

STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION

DIVISION OF WATER DIRECTOR'S OFFICE

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August 14, 2006

Michael F. Gearheard, Director
Office of Water and Watersheds
US Environmental Protection Agency
1200 Sixth Avenue
Seattle, WA 98101

RE: Revisions to Alaska Water Quality Standards for dissolved oxygen criterion and analytical methods

Dear Mr. Gearheard:

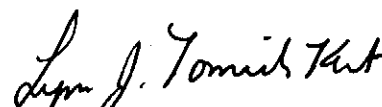
The Department of Environmental Conservation (DEC) recently adopted a change in its regulations and is submitting the change to the Environmental Protection Agency (EPA) for review. The change entails a repeal of the dissolved oxygen criterion for the seafood processing use and an update to analytical methods approved by EPA for Clean Water Act purposes. The regulation change was signed by Commissioner Kurt Fredriksson on May 3, 2006 and filed by Lieutenant Governor Leman on May 14, 2006. The requirements under this regulation became effective for State purposes on June 13, 2006.

Please find enclosed:

1. a copy of the final regulation in 18 AAC 70.020(b)(15) and 18 AAC 70.020(c)(2);
2. the adoption order signed by Commissioner Fredriksson and Lieutenant Governor Leman;
3. the May 8, 2006 memo from the Alaska Department of Law certifying the regulation; and
4. Frequently Asked Questions which details the technical justification for these changes.

If you have any questions, please contact me or Nancy Sonafrank at (907) 451-2726.

Sincerely,


Lynn J. Tomich Kent
Director

Enclosures

cc:

(w/enc): Janine Jennings, EPA R10
Lisa McGuire, EPA R10

[w/out enc]: Dan Easton, DEC Deputy Commissioner
Nancy Sonafrank, DEC Water/Fairbanks

18 AAC 70.020(b)(15) is amended to read:

Water Quality Standards for Designated Uses	
POLLUTANT & WATER USE	CRITERIA
(15) DISSOLVED GAS, FOR MARINE WATER USES	
(A) Water Supply (i) aquaculture	Surface dissolved oxygen (D.O.) concentration in coastal water may not be less than 6.0 mg/l for a depth of one meter except when natural conditions cause this value to be depressed. D.O. may not be reduced below 4 mg/l at any point beneath the surface. D.O. concentrations in estuaries and tidal tributaries may not be less than 5.0 mg/l except where natural conditions cause this value to be depressed. In no case may D.O. levels exceed 17 mg/l. The concentration of total dissolved gas may not exceed 110% of saturation at any point of sample collection.
(A) Water Supply (ii) seafood processing	Not applicable [D.O. MUST BE GREATER THAN OR EQUAL TO 5 MG/L].
(A) Water Supply (iii) industrial	Not applicable.
(B) Water Recreation (i) contact recreation	Same as (15)(A)(i).
(B) Water Recreation (ii) secondary recreation	Same as (15)(A)(i).
(C) Growth and Propagation of Fish, Shellfish, Other Aquatic Life, and Wildlife	Same as (15)(A)(i).
(D) Harvesting for Consumption of Raw Mollusks or Other Raw Aquatic Life	Same as (15)(A)(i).

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18 AAC 70.020(b), note 1, is amended to read:

1. Wherever criteria for fecal coliform bacteria are provided in this section, fecal coliform bacteria **enumeration** must be determined by the membrane filter technique or most probable number procedure according to **any edition of** *Standard Methods for the Examination of Water and Wastewater*, **adopted by reference** [18TH EDITION, 1992, AS DESCRIBED] in (c)(1) of this section [AND ADOPTED BY REFERENCE], or in accordance with other standards approved by the department and the United States Environmental Protection Agency (EPA).

18 AAC 70.020(b), note 7, is amended to read:

7. Samples to determine concentrations of total aromatic hydrocarbons (TAH) and total aqueous hydrocarbons (TAqH) must be collected in marine and fresh waters below the surface and away from any observable sheen; concentrations of TAqH must be determined and summed using a combination of: (A) EPA Method 602 (plus xylenes) or EPA Method 624 to quantify monoaromatic hydrocarbons and to measure TAH; and (B) EPA Method 610 or EPA Method 625 to quantify polynuclear aromatic hydrocarbons listed in EPA Method 610; use of an alternative method requires department approval; the EPA methods referred to in this note may be found in **Appendix A of** 40 C.F.R. 136, [APPENDIX A,] as revised as of July 1, **2003** [2002] and adopted by reference.

