

MINNESOTA DEPARTMENT OF HEALTH
Division of Environmental Health

MAK 1 / 1982

Minnesota State
of Health Division

In the Matter of Amendments
to Rules Relating to Public
Water Supplies

STATEMENT OF NEED AND REASONABLENESS

The amendments to rules relating to public water supplies, 7MCAR § 1.141-1.145, are being proposed by the Commissioner of Health for the purpose of complying with requirements contained in federal safe drinking water rules.

HISTORY

The Minnesota Safe Drinking Water Act (SDWA) enacted in 1977 [Minn. Stat. § 144.381 to 144.387 (1980)] authorizes the Commissioner of Health to promulgate rules which are no less stringent than federal regulations relating to public water supplies [Minn. Stat. § 144.383 (e) (1980)]. This authority was granted for the purpose of allowing the State, pursuant to the federal SDWA of 1974 (PL 93-523 and amendments thereto) to assume primacy for enforcement of the U.S. Environmental Protection Agency (EPA) drinking water standards. The federal law requires that a state which assumes primacy must meet certain minimum requirements prescribed in federal rules in order to be eligible to receive federal grant monies to support its administration of the federal program. The Minnesota SDWA provides that the State can retain primacy only as long as federal support does not fall below 40% of the State's total cost for administration of the program. Minn. Stat. § 144,388 (1980).

The Commissioner of Health promulgated the necessary rules 7MCAR § 1.145-1.149, and the U.S. EPA granted primary enforcement responsibility to the State in 1977. Since that time, the U.S. EPA has amended the federal rules. A state must now amend its rules similarly if it wishes to retain primacy. Amendments to the state rules which are discussed here are being proposed for the purpose of complying with the federal requirements (44 F.R. 68641-68642, November 29, 1979, and 45 F.R. 57342-47346, August 27, 1980).*

NEED AND REASONABLENESS

Nearly all of the amendments being proposed below are required by the federal rules. In those instances where that is basis for the amendment a simple reference to the federal citation will be given without additional comment. Where the federal rules allow a state to exercise discretion, the rationale for the particular amendment being proposed will be provided. Similarly, where a change is being made for any reason other than a change in the federal rule, a specific explanation and rationale will be given.

*A copy of the referenced pages is attached as Appendix A.

7MCAR § 1.145 B. New terms are being added to the existing list of defined terms. The new terms are contained in the federal rules' definition section, 40 C.F.R., § 141.2 (p) through (t) (44 F.R. 68641). The terms already contained in the state rule are being relabelled to maintain alphabetical order.

7MCAR § 1.145 C.1. This portion of the rule is being amended by addition of the phrase "sodium and corrosivity" to reflect the expanded scope of the State rules, as prescribed in the federal rules (45 F.R. 57346, § 141.42).

7MCAR § 1.145 C.2. The last portion of the sentence is being stricken because the State will henceforth exercise its enforcement authority over public water supplies on federal facilities. When the rule was originally adopted, it was generally accepted that the states were pre-empted from enforcing their own rules in federal facilities. Since that time, Congress has specifically amended* the federal SDWA (42 U.S.C. § 300 f) to allow for enforcement of state standards on federal installations by states with primacy. Since the State has decided to assume this responsibility, the limiting language must be repealed.

7MCAR § 1.146 A.1. All the newly proposed language is authorized in the federal rules [45 F.R. 57343, § 141.14 (a)(1)]. The State will exercise its discretion with regard to authorizing a supplier to exclude one positive sample per month. Based on previous experience, the State has learned that occasional samples will yield a positive result which is not repeatable and which is not attributable to any identifiable cause. As long as the conditions enumerated in subpart A.1. are met, the elimination of the one positive sample from the calculated monthly average will not result in the creation of a public health risk. No purpose would be served by requiring the supplier to include the "false" positive in his monthly average, which might cause the maximum contaminant level to be exceeded, thus triggering the notification of the public. The proposed amendment meets the federal requirement and reduces the burden on the supplies without any increase in risk to the public health.

7MCAR § 1.146 A.2. The preceding rationale applies equally to the additions being proposed in this section. The comparable federal rule can be found at 45 F.R. 57343, § 141.14 (b)(1) and (2).

7MCAR § 1.145 A.4. The amendment proposed here is taken verbatim from the federal rule contained in 45 F.R. 57343, § 141.14 (d). The amendment is being made to eliminate any misunderstanding of the earlier federal rule. Without the amending statement, one could have interpreted the existing language to mean that exceeding the "single sample" maximum contaminant level (MCL) constituted a separate violation from that which resulted when a monthly average MCL was exceeded because of that same "single sample". The amendment makes clear that there is only one and not two violations.

*P.L. 95-190, 42 U.S.C. 300 j(6).

