

61-9.125

Criteria and Standards for the National Pollutant Discharge Elimination System

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PART A
CRITERIA AND STANDARDS FOR IMPOSING TECHNOLOGY-BASED TREATMENT REQUIREMENTS UNDER SECTIONS 301(B) AND 402 OF THE CLEAN WATER ACT

125.1. Purpose and scope.

This part establishes criteria and standards for the imposition of technology-based treatment requirements in permits under section 48-1-90 of the South Carolina Pollution Control Act and section 301(b) of the Federal Clean Water Act, including the application of EPA promulgated effluent limitations and case-by-case determinations of effluent limitations under this regulation and section 402(a)(1) of the Clean Water Act.

125.2. Definitions.

Unless otherwise noted, the definitions in R.61-9.122, 40 CFR Part 123, and R.61-9.124 apply to this part.

125.3. Technology-based treatment requirements in permits.

(a) General. Technology-based treatment requirements under section 301(b) of the CWA represent the minimum level of control that must be imposed in an NPDES permit issued under section 402 of the CWA. (See R.61-9.122.41, 122.42, and 122.44 for a discussion of additional or more stringent effluent limitations and conditions.) NPDES permits shall contain the following technology-based treatment requirements in accordance with the following statutory deadlines:

(1) For POTW's, NPDES permit effluent limitations based upon:

(i) Secondary treatment - from date of permit issuance; and

(ii) [Reserved]

(2) For dischargers other than POTWs except as provided in R. 61-9.122.29(d), NPDES permit effluent limitations requiring:

(i) The best practicable control technology currently available (BPT).

(A) [Reserved]

(B) [Reserved]

(C) For all other BPT effluent limitations compliance is required from the date of permit issuance.

(ii) For conventional pollutants, the best conventional pollutant control technology (BCT).

(iii) For all toxic pollutants referred to in Committee Print No. 95-30, House Committee on Public Works and Transportation, the best available technology economically achievable (BAT).

(iv) For all toxic pollutants other than those listed in Committee Print No. 95-30, effluent limitations based on BAT.

(v) For all pollutants which are neither toxic nor conventional pollutants, effluent limitations based on BAT.

(b) Statutory variances and extensions.

(1) The following variances from technology-based treatment requirements are authorized by the CWA and may be applied for under R.61-9.122.21;

(i) [Reserved]

(ii) For dischargers other than POTW's;

(A) [Reserved]

(B) [Reserved]; and

(C) A section 316(a) thermal variance from BPT, BCT and BAT (Part H).

(2) The following extensions of deadlines for compliance with technology-based treatment requirements are authorized by the CWA and may be applied for under R.61-9.124.53:

(i) [Reserved]

(ii) For dischargers other than POTW's:

(A) [Reserved]

(B) A section 301(k) extension of the BAT deadline.

(c) Methods of imposing technology-based treatment requirements in permits. Technology-based treatment requirements may be imposed through one of the following three methods;

(1) Application of EPA-promulgated effluent limitations developed under section 304 of the CWA to dischargers by category or subcategory. These effluent limitations are not applicable to the extent that they have been remanded or withdrawn. However, in the case of a court remand, determinations underlying effluent limitations shall be binding in permit issuance proceedings where those determinations are not required to be reexamined by a court remanding the regulations. In addition, dischargers may seek fundamentally different factors variances from these effluent limitations under R.61-9.122.21 and Part D of this regulation.

(2) On a case-by-case basis under section 402(a)(1) of the CWA, to the extent that EPA-promulgated effluent limitations are inapplicable. The permit writer shall apply the appropriate factors listed in section 125.3(d) and shall consider:

(i) The appropriate technology for the category or class of point sources of which the applicant is a member, based upon all available information; and

(ii) Any unique factors relating to the applicant.

(3) Through a combination of the methods in paragraphs (d)(1) and (d)(2) of this section. Where promulgated effluent limitations guidelines only apply to certain aspects of the discharger's operation, or

to certain pollutants, other aspects or activities are subject to regulation on a case-by-case basis in order to carry out the provisions of the CWA and Pollution Control Act.

(4) Limitations developed under paragraph (d)(2) of this section may be expressed, where appropriate, in terms of toxicity (e.g., “the LC50 for fat head minnow of the effluent from outfall 001 shall be greater than 25%”), provided that it is shown that the limits reflect the appropriate requirements (for example, technology-based or water-quality-based standards) of the CWA.