18 AAC 70.020(b), note 8, is amended to read:

8. Color is as measured in color units on the platinum-cobalt scale according to

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any edition of *Standard Methods for the Examination of Water and Wastewater*, adopted by reference [18TH EDITION, 1992 AS DESCRIBED] in (c)(1) of this section [AND ADOPTED BY REFERENCE].

The lead-in language of 18 AAC 70.020(c) is amended to read:

(c) Water quality **must** [WILL] be analyzed according to

...

18 AAC 70.020(c)(1) is amended to read:

(1) *Standard Methods for the Examination of Water and Wastewater*, 18th **edition** [EDITION], 1992, **19th edition, 1995, or 20th edition, 1998**, published jointly by the American Public Health and American Water Works Associations, and the Water Environment Federation; **the editions of *Standard Methods for the Examination of Water and Wastewater* listed in this paragraph are adopted by reference, except that analytical methods 3111B, 3111D, 3112B, 3113B, and 3114B in the 20th edition are not adopted by reference and are not approved** [(PUBLICATION OFFICE: AMERICAN PUBLIC HEALTH ASSOCIATION, 1015 15TH STREET NW, WASHINGTON, D.C. 20005)];

18 AAC 70.020(c)(2) is amended to read:

(2) *Methods for Chemical Analysis of Water and Wastes*, **March 1983** [MARCH 1979, TECHNICAL REPORT NO. EPA 600-4-79-020], Environmental Monitoring and Support Laboratory, Office of Research and Development, United States Environmental Protection

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Agency, Technical Report No. EPA-600/4-79-020, adopted by reference [CINCINNATI, OHIO 45268 (AVAILABLE FROM THE NATIONAL TECHNICAL INFORMATION SERVICE, UNITED STATES DEPARTMENT OF COMMERCE, SPRINGFIELD, VIRGINIA 22161, ORDER NO. PB 297686)];

18 AAC 70.020(c)(3) is amended to read:

(3) EPA's Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act; National Primary Drinking Water Regulations; and National Secondary Drinking Water Regulations; Methods Update, 67 Fed. Reg. 65220 - 65253 (October 23, 2002), adopted by reference [GUIDELINES ESTABLISHING TEST PROCEDURES FOR THE ANALYSIS OF POLLUTANTS; FINAL RULE AND INTERIM FINAL RULE AND PROPOSED RULE, FEDERAL REGISTER PART VIII, EPA, FRIDAY, OCTOBER 26, 1984, 40 C.F.R. PART 136, VOL. 49, NO. 209];

18 AAC 70.020(c)(4) is repealed:

(4) repealed __/__/__;

18 AAC 70.020(c)(5) is amended to read:

(5) Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, July 1982 [TECHNICAL REPORT NO. EPA 600 14-82-057], Environmental Monitoring and Support Laboratory, Office of Research and Development, United States Environmental Protection Agency, Technical Report No. EPA-600/4-82-057, adopted by

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reference [CINCINNATI, OH 45268];

(Eff. 11/1/97, Register 143; am 4/29/99, Register 150; am 5/27/99, Register 150; am 6/22/2003, Register 166; am __/__/__, Register ____)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.080
AS 46.03.050

Editor's note: Federally-promulgated water quality standards for the State of Alaska regarding toxic substances, including human health criteria and aquatic life criteria, are found at 40 C.F.R. 131.36. The documents adopted by reference in 18 AAC 70.020 may be viewed at the department's Anchorage, Fairbanks, and Juneau offices. The United States Department of Interior documents adopted by reference in 18 AAC 70.020(b), notes 2 and 3, are also available from that agency. The United States Department of Agriculture document adopted by reference in 18 AAC 70.020(b), note 3, is also available from the USDA Forest Service Pacific Northwest Forest and Range Experiment Station, P.O. Box 909, Juneau, Alaska 99802. The document adopted by reference in 18 AAC 70.020(b), note 4, is also available from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428-2959. The documents adopted by reference in 18 AAC 70.020(b), notes 6 and 10, are also available from the Superintendent of Documents, United States Government Printing Office, Washington, D.C. **Information on purchasing *Standard Methods for the Examination of Water and Wastewater*, adopted by reference in 18 AAC 70.020(c), may be obtained by contacting the American Public Health Association, 1015 15th Street NW, Washington, D.C. 20005). Information on purchasing *Methods for Chemical Analysis of Water and***

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Wastes and Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater,
adopted by reference in 18 AAC 70.020(c), may be obtained by contacting the National
Technical Information Service (NTIS), United States Department of Commerce, 5285 Port
Royal Road, Springfield, Virginia 22161; telephone (800) 553-6847; fax (703) 487-4650.
Methods for Chemical Analysis of Water and Wastes is also available, at no cost, for
download at the website for the United States Environmental Protection Agency, National
Environmental Publications Information System (NEPIS), Internet address:
<http://nepis.epa.gov>.