7MCAR § 1.146 C. The opening paragraph of the section is being stricken because it is being interwoven into succeeding parts of subsection C. In subsection C.1. the level for fluoride is being reduced from 2.4 mg/l to 2.2 mg/l. The MCL of 2.4 mg/l was originally chosen, based on ambient temperature data which was then thought to be representative of the average annual temperature in the State. After adoption of that 2.4 level, it was learned, from the U.S. Weather Service, that the average ambient temperature was lower than previously assumed. The U.S. EPA rules prescribe specific MCLS based on a state's average annual temperature, 40 CFR Section 141.11 (c). Based on the true average temperature in Minnesota, the fluoride MCL should be 2.2 mg/l, to comply with the federal requirements. Sentence number "2" is the same as the second sentence in the opening paragraph which was stricken earlier. The sentence labeled "3" is taken in part from the first sentence in the opening stricken paragraph. (The MCL for nitrate listed in C.1, also applies to non-community water supplies ...). The latter part of this new sentence "3", starting with "except that ..." is new language being added to the state rule. This provision is a discretionary one which is permitted under the federal rule at 45 F.R. 57343, Section 141.11 (d). The amendment is being proposed based on the recognition that the populations which are served by non-community supplies are almost exclusively transient, and therefore are not likely to consume quantities of high nitrate containing water which would be sufficient to cause any significant health problems. In addition, the only population which is really sensitive to high nitrate level water is children under six months of age, and the rule prohibits their being served water from a supply which has a higher nitrate level. There is little likelihood that a non-resident over 6 months of age who is permitted to drink the water will suffer any health consequences. None have been shown to occur in adult populations which have been drinking high nitrate containing water for extended periods of time. The State has determined that if the conditions prescribed in subparts a through d of the proposed amendment are being met, no risk will result to the health of persons who consume that water.

7MCAR § 1.146 D. A new subsection 3 sets out the level for total trihalomethanes and describes its scope of applicability, just as it is as prescribed in the federal rule, 44 F.R. 68641, Section 141.12.

7MCAR § 1.147 B.1. This section enumerates new alternative analytical methods which the federal rules authorize the states to use in analyzing the microbiological quality of water. All of the titles of the reference sources are being defined in the definitions' portion of the amended rules at 7MCAR §1.145 for purposes of brevity and consistency and to reduce the possibility of misprints. The new methods enumerated here are authorized in 45 F.R. 57343, Section 141.21 (a).

7MCAR § 1.147 B.3. The amended federal rules authorize

states to impose on non-community water supplies, monitoring frequencies which are different from those prescribed in the original federal rules. The new federal rule leaves it to the discretion of the state to set a monitoring frequency, as long as the state takes certain factors into account before relaxing the sampling frequency.

Minnesota is electing to adopt this discretionary provision based on the following rationale. The single best way of determining whether a ground water supply can deliver water which complies with state water quality standards is to look for compliance with the state water well construction code. If a well is constructed and located in accordance with the code, the chemical and bacteriological quality of the water is not likely to change from quarter to quarter or even from year to year. Therefore, there is no need to set a minimum sampling frequency of once per year for those supplies which meet the prescribed conditions. Rather than requiring the analysis of one sample of water on an annual basis, the rule will now require that the well have been constructed in accordance with the Minnesota Water Well Construction Code. If upon making a sanitary survey, the inspecting engineer or environmental health specialist finds that the well for a non-community supply does comply with the well code, then the Commissioner may set a sampling frequency which is less than once per year. The State has determined, based on its own experience and that of other states, that this alternative procedure will provide the same degree of protection to the health of the public which consumes water from such supply as would be provided if quarterly samples were required. The federal rule authorizing the exercise of such discretion by the states can be found at 45 F.R. 57344, Section 141.21 (c).

7MCAR § 1.147 C. The federal rules allow a state to reduce the sampling frequency for measurement for turbidity in non-community supplies, as long as the state's regulatory authority finds that such a reduced frequency will not pose a risk to the public health. As provided in the federal rule, the conditions which must be met by the supply before such a reduced sampling frequency will be authorized is contained in the amending language. The federal rule authorizing this exercise of discretion by the states is contained in 45 F.R. 57344, Section 141.22 (a). The federal rules also authorize the adoption of additional analytical methods for the measurement of turbidity, at 45 F.R. 57344 Section 141.22 (a).

7MCAR § 1.147 D.3. This entire portion of the existing rule is being repealed and replaced with updated and additional references for analytical methods, as provided in the federal rules at 45 F.R. 57344, Section 141.23 (f). Here too we have chosen to footnote the names of the major references in order to save having to repeat the same title several times over.

7MCAR § 1.147 E.2. The federal rules permit the alternative use of newly developed methods and these have been incorporated

into the rule. The federal rule language is contained at 45 F.R. 57345, Section 141.24 (e).