(d) In setting case-by-case limitations pursuant to section 125.3(c), the permit writer must consider the following factors:

(1) For BPT requirements:

(i) The total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application;

(ii) The age of equipment and facilities involved;

(iii) The process employed;

(iv) The engineering aspects of the application of various types of control techniques;

(v) Process changes; and

(vi) Non-water quality environmental impact (including energy requirements).

(2) For BCT requirements:

(i) The reasonableness of the relationship between the costs of attaining a reduction in effluent and the effluent reduction benefits derived;

(ii) The comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources;

(iii) The age of equipment and facilities involved;

(iv) The process employed;

(v) The engineering aspects of the application of various types of control techniques;

(vi) Process changes; and

(vii) Non-water quality environmental impact (including energy requirements).

(3) For BAT requirements:

(i) The age of equipment and facilities involved;

(ii) The process employed;

(iii) The engineering aspects of the application of various types of control techniques;

(iv) Process changes;

(v) The cost of achieving such effluent reduction; and

(vi) Non-water quality environmental impact (including energy requirements).

(e) Technology-based treatment requirements are applied prior to or at the point of discharge.

(f) Technology-based treatment requirements cannot be satisfied through the use of “non-treatment” techniques such as flow augmentation and in-stream mechanical aerators. However, these techniques may be considered as a method of achieving water quality standards on a case-by-case basis when:

(1) The technology-based treatment requirements applicable to the discharge are not sufficient to achieve the standards;

(2) The discharger agrees to waive any opportunity to request a variance under section 301(c), (g) or (h) of the CWA; and

(3) The discharger demonstrates that such a technique is the preferred environmental and economic method to achieve the standards after consideration of alternatives such as advanced waste treatment, recycle and reuse, land disposal, changes in operating methods, and other available methods.

(g) Technology-based effluent limitations shall be established under this part for solids, sludges, filter backwash, and other pollutants removed in the course of treatment or control of wastewaters in the same manner as for other pollutants.

(h)(1) The Department may set a permit limit for a conventional pollutant at a level more stringent than the best conventional pollution control technology (BCT), or a limit for a nonconventional pollutant which shall not be subject to modification under section 301(c) or (g) of the CWA where:

(i) Effluent limitations guidelines specify the pollutant as an indicator for a toxic pollutant, or

(ii)(A) The limitation reflects BAT-level control of discharges of one or more toxic pollutants which are present in the waste stream, and a specific BAT limitation upon the toxic pollutant(s) is not feasible for economic or technical reasons;

(B) The permit identifies which toxic pollutants are intended to be controlled by use of the limitation; and

(C) The fact sheet required by R.61-9.124.56 sets forth the basis for the limitation, including a finding that compliance with the limitation will result in BAT-level control of the toxic pollutant discharges identified in paragraph (h)(1)(ii)(B) of this part, and a finding that it would be economically or technically infeasible to directly limit the toxic pollutant(s).

(2) The Department may set a permit limit for a conventional pollutant at a level more stringent than BCT when;

(i) Effluent limitations guidelines specify the pollutant as an indicator for a hazardous substance, or

(ii)(A) The limitation reflects BAT-level control of discharges (or an appropriate level determined under section 301(c) or (g) of the CWA) of one or more hazardous substance(s) which are present in the waste stream, and a specific BAT (or other appropriate) limitation upon the hazardous substance(s) is not feasible for economic or technical reasons;

(B) The permit identifies which hazardous substances are intended to be controlled by use of the limitation; and

(C) The fact sheet required by R.61-9.124.56 sets forth the basis for the limitation, including a finding that compliance with the limitations will result in BAT-level (or other appropriate level) control of the hazardous substances discharges identified in paragraph (h)(2)(ii)(B) of this section, and a finding that it would be economically or technically infeasible to directly limit the hazardous substance(s).

(iii) Hazardous substances which are also toxic pollutants are subject to paragraph (h)(1) of this section.

(3) The Department may not set a more stringent limit under the preceding paragraphs if the method of treatment required to comply with the limit differs from that which would be required if the toxic pollutant(s) or hazardous substance(s) controlled by the limit were limited directly.

(4) Toxic pollutants identified under paragraph (h)(1) of this section remain subject to the requirements of R.61-9.122.42(a)(1) (notification of increased discharges of toxic pollutants above levels reported in the application form).

PART B

CRITERIA FOR ISSUANCE OF PERMITS TO AQUACULTURE PROJECTS

125.10. Purpose and scope.

(a) These regulations establish guidelines under sections 318 and 402 of the CWA for approval of any discharge of pollutants associated with an aquaculture project.

(b) The regulations authorize, on a selective basis, controlled discharges which would otherwise be unlawful under the PCA, section 48-1-90, and the CWA in order to determine the feasibility of using pollutants to grow aquatic organisms which can be harvested and used beneficially.

