriate local or State agency.

(qqq) Wholesale system--a public water system that treats source water as necessary to produce finished water and then delivers some or all of that finished water to another public water system. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems.

Author: Joe Alan Power, Thomas S. DeLoach, Dennis D. Harrison
Statutory Authority: Code of Ala. 1975, §§22-23-33, 22-23-49.
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January 6, 1996. **Amended:** Filed December 21, 1998; effective January 25, 1999. **Amended:** Filed May 2, 2000; effective June 6, 2000. **Amended:** Filed February 6, 2002; effective March 13, 2002. **Amended:** Filed April 25, 2003; effective May 30, 2003. **Amended:** Filed December 18, 2007; effective January 22, 2008. **Amended:** Filed October 21, 2014; effective November 25, 2014.

335-7-1-.02 Applicability.

Regulations and standards established under Division 7 apply to each public water system in Alabama as defined in this chapter except water dispensing machines unless the water system meets all of the following conditions:

(a) Consists only of distribution and/or storage facilities and does not have any collection and treatment facilities,

(b) Obtains all of its water from, but is not owned or operated by, a public water system to which this chapter applies,

(c) Does not sell water to any person, and

(d) Is not a carrier which conveys passengers in interstate commerce.

Author: Joe Alan Power, Dennis D. Harrison
Statutory Authority: Code of Ala.1975, §§22-23-33, 22-23-49.
History: May 23, 1977. **Repealed and Readopted:** January 4, 1989; October 31, 1990; effective December 5, 1990. **Amended:** Filed December 18, 2007; effective January 22, 2008.

335-7-1-.03 Variance From Regulations.

The Department may grant variances to design, treatment, and operational requirements based on the following conditions and procedures:

(a) No variance will be granted for treatment techniques or activities which will result in an unreasonable risk to public health, cause a public nuisance, create environmental pollution, or allow use of a surface source without filtration unless the system can demonstrate compliance with EPA Regulations 141.71, 141.72, and 141.75.

(b) No variance from the E. coli MCL will be granted.

(c) The Department may impose additional monitoring, require onsite treatability studies, and may require the applicant to obtain and keep in force a bond to ensure further treatment

facilities are obtained to prevent any hazard to public health.

(d) The Department may establish a compliance schedule to obtain modifications to the treatment process, obtain a new source of supply, or other action deemed necessary to bring the system into full compliance with these regulations.

Author: Joe Alan Power
Statutory Authority: Code of Ala. 1975, §§22-23-33, 22-23-35, 22-23-49, 22-22A-5, 22-22A-6.
History: May 23, 1977. **Repealed and Readopted:** January 4, 1989; October 31, 1990. **Amended:** September 19, 1995 (ER); November 28, 1995; effective January 2, 1996. **Amended:** Filed October 21, 2014; effective November 25, 2014.

335-7-1-.04 Variance Application.

Any supplier of water requesting a variance from provisions of these regulations shall file a written application providing the following information:

(a) Specific regulation for which a variance is requested;

(b) The type and duration of the variance;

(c) Analytical results of system and source water quality and projected quality if the variance is approved;

(d) Data showing adequate water treatment will be provided based on information from plant studies, research, pilot plant results or other studies using the same or similar raw water sources; and

(e) A plan for the provision of safe drinking water if an excessive level of any contaminant affected by the variance should occur.

Author: Joe Alan Power, Dennis D. Harrison
Statutory Authority: Code of Ala. 1975, §§22-23-33, 22-23-35, 22-23-49, 22-22A-5, 22-22A-6.
History: May 23, 1977. **Repealed and Readopted:** January 4, 1989; October 31, 1990; effective December 5, 1990. **Amended:** Filed December 18, 2007; effective January 22, 2008. **Amended:** Filed October 21, 2014; effective November 25, 2014.

335-7-1-.05 Exemption.

The Department may, upon written application, grant an exemption from drinking water standards not to include monitoring, based upon the following conditions and findings:

(a) The public water system was in operation on the date the MCL became effective.

(b) The granting of the exemption will not result in an unreasonable risk to the public health.

(c) No exemption from the E. coli MCL will be granted.

(d) The exemption may be granted for a period not to exceed three years from the date of issuance.

(e) The Department may require the applicant to obtain a bond in sufficient amount to correct a possible hazard to public health which may be created by the granting of this exemption.

Author: Joe Alan Power
Statutory Authority: Code of Ala. 1975, §§22-23-33, 22-23-35, 22-23-49, 22-22A-5, 22-22A-6.
History: May 23, 1977. **Repealed and Readopted:** January 4, 1989; October 31 1990; effective December 5, 1990. **Amended:** Filed October 21, 2014; effective November 25, 2014.

335-7-1-.06 Exemption Application.

Any supplier of water requesting an exemption from compliance of any water standard shall file a written application providing the following information:

(a) Contaminant to be considered plus historic and current analysis indicating the maximum and normal level found and the potential for increased levels.

(b) Health effects data demonstrating that no unreasonable risk to human health will occur.

(c) A detailed engineering report providing either proposed treatment or alternative sources which will meet all water standards.

(d) An economic statement demonstrating that funds will be available within two years to provide necessary system modification to meet all water standards.

(e) An explanation of the compelling factors, such as time or economics, which prevent the system from achieving present compliance.

(f) Any other information believed relevant by the applicant or requested by the Department.

Author: Joe Alan Power.
Statutory Authority: Code of Ala. 1975, §§22-23-33, 22-23-35, 22-22A-5, 22-22A-6.

History: May 23, 1977. **Repealed and Readopted:** January 4, 1989; October 31, 1990; effective December 5, 1990.

335-7-1-.07 Exemption Disposition.

Upon receipt of a complete application the Department shall take the following action:

(a) Approval - should the Department favorably consider the exemption request, the following procedures must be followed:

1. At the expense of the applicant a public hearing will be held in the county where the greatest percent of customers will be affected.

2. The Department will provide notice to the affected public including:

(i) Contaminant

(ii) Health-effects

(iii) Time and location of public hearing and comment period.

(iv) ADEM established Compliance schedule

(v) Name, address, and telephone number of the person requesting the exemption.

3. EPA will be provided with copies of all applications and documents with a request made for concurrence with granting the exemption.

4. No later than 90 days after close of the comment period and hearing record the Department shall, after taking into consideration comments received, confirm, revise or rescind the compliance schedule and exemption.

5. Upon approval of the exemption, the applicant shall provide written notification to all persons affected in a manner acceptable to the Department. Such notice shall be repeated at least once every three months so long as the exemption remains in effect.

(b) Denial -- should the Department deny the request, the applicant shall be notified in writing and provided a reason for the denial.

Author: Joe Alan Power
Statutory Authority: Code of Ala. 1975, §§22-23-32, 22-23-33, 22-23-35, 22-23-49, 22-22A-5, 22-22A-6.

History: May 23, 1977. **Repealed and Readopted**: January 4, 1989; October 31, 1990. **Revised**: September 23, 1992. Effective: November 9, 1992. **Amended**: Filed November 28, 1995; effective January 6, 1996. **Amended**: Filed December 21, 1998; effective January 25, 1999. **Amended**: Filed May 2, 2000; effective June 6, 2000.