7MCAR § 1.147 E.5. The federal rules impose a requirement to sample for a new class of organic materials called trihalomethanes. The proposed amendment contains the necessary provisions (44 F.R. 68641, Section 141.30) which a state with primacy must adopt. In those instances where the federal rule relating to trihalomethanes (THMs) grants to a state the authority to exercise discretion, the State proposes to adopt the minimum requirement permissible under that federal rule. In subpart E.5.a., the proposed amendment states that multiple wells (for any single supply) which draw from the same aquifer will be handled as if they represented a single treatment plant for the purpose of determining number of samples. It has been the State's experience that a cluster of wells drawing from the same aquifer, in the vast majority of cases, supply water which has virtually the same properties. Therefore, it is appropriate to consider a cluster of wells which are drawing from the same aquifer as if they were a single well supplying a single treatment plant. This exercise of discretion by a state is authorized in the federal rule (44 F.R. 68641 Section 141.30 (a) Column 3, line 8). All of the amending language in 7MCAR §1.147 E.5.b(1), (2) and (3) is taken from the federal rule [44 F.R. 68642, § 141.30 (b)(1)(2) and (3)]. The last sentence of subpart (3) of the federal rule grants a state the option of imposing an increased monitoring frequency above the minimum prescribed in the rule, in cases where it is necessary to detect variations of levels within the distribution system. (44 F.R. 68641, Section 141.30 (b)(3), last sentence). It is not necessary to incorporate this optional language into the state rule because there already is a state provision (contained in 7MCAR section 1.147 J.) which allows the Commissioner to impose requirements for more frequent sampling if analytical results show that a previously measured contaminant is approaching an MCL.

7MCAR § 1.147 E.5.c. This is taken from its federal counterpart at 44 F.R. 68642, § 141.30 (c). Two portions of the federal rule were not included in this proposed amendment. The federal rule reference to a 30-day reporting period (44 F.R. 68642, 1st column, 18 lines from bottom) is not incorporated here because there is a separate reporting provision covering all analytical results (cf., 7MCAR §1.149 B.2. as proposed). The second portion from the federal rule which is not incorporated into the proposed amendments relates to increasing the monitoring frequency (44 F.R. 68642, 2nd column, last sentence of (c)(2)). The reason for not including this statement is the same as was given above, under 7MCAR § 1.147 E.5.b.(1).

7MCAR § 1.147 E.5.d. and e. are taken in their entirety from 44 F.R. 68642, § 141.30 (d) and (e).

7MCAR § 1.147 E.5.f. is taken from 44 F.R. 68642, § 141.30 (f) with a few deletions from (f)(3) and (f)(4). 7MCAR Section

1.147 E.5.f.(3) makes it mandatory that a supply provide certain base line water quality information as part of its plan for modifying a treatment process. The federal rules make this particular requirement permissive by saying that a state "should" require certain kinds of information, 44 F.R. 68642, 3rd column, mid page. The proposed amendment requires the submission of all the information recommended in the federal rule except for data concerning levels of fecal streptococci, because existing state laboratory practice does not allow for routine testing for fecal strep in drinking water. In our opinion, the results of measurements for fecal coliform are just as good an indicator of fecal contamination as are those from measurements for fecal strep. The last sentence in the same portion of the federal rule recommending that results of virus studies also be required is not included in the proposed amendment because no state laboratory has the necessary facilities for doing such virus studies on a routine basis. If such studies should ever become necessary, the State could explore sources out of state to provide that service. 7MCAR § 1.147 E.5.f(4). Here too, the federal rules permit a state with primacy to impose requirements for additional monitoring when disinfectant procedures are changed by a supply. As noted earlier, the state rules elsewhere contain a provision authorizing the imposition of more frequent monitoring under certain circumstances.

7MCAR § 1.147 H. The rule is being amended to allow for individual persons who are acceptable to the Commissioner to perform measurements for temperature and pH in addition to those already listed in the rule (turbidity and free-chlorine residual). This authority is being granted to certain individuals because measurements for temperature and pH are relatively easy to perform and require the use of equipment which most supply operators are familiar with. Therefore, it is appropriate that the rules state that some individuals will be allowed to make these measurements.

7MCAR § 1.147 K and L. Both of these subsections contain entirely new language as authorized in the federal rules (45 F.R. 57345 et. seq., § 141.41 and § 141.42). 7MCAR §1.147 K relates to monitoring for sodium and 7MCAR §1.147 L relates to monitoring for corrosivity. Federal law does not require a state with primacy to enforce the federal standards relating to monitoring for sodium and corrosivity. In states which chose not to, the U.S EPA will deal with suppliers directly to require their compliance with the federal monitoring standards. Minnesota has chosen to enforce those requirements through its own rules because the state wishes to continue to be the exclusive governmental body with which public water supplies must interact on matters relating to the quality of drinking water. Those portions of the federal rules which impose specific responsibilities upon the supplier have been incorporated into the State rule. Those portions of the federal rules which are permissive have been handled as follows: the federal provisions authorizing the sampling of multiple wells from a single aquifer as if they constituted a single treatment plant (45 F.R. 57345, § 141.41