(c) Permits issued for discharges into aquaculture projects under this part are NPDES permits and are subject to the applicable requirements of R.61-9.122 and 124 and 40 CFR Part 123. Any permit shall include such conditions (including monitoring and reporting requirements) as are necessary to comply with those regulations. Technology-based effluent limitations need not be applied to discharges into the approved project except with respect to toxic pollutants.

125.11. Criteria.

(a) No NPDES permit shall be issued to an aquaculture project unless:

(1) The Department determines that the aquaculture project:

(i) Is intended by the project operator to produce a crop which has significant direct or indirect commercial value (or is intended to be operated for research into possible production of such a crop); and

(ii) Does not occupy a designated project area which is larger than can be economically operated for the crop under cultivation or than is necessary for research purposes.

(2) The applicant has demonstrated, to the satisfaction of the Director, that the use of the pollutant to be discharged to the aquaculture project will result in an increased harvest of organisms under culture over what would naturally occur in the area;

(3) The applicant has demonstrated, to the satisfaction of the Department that if the species to be cultivated in the aquaculture project is not indigenous to the immediate geographical area, there will be minimal adverse effects on the flora and fauna indigenous to the area, and the total commercial value of the introduced species is at least equal to that of the displaced or affected indigenous flora and fauna;

(4) The Department determines that the crop will not have a significant potential for human health hazards resulting from its consumption;

(5) The Department determines that migration of pollutants from the designated project area to water outside of the aquaculture project will not cause or contribute to a violation of water quality standards or a violation of the applicable standards and limitations applicable to the supplier of the pollutant that would govern if the aquaculture project were itself a point source. The approval of an aquaculture project shall not result in the enlargement of a pre-existing mixing zone area beyond what had been designated by the State for the original discharge.

(b) No permit shall be issued for any aquaculture project in conflict with a plan or an amendment to a plan approved under section 208(b) of the CWA.

(c) No permit shall be issued for any aquaculture project located in the territorial sea, the waters of the contiguous zone, or the oceans, except in conformity with guidelines issued under section 403(c) of the CWA.

(d) Designated project areas shall not include a portion of a body of water large enough to expose a substantial portion of the indigenous biota to the conditions within the designated project area. For example, the designated project area shall not include the entire width of a watercourse, since all organisms indigenous to that watercourse might be subjected to discharges of pollutants that would, except for the provisions of section 318 of the CWA, violate section 301 of the CWA.

(e) Any modifications caused by the construction or creation of a reef, barrier or containment structure shall not unduly alter the tidal regimen of an estuary or interfere with migrations of unconfined aquatic species.

(f) Any pollutants not required by or beneficial to the aquaculture crop shall not exceed applicable standards and limitations when entering the designated project area.

PART D
CRITERIA AND STANDARDS FOR DETERMINING FUNDAMENTALLY DIFFERENT
FACTORS UNDER SECTIONS 301(B)(1)(A), 301(B)(2)(A) AND (E) OF THE CWA

125.30. Purpose and scope.

(a) This part establishes the criteria and standards to be used in determining whether effluent limitations alternative to those required by promulgated EPA effluent limitations guidelines under sections 301 and 304 of the CWA (hereinafter referred to as “national limits”) should be imposed on a discharger because

factors relating to the discharger's facilities, equipment, processes or other factors related to the discharger are fundamentally different from the factors considered by EPA in development of the national limits. This part applies to all national limitations promulgated under sections 301 and 304 of the CWA, except for the BPT limits contained in 40 CFR 423.12 (steam electric generating point source category).

(b) In establishing national limits, EPA takes into account all the information it can collect, develop and solicit regarding the factors listed in sections 304(b) and 304(g) of the CWA. In some cases, however, data which could affect these national limits as they apply to a particular discharge may not be available or may not be considered during their development. As a result, it may be necessary on a case-by-case basis to adjust the national limits, and make them either more or less stringent as they apply to certain dischargers within an industrial category or subcategory. This will only be done if data specific to that discharger indicates it presents factors fundamentally different from those considered by EPA in developing the limit at issue. Any interested person believing that factors relating to the discharger's facilities, equipment, processes or other facilities related to the discharger are fundamentally different from the factors considered during development of the national limits may request a fundamentally different factors variance under R.61-9.122.21(l)(1). In addition, such a variance may be proposed by the Department in the draft permit.