As of Register 178 (July 2006), the regulations attorney made technical revisions under AS 44.62.125(b)(6) to 18 AAC 70.020(b).

The lead-in language of 18 AAC 70.030(a) is amended to read:

18 AAC 70.030. Whole effluent toxicity limit. (a) An effluent discharged to a water may not impart chronic toxicity to aquatic organisms, expressed as 1.0 chronic toxic unit, at the point of discharge, or if the department authorizes a mixing zone in a permit, approval, or certification, at or beyond the mixing zone boundary, based on the minimum effluent dilution achieved in the mixing zone. If the department determines that an effluent has reasonable potential to cause or contribute to exceedance of the whole effluent toxicity limit, the department will require whole effluent toxicity testing as a condition of a permit, approval, or certification. The permittee shall use methods and species approved by the United States Environmental Protection Agency in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 4th edition (2002), Technical Report No. EPA-*

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821-R-02-013, adopted by reference, and [(2D ED. 1989) (OFFICE OF RESEARCH AND DEVELOPMENT, CINCINNATI, OH, EPA-600/4-89/001),] *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms, 1st edition (August 1995), Technical Report No. EPA/600/R-95/136, adopted by reference* [(1988) (OFFICE OF RESEARCH AND DEVELOPMENT, CINCINNATI, OH, EPA-600/4-87/028), AND SUPPLEMENT TO "SHORT-TERM METHODS FOR ESTIMATING THE CHRONIC TOXICITY OF EFFLUENTS AND SURFACE WATERS TO FRESHWATER ORGANISMS" (SEPTEMBER 1989) (OFFICE OF RESEARCH AND DEVELOPMENT, CINCINNATI, OH, EPA-600/4-89/001a, REVISION 1)], or alternate methods and species approved by the department that provide equivalent estimates of chronic toxicity. The department will require that the testing use sensitive and biologically important life stages of indigenous species, as the department considers necessary and feasible to protect aquatic life fully. The department will reduce the frequency of, or eliminate, whole effluent toxicity testing if

...

(Eff. 11/1/97, Register 143; am 4/29/99, Register 150; am __/__/__, Register __)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.080
AS 46.03.050

Editor's note: *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms and Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine*

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Organisms, adopted by reference in 18 AAC 70.030(a), are available for viewing at the department's Anchorage, Fairbanks, and Juneau offices. Those publications may also be obtained by contacting the United States Environmental Protection Agency, National Service Center for Environmental Publications (NSCEP), P.O. Box 42419, Cincinnati, Ohio 45242; telephone: (800) 490-9198; fax: (513) 489-8695. In addition, *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* is available at the website for the United States Environmental Protection Agency, Office of Water, Internet address: <http://yosemite.epa.gov/water/owrcatalog.nsf>; *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* is available at the website for the United States Environmental Protection Agency, National Environmental Publications Information System (NEPIS), Internet address: <http://nepis.epa.gov>.

18 AAC 70.990(34) is amended to read:

(34) "mean" means the average of values obtained over a specified time period and, for fecal coliform analysis, is computed as a geometric mean [LOGARITHM];

18 AAC 70.990(52) is amended to read:

(52) "settleable solids" means solid material of organic or mineral origin that is transported by and deposited from water, as measured by the volumetric Imhoff cone method and at the method detection limits specified in method 2540(F), in any edition of *Standard Methods for the Examination of Water and Wastewater*, adopted by reference in 18 AAC

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70.020(c)(1) [18TH EDITION (1992)];

18 AAC 70.990(70) is amended to read:

(70) "milliequivalents per liter [LITTER]" or "meq/l" mean milligrams per liter divided by the molecular weight of **a chemical species, and multiplied by the electrical charge or valence of the species** [THE CHEMICAL COMPOUND];

(Eff. 11/1/97, Register 143; am 4/29/99, Register 150; am 6/22/2003, Register 166; am ___/___/___, Register ___)

Authority:	AS 46.03.010	AS 46.03.080	AS 46.03.110
	AS 46.03.020	[AS 46.03.090]	AS 46.03.710
	AS 46.03.050	AS 46.03.100	AS 46.03.720
	AS 46.03.070		