(a) re: sodium, and 45 F.R. § 57346, § 141.42 (a)(1) re: corrosivity) have been adopted in the state rule, for the reasons given earlier, at p. 8; the federal provisions authorizing a state to impose more frequent monitoring have not been incorporated here because they are already contained in 7MCAR § 1.147 J. In the federal rules (45 F.R. 57346, § 141.41 (c)) there is a provision making it permissive for a supply to be notifying local health officials of sodium levels. Since the State has elected to assume the responsibility for providing this information to local health officials, there is no need to include that federal provision in the state rule. There is permissive language in the federal rule relating to monitoring for corrosivity (45 F.R. 57346, § 141.42 A.(a)(2)) having to do with a state requiring more frequent monitoring, requiring monitoring for additional parameters, or authorizing use of the Aggressive Index. The State has not elected to include any of this language in the proposed amendments. Use of the Aggressive Index by suppliers as one measure for corrosivity, is not being allowed since it is the State's determination that that Index does not provide as reliable a measure of corrosivity as does the Langelier Index.

7MCAR § 1.149 B.2. The forty-day reporting interval provided in the existing rule is being shortened in accordance with the requirement in the federal rules that results be submitted to the state within ten days following receipt of the result by the supply or within ten days following the termination of a stipulated monitoring period whichever is appropriate. This requirement is contained in the federal rule at 45 F.R. 57345, § 141.31.

The rule changes being proposed here are all based on new requirements having been adopted in the federal rules or federal law. To the extent that the State is required by the provisions of the Federal Safe Drinking Water Act to have adopted rules which are at least as stringent as the federal rules, the foregoing proposed changes are necessary. In those instances where the State could exercise some discretion in terms of what it could require from the supplier, only the minimum which is authorized in the federal rules will be imposed in the state rules. The State has based its decision on its own best judgement that risks to the public health would not be increased as a result of imposing these minimum requirements. To the extent that the State is imposing only the minimum requirements of the federal rules, thus freeing the regulated public of any significant new burdens, while still protecting the public health, the rules are reasonable.

regulation not subject to the procedural requirements of Executive Order 12044.

Dated: November 5, 1979.

Douglas M. Costle,
Administrator.

Accordingly, Part 141, Title 40 of the Code of Federal Regulations is hereby amended as follows:

1. By amending § 141.2 to include the following new paragraphs (p) through (t):

§ 141.2 Definitions.

(p) "Halogen" means one of the chemical elements chlorine, bromine or iodine.

(q) "Trihalomethane" (THM) means 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.

(r) "Total trihalomethanes" (TTHM) means the sum of the concentration in milligrams per liter of the trihalomethane compounds (trichloromethane [chloroform], dibromochloromethane,

bromodichloromethane and bromomethane [bromoform]), rounded to two significant figures.

(s) "Maximum Total Trihalomethane Potential (MTP)" means the maximum concentration of total trihalomethanes produced in a given water containing a disinfectant residual after 7 days at a temperature of 25° C or above.

(t) "Disinfectant" means any oxidant, including but not limited to chlorine, chlorine dioxide, chloramines, and ozone added to water in any part of the treatment or distribution process, that is intended to kill or inactivate pathogenic microorganisms.

2. By revising § 141.6 to read as follows:

§ 141.6 Effective dates.

(a) Except as provided in paragraph (b) of this section, the regulations set forth in this part shall take effect on June 24, 1977.

(b) The regulations for total trihalomethanes set forth in § 141.12(c) shall take effect 2 years after the date of promulgation of these regulations for community water systems serving 75,000 or more individuals, and 4 years after the date of promulgation for communities serving 10,000 to 74,999 individuals.

3. By revising the introductory paragraph and adding a new paragraph (c) in § 141.12 to read as follows:

§ 141.12 Maximum contaminant levels for organic chemicals.

The following are the maximum contaminant levels for organic chemicals. The maximum contaminant levels for organic chemicals in paragraphs (a) and (b) of this section apply to all community water systems. Compliance with the maximum contaminant levels in paragraphs (a) and (b) is calculated pursuant to § 141.24. The maximum contaminant level for total trihalomethanes in paragraph (c) of this section applies only to community water systems which serve a population of 10,000 or more individuals and which add a disinfectant (oxidant) to the water in any part of the drinking water treatment process. Compliance with the maximum contaminant level for total trihalomethanes is calculated pursuant to § 141.30.

(c) Total trihalomethanes (the sum of the concentrations of bromodichloromethane, dibromochloromethane, tribromomethane (bromoform) and trichloromethane (chloroform)) 0.10 mg/l.