125.31. Criteria.

(a) A request for the establishment of effluent limitations under this part (fundamentally different factors variance) shall be approved only if:

(1) There is an applicable national limit which is applied in the permit and specifically controls the pollutant for which alternative effluent limitations or standards have been requested; and

(2) Factors relating to the discharge controlled by the permit are fundamentally different from those considered by EPA in establishing the national limits; and

(3) The request for alternative effluent limitations or standards is made in accordance with the procedural requirements of R.61-9.124.

(b) A request for the establishment of effluent limitations less stringent than those required by national limits guidelines shall be approved only if:

(1) The alternative effluent limitation or standard requested is no less stringent than justified by the fundamental difference; and

(2) The alternative effluent limitation or standard will ensure compliance with section 208(e) and 301(b)(1)(C) of the CWA; and

(3) Compliance with the national limits (either by using the technologies upon which the national limits are based or by other control alternatives) would result in:

(i) A removal cost wholly out of proportion to the removal cost considered during development of the national limits; or

(ii) A non-water quality environmental impact (including energy requirements) fundamentally more adverse than the impact considered during development of the national limits.

(c) A request for alternative limits more stringent than required by national limits shall be approved only if:

(1) The alternative effluent limitation or standard requested is no more stringent than justified by the fundamental difference; and

(2) Compliance with the alternative effluent limitation or standard would not result in:

(i) A removal cost wholly out of proportion to the removal cost considered during development of the national limits; or

(ii) A non-water quality environmental impact (including energy requirements) fundamentally more adverse than the impact considered during development of the national limits.

(d) Factors which may be considered fundamentally different are:

(1) The nature or quality of pollutants contained in the raw waste load of the applicant's process wastewater;

(2) The volume of the discharger's process wastewater and effluent discharged;

(3) Non-water quality environmental impact of control and treatment of the discharger's raw waste load;

(4) Energy requirements of the application of control and treatment technology;

(5) Age, size, land availability, and configuration as they relate to the discharger's equipment or facilities; processes employed; process changes; and engineering aspects of the application of control technology;

(6) Cost of compliance with required control technology.

(e) A variance request or portion of such a request under this section shall not be granted on any of the following grounds;

(1) The infeasibility of installing the required waste treatment equipment within the time the CWA allows.

(2) The assertion that the national limits cannot be achieved with the appropriate waste treatment facilities installed, if such assertion is not based on factor(s) listed in paragraph (d) of this section;

(3) The discharger's ability to pay for the required waste treatment; or

(4) The impact of a discharge on local receiving water quality.

(f) Nothing in this section shall be construed to impair the right of the State or locality under section 510 of the CWA to impose more stringent limitations than those required by Federal law.

125.32. Method of application.

(a) A written request for a variance under this part D shall be submitted in duplicate to the Department in accordance with R61-9.122.21(m)(1) and R61-9.124.3.

(b) The burden is on the person requesting the variance to explain that:

(1) Factor(s) listed in section 125.31(b) regarding the discharger's facility are fundamentally different from the factors EPA considered in establishing the national limits. The requester should refer to all relevant material and information, such as the published guideline regulations development document, all associated technical and economic data collected for use in developing each national limit, all records of legal proceedings, and all written and printed documentation including records of communication, etc., relevant to the regulations which are kept on public file by the EPA;

(2) The alternative limitations requested are justified by the fundamental difference alleged in paragraph (b)(1) of this section; and

(3) The appropriate requirements of section 125.31 have been met.

PART H

CRITERIA FOR DETERMINING ALTERNATIVE EFFLUENT LIMITATIONS UNDER SECTION 316(A) OF THE CWA

125.70. Purpose and scope.

(a) Section 316(a) of the CWA provides that: "With respect to any point source otherwise subject to the provisions of section 301 or section 306 of this ACT, whenever the owner or operator of any such source, after opportunity for public hearing, can demonstrate to the satisfaction of ... the State that any effluent limitation proposed for the control of the thermal component of any discharge from such source will require effluent limitations more stringent than necessary to assure the protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife in and on the body of water into which the discharge is to be made, the ...State may impose an effluent limitation under such sections on such plant, with respect to the thermal component of such discharge (taking into account the interaction of such thermal component with other pollutants), that will assure the protection and propagation of a balanced indigenous population of shellfish, fish and wildlife in and on that body of water."

(b) This part describes the factors, criteria and standards for establishment of alternative thermal effluent limitations under section 316(a) of the CWA in permits issued under section 402(a) of the CWA.

125.71. Definitions.

For the purpose of this part:

(a) "Alternative effluent limitations" means all effluent limitations or standards of performance for the control of the thermal component of any discharge which are established under section 316(a) of the CWA, this section, and the State Water Quality Standard R.61-68.