4. By revising the title, the introductory text of paragraph (a) and paragraph (b) of § 141.24 to read as follows:

§ 141.24 Organic chemicals other than total trihalomethanes, sampling and analytical requirements.

(a) An analysis of substances for the purpose of determining compliance with § 141.12(a) and § 141.12(b) shall be made as follows:

(b) If the result of an analysis made pursuant to paragraph (a) of this section indicates that the level of any contaminant listed in § 141.24 (a) and (b) exceeds the maximum contaminant level, the supplier of water shall report to the State within 7 days and initiate three additional analyses within one month.

5. By adding a new § 141.30 to read as follows:

§ 141.30 Total trihalomethanes sampling, analytical and other requirements.

(a) Community water system which serve a population of 10,000 or more individuals and which add a disinfectant (oxidant) to the water in any part of the drinking water treatment process shall analyze for total trihalomethanes in accordance with this section. For systems serving 75,000 or more individuals, sampling and analyses shall begin not later than 1 year after the date of promulgation of this regulation. For systems serving 10,000 to 74,999

individuals, sampling and analyses shall begin not later than 3 years after the date of promulgation of this regulation. For the purpose of this section, the minimum number of samples required to be taken by the system shall be based on the number of treatment plants used by the system, except that multiple wells drawing raw water from a single aquifer may, with the State approval, be considered one treatment plant for determining the minimum number of samples. All samples taken within an established frequency shall be collected within a 24-hour period.

(b)(1) For all community water systems utilizing surface water sources in whole or in part, and for all community water systems utilizing only ground water sources that have not been determined by the State to qualify for the monitoring requirements of paragraph (c) of this section, analyses for total trihalomethanes shall be performed at quarterly intervals on at least four water samples for each treatment plant used by the system. At least 25 percent of the samples shall be taken at locations within the distribution system reflecting the maximum residence time of the water in the system. The remaining 75 percent shall be taken at representative locations in the distribution system, taking into account number of persons served, different sources of water and different treatment methods employed. The results of all analyses per quarter shall be arithmetically averaged and reported to the State within 30 days of the system's receipt of such results. Results shall also be reported to EPA until such monitoring requirements have been adopted by the State. All samples collected shall be used in the computation of the average, unless the analytical results are invalidated for technical reasons. Sampling and analyses shall be conducted in accordance with the methods listed in paragraph (e) of this section.

(2) Upon the written request of a community water system, the monitoring frequency required by paragraph (b)(1) of this section may be reduced by the State to a minimum of one sample analyzed for TTHMs per quarter taken at a point in the distribution system reflecting the maximum residence time of the water in the system, upon a written determination by the State that the data from at least 1 year of monitoring in accordance with paragraph (b)(1) of this section and local conditions demonstrate that total trihalomethane concentrations will be consistently below the maximum contaminant level.

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(3) If at any time during which the reduced monitoring frequency prescribed under this paragraph applies, the results from any analysis exceed 0.10 mg/l of TTHMs and such results are confirmed by at least one check sample taken promptly after such results are received, or if the system makes any significant change to its source of water or treatment program, the system shall immediately begin monitoring in accordance with the requirements of paragraph (b)(1) of this section, which monitoring shall continue for at least 1 year before the frequency may be reduced again. At the option of the State, a system's monitoring frequency may and should be increased above the minimum in those cases where it is necessary to detect variations of TTHM levels within the distribution system.

(c)(1) Upon written request to the State, a community water system utilizing only ground water sources may seek to have the monitoring frequency required by subparagraph (1) of paragraph (b) of this section reduced to a minimum of one sample for maximum TTHM potential per year for each treatment plant used by the system taken at a point in the distribution system reflecting maximum residence time of the water in the system. The system shall submit to the State the results of at least one sample analyzed for maximum TTHM potential for each treatment plant used by the system taken at a point in the distribution system reflecting the maximum residence time of the water in the system. The system's monitoring frequency may only be reduced upon a written determination by the State that, based upon the data submitted by the system, the system has a maximum TTHM potential of less than 0.10 mg/l and that, based upon an assessment of the local conditions of the system, the system is not likely to approach or exceed the maximum contaminant level for total TTHMs. The results of all analyses shall be reported to the State within 30 days of the system's receipt of such results. Results shall also be reported to EPA until such monitoring requirements have been adopted by the State. All samples collected shall be used for determining whether the system must comply with the monitoring requirements of paragraph (b) of this section, unless the analytical results are invalidated for technical reasons. Sampling and analyses shall be conducted in accordance with the methods listed in paragraph (e) of this section.

(2) If at any time during which the reduced monitoring frequency

prescribed under paragraph (c)(1) of this section applies, the results from any analysis taken by the system for maximum TTHM potential are equal to or greater than 0.10 mg/l, and such results are confirmed by at least one check sample taken promptly after such results are received, the system shall immediately begin monitoring in accordance with the requirements of paragraph (b) of this section and such monitoring shall continue for at least one year before the frequency may be reduced again. In the event of any significant change to the system's raw water or treatment program, the system shall immediately analyze an additional sample for maximum TTHM potential taken at a point in the distribution system reflecting maximum residence time of the water in the system for the purpose of determining whether the system must comply with the monitoring requirements of paragraph (b) of this section. At the option of the State, monitoring frequencies may and should be increased above the minimum in those cases where this is necessary to detect variation of TTHM levels within the distribution system.

(d) Compliance with § 141.12(c) shall be determined based on a running annual average of quarterly samples collected by the system as prescribed in subparagraphs (1) or (2) of paragraph (b) of this section. If the average of samples covering any 12 month period exceeds the Maximum Contaminant Level, the supplier of water shall report to the State pursuant to § 141.31 and notify the public pursuant to § 141.32. Monitoring after public notification shall be at a frequency designated by the State and shall continue until a monitoring schedule as a condition to a variance, exemption or enforcement action shall become effective.

(e) Sampling and analyses made pursuant to this section shall be conducted by one of the following EPA approved methods:

(1) "The Analysis of Trihalomethanes in Finished Waters by the Purge and Trap Method," Method 501.1, EMSL, EPA Cincinnati, Ohio.

(2) "The Analysis of Trihalomethanes in Drinking Water by Liquid/Liquid Extraction," Method 501.2, EMSL, EPA Cincinnati, Ohio.

Samples for TTHM shall be dechlorinated upon collection to prevent further production of Trihalomethanes, according to the procedures described in the above two methods. Samples for maximum TTHM potential should not be dechlorinated, and should be held for seven days at 25° C prior to analysis,

according to the procedures described in the above two methods.

(f) Before a community water system makes any significant modifications to its existing treatment process for the purposes of achieving compliance with § 141.12(c), such system must submit and obtain State approval of a detailed plan setting forth its proposed modification and those safeguards that it will implement to ensure that the bacteriological quality of the drinking water served by such system will not be adversely affected by such modification. Each system shall comply with the provisions set forth in the State-approved plan. At a minimum, a State approved plan shall require the system modifying its disinfection practice to:

(1) Evaluate the water system for sanitary defects and evaluate the source water for biological quality;

(2) Evaluate its existing treatment practices and consider improvements that will minimize disinfectant demand and optimize finished water quality throughout the distribution system;

(3) Provide baseline water quality survey data of the distribution system. Such data should include the results from monitoring for coliform and fecal coliform bacteria, fecal streptococci, standard plate counts at 55° C and 20° C, phosphate, ammonia nitrogen and total organic carbon. Virus studies should be required where source waters are heavily contaminated with sewage effluent;

(4) Conduct additional monitoring to assure continued maintenance of optimal biological quality in finished water, for example, when chloramines are introduced as disinfectants or when pre-chlorination is being discontinued. Additional monitoring should also be required by the State for chlorate, chlorite and chlorine dioxide when chlorine dioxide is used as a disinfectant. Standard plate count analyses should also be required by the State as appropriate before and after any modifications;

(5) Demonstrate an active disinfectant residual throughout the distribution system at all times during and after the modification.

This paragraph (f) shall become effective on the date of its promulgation.

ENVIRONMENTAL PROTECTION AGENCY

Docket No.

40 CFR Part 141

National Primary Drinking Water Regulations; Amendments
Correction

AGENCY: Environmental Protection Agency

ACTION: Final Rule; Correction

SUMMARY: This document corrects amendments to the National Interim Primary Drinking Water Regulations that appeared on November 29, 1979, (44 FR 68624). This action is necessary to correct typographical errors and to clarify certain effective dates for the purpose of implementing these regulations on the calendar quarter basis.

FOR FURTHER INFORMATION CONTACT: Joseph A. Cotruvo, Director, Criteria and Standards Division, Office of Drinking Water (WH-550), Environmental Protection Agency, Washington, D.C. 20460 (202/472-5030).

SUPPLEMENTARY INFORMATION: The following corrections are made in FR Doc. 79-35442 appearing at page 68624 in the issue of November 29, 1979:

1. On page 68641, column 1, section 141.6(a), "paragraph (b)" should be corrected to read "paragraph (b), (c), (d), and (e)".
2. On page 68641, column 1, section 141.6(b), "2 years after the date of promulgation of these regulations" should be corrected to read "on January 1, 1982," and "4 years after the date of promulgation" should be corrected to read "on January 1, 1984,".

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3. On page 68641, column 2, section 141.24(b), fourth line, "§141.24" should be corrected to read "§141.12".
4. On page 68641, column 2, section 141.30(a), "1 year after the date of promulgation of this regulation" should be corrected to read, "January 1, 1981".
5. On page 6841, column 3, section 141.30(a), "3 years after the date of promulgation of this regulation" should be corrected to read, "January 1, 1983".