(b) "Representative important species" means species which are representative, in terms of their biological needs, of a balanced, indigenous community of shellfish, fish and wildlife in the body of water into which a discharge of heat is made.

(c) The term "balanced, indigenous community" is synonymous with the term "balanced, indigenous population" in the CWA and means a biotic community typically characterized by diversity, the capacity to sustain itself through cyclic seasonal changes, presence of necessary food chain species and by a lack of domination by pollution tolerant species. Such a community may include historically non-native species introduced in connection with a program of wildlife management and species whose presence or abundance

results from substantial, irreversible environmental modifications. Normally, however, such a community will not include species whose presence or abundance is attributable to the introduction of pollutants that will be eliminated by compliance by all sources with section 301(b)(2) of the CWA; and may not include species whose presence or abundance is attributable to alternative effluent limitations imposed pursuant to section 316(a) of the CWA.

125.72. Early screening of applications for variances under section 316(a) of the CWA.

(a) Any initial application for a section 316(a) variance shall include the following early screening information:

(1) A description of the alternative effluent limitation requested;

(2) A general description of the method by which the discharger proposes to demonstrate that the otherwise applicable thermal discharge effluent limitations are more stringent than necessary;

(3) A general description of the type of data, studies, experiments and other information which the discharger intends to submit for the demonstration; and

(4) Such data and information as may be available to assist the Department in selecting the appropriate representative important species.

(b) After submitting the early screening information under paragraph (a) of this section, the discharger shall consult with the Department at the earliest practicable time (but not later than 30 days after the application is filed) to discuss the discharger's early screening information. Within 60 days after the application is filed, the discharger shall submit for the Department's approval a detailed plan of study which the discharger will undertake to support its section 316(a) demonstration. The discharger shall specify the nature and extent of the following type of information to be included in the plan of study; Biological, hydrographical and meteorological data; physical monitoring data; engineering or diffusion models; laboratory studies; representative important species; and other relevant information. In selecting representative important species, special consideration shall be given to species mentioned in applicable water quality standards. After the discharger submits its detailed plan of study, the Department shall either approve the plan or specify any necessary revisions to the plan. The discharger shall provide any additional information or studies which the Department subsequently determines necessary to support the demonstration, including such studies or inspections as may be necessary to select representative important species. The discharger may provide any additional information or studies which the discharger feels are appropriate to support the demonstration.

(c) Any application for the renewal of a section 316(a) variance shall include only such information described in paragraph (a) and (b) of this section and section 125.73(c)(1) as the Department requests within 60 days after receipt of the permit application.

(d) [Reserved]

(e) In making the demonstration the discharge shall consider any information or guidance published by EPA to assist in making such demonstrations.

(f) If an applicant desires a ruling on a section 316(a) application before the ruling on any other necessary permit terms and conditions, it shall so request upon filing its application under paragraph (a) of this section. This request shall be granted or denied at the discretion of the Department.

125.73. Criteria and standards for the determination of alternative effluent limitations under section 316(a) of the CWA.

(a) Thermal discharge effluent limitations or standards established in permits may be less stringent than those required by applicable standards and limitations if the discharger demonstrates to the satisfaction of the Department that such effluent limitations are more stringent than necessary to assure the protection and propagation of a balanced, indigenous community of shellfish, fish and wildlife in and on the body of water into which the discharge is made. This demonstration must show that the alternative effluent limitation desired by the discharger, considering the cumulative impact of its thermal discharge together with all other significant impacts on the species affected, will assure the protection and propagation of a balanced indigenous community of shellfish, fish and wildlife in and on the body of water into which the discharge is to be made.

(b) In determining whether or not the protection and propagation of the affected species will be assured, the Department may consider any information contained or referenced in any applicable thermal water quality criteria and thermal water quality information published by the Administrator under section 304(a) of the CWA, or any other information it deems relevant.

(c)(1) Existing dischargers may base their demonstration upon the absence of prior appreciable harm in lieu of predictive studies. Any such demonstrations shall show:

(i) That no appreciable harm has resulted from the normal component of the discharge (taking into account the interaction of such thermal component with other pollutants and the additive effect of other thermal sources to a balanced, indigenous community of shellfish, fish and wildlife in and on the body of water into which the discharge has been made; or

(ii) That despite the occurrence of such previous harm, the desired alternative effluent limitations (or appropriate modifications thereof) will nevertheless assure the protection and propagation of a balanced, indigenous community of shellfish, fish and wildlife in and on the body of water into which the discharge is made.

(2) In determining whether or not prior appreciable harm has occurred, the Department shall consider the length of time in which the applicant has been discharging and the nature of the discharge.