AUTHORITY: Safe Drinking Water Act, Sections 1401, 1412, 1414, 1416, 1445 and 1450 of the Pub.L. 93-523, as amended by Pub.L. 95-190, 96-15 and 96-502: (42 U.S.C. 300f, et seq.)

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Victor J. Kimm
Deputy Assistant Administrator
for Drinking Water

Date

of contamination and increased monitoring for microbiological contaminants would be recommended.

While the condition on nitrite has been deleted, the condition that states "no adverse health effects will result" has been retained. This condition is the final safeguard and is left as general guidance as a contingency if the other conditions are not met.

Several commenters felt that the proposed requirement that the suppliers notify local physicians was unclear and could impose a large burden for some supplies in the suburbs of a large city. This condition has been revised so that the supplier would notify appropriate local and State public health authorities on an annual basis. It is expected that the local and State health authorities would notify appropriate physicians in the locality of the public water system.

Economic and Energy Assessment

A detailed regulatory analysis of the proposed amendments was not conducted due to the routine nature of the amendments and the expected decrease in the economic burden associated with these amended NPDWR. Further, these amendments are generally not expected to have significant impacts upon resources or reporting requirements. The economics associated with each of the amendments are explained below. Energy impacts are negligible.

Changes in the microbiological monitoring and reporting requirements should result in unquantifiable but known savings to local water supply facilities. The savings reflect fewer public notifications. Although these savings are relatively small on a national scale, they are significant to the water utilities affected.

It is anticipated that the amendment on alternate analytical methods will have a minimal economic impact. Laboratories that are presently using equipment for new alternate methods, will have cost savings, since the need for equipment purchase for the previously approved methods will be eliminated. No changes in costs are expected in laboratories that do not adopt these procedures. The overall economic effect of the amendment on alternate techniques should be no cost increase, and in some cases a cost savings, since a greater analytical flexibility will be provided.

Changes in the regulations which affect non-community water systems will result in savings associated with reduced monitoring and public notification. Again, the extent of these reductions will be small in terms of

national costs, but may be significant for individual suppliers.

Changes in public notification requirements will decrease costs. Some of these savings will be significant for small supplies.

Changes in the fluoride regulations are only for clarification, and will not affect the associated cost in any way.

As indicated previously, a requirement for monitoring and notification of sodium concentrations in drinking water will result in new costs to drinking water utilities. Based upon \$10 per sample analysis, total national annual costs associated with this regulation are estimated to be \$450,000 with annual per capita costs for the smallest systems (25 customers) of \$0.80 for surface supplies and \$0.13 for groundwater supplies, and less than \$0.01 for the largest systems of both source types. These new costs do not impact all systems since some States already require monitoring for sodium.

Monitoring for corrosivity characteristics does not require sophisticated equipment or procedures. Determination of the Langelier Index involves measurement of hardness, alkalinity, pH, total dissolved solids, and temperature (the Aggressive Index only requires hardness, alkalinity and pH); in many cases, the water system will be able to conduct the analyses in their own laboratory. For many of the smaller systems, States will likely continue providing analytical services to the utilities. Based upon an estimate of \$20 per LI analysis by a commercial laboratory, the total one time national cost would be \$1.5 million with maximum per capita costs for the smallest systems (25 customers) of \$1.60 and \$0.80 for surface and groundwater systems, respectively, and less than \$0.01 per capita for the largest systems of both source types. Costs for each system associated with identifying the composition of materials of construction in the distribution systems are expected to be negligible.

In regard to reporting and resource impacts, it is expected that the reporting requirements will have negligible impacts because of the infrequency of monitoring and the fact that reporting would occur through the system already established and in use for compliance with the primary regulations. Thus, additional resources are not expected to be necessary at the Federal, State and local levels.

The effective date is immediately upon promulgation except that the requirements for sodium monitoring and reporting, determination of the types of materials in the distribution system, and monitoring and reporting corrosivity

characteristics will be effective 18 months after date of promulgation. The sodium and corrosion requirements must be completed within 12 months following the effective date. The Statement of Basis and Purpose Document which provides additional supporting information for the sodium and corrosivity monitoring requirements is available upon request at EPA headquarters, 401 M Street, S.W., Washington, D.C., and for reading at EPA regional offices.

Under Executive Order 12044, EPA is required to judge whether a regulation is "significant" and therefore subject to the procedural requirements of the Order or whether it may follow other specialized development procedures. EPA labels these regulations "specialized." I have reviewed this regulation and determined that it is a specialized regulation not subject to the procedural requirements of Executive Order 12044.

Dated: August 19, 1980.

Barbara Blum,

Acting Administrator.

Accordingly, 40 CFR, Part 141, is amended as follows:

1. By revising § 141.6 (c) and (d) to read as follows:

§ 141.6 Effective dates.

(c) The regulations set forth in 141.11 (a), (e) and (d); 141.14(a)(1); 141.14(b)(1)(i); 141.14(b)(2)(i); 141.14(d); 141.21 (a), (c) and (i); 141.22 (a) and (e); 141.23 (a)(3) and (a)(4); 141.23(f); 141.24(a)(3); 141.24 (e) and (f); 141.25(e); 141.27(a); 141.28 (a) and (b); 141.31 (a), (d) and (e); 141.32(b)(3); and 141.32(d) shall take effect immediately upon promulgation on 8/27/80

(d) The regulations set forth in 141.41 shall take effect 18 months from the date of promulgation. Suppliers must complete the first round of sampling and reporting within 12 months following the effective date. by 4/1/82

(e) The regulations set forth in 141.42 shall take effect 18 months from the date of promulgation. All requirements in 141.42 must be completed within 12 months following the effective date.

2. Amending § 141.11 (a) and (d) to read as follows:

§ 141.11 Maximum contaminant levels for inorganic chemicals.

(a) The MCL for nitrate is applicable to both community water systems and non-community water systems except as provided by in paragraph (b). The levels for the other ~~organic~~ ^{inorganic} chemicals apply only to community water systems. Compliance with MCLs for inorganic

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chemicals is calculated pursuant to § 141.23.

(e) At the discretion of the State, nitrate levels not to exceed 20 mg/l may be allowed in a non-community water system if the supplier of water demonstrates to the satisfaction of the State that:

- (1) Such water will not be available to children under 6 months of age; and
- (2) There will be continuous posting of the fact that nitrate levels exceed 10 mg/l and the potential health effects of exposure; and
- (3) Local and State public health authorities will be notified annually of nitrate levels that exceed 10 mg/l; and
- (4) No adverse health effects shall result.

3. Amending § 141.11(c) to read as follows:

§ 141.11 Maximum contaminant levels for inorganic chemicals.

(d) Fluoride at optimum levels in drinking water has been shown to have beneficial effects in reducing the occurrence of tooth decay.

5. Amending § 141.14 (a)(1), (b)(1)(i), (b)(2)(i), and revising (d) to read as follows:

§ 141.14 Maximum microbiological contaminant levels.

(a) (1) One per 100 milliliters as the arithmetic mean of all samples examined per compliance period pursuant to § 141.21(b) or (c), except that, at the primacy Agency's discretion systems required to take 10 or fewer samples per month may be authorized to exclude one positive routine sample per month from the monthly calculation if: (i) as approved on a case-by-case basis the State determines and indicates in writing to the public water system that no unreasonable risk to health existed under the conditions of this modification. This determination should be based upon a number of factors not limited to the following: (A) the system provided and had maintained an active disinfectant residual in the distribution system, (B) the potential for contamination as indicated by a sanitary survey, and (C) the history of the water quality at the public water system (e.g. MCL or monitoring violations); (ii) the supplier initiates a check sample on each of two consecutive days from the same sampling point within 24 hours after notification that the routine sample is positive, and each of these check samples is negative; and (iii) the original positive routine sample is reported and

recorded by the supplier pursuant to § 141.31(a) and § 141.33(a). The supplier shall report to the State its compliance with the conditions specified in this paragraph and a summary of the corrective action taken to resolve the prior positive sample result. If a positive routine sample is not used for the monthly calculation, another routine sample must be analyzed for compliance purposes. This provision may be used only once during two consecutive compliance periods.

(b)(1) (i) More than 10 percent of the portions (tubes) in any one month pursuant to § 141.21 (b) or (c) except that, at the State's discretion, systems required to take 10 or fewer samples per month may be authorized to exclude one positive routine sample resulting in one or more positive tubes per month from the monthly calculation if: (A) as approved on a case-by-case basis the State determines and indicates in writing to the public water system that no unreasonable risk to health existed under the conditions of this modification. This determination should be based upon a number of factors not limited to the following: (1) the system provided and had maintained an active disinfectant residual in the distribution system, (2) the potential for contamination as indicated by a sanitary survey, and (3) the history of the water quality at the public water system (e.g. MCL or monitoring violations); (B) the supplier initiates a check sample on each of two consecutive days from the sampling point within 24 hours after notification that the routine sample is positive, and each of these check samples is negative; and (C) the original positive routine sample is reported and recorded by the supplier pursuant to § 141.31(a) and § 141.33(a). The supplier shall report to the State its compliance with the conditions specified in this paragraph and report the action taken to resolve the prior positive sample result. If a positive routine sample is not used for the monthly calculation, another routine sample must be analyzed for compliance purposes. This provision may be used only once during two consecutive compliance periods.

(b)(2) (i) More than 60 percent of the portions (tubes) in any month pursuant to § 141.21 (b) or (c), except that, State discretion, systems required to take 10 or fewer samples per month may be authorized to exclude one positive routine sample resulting in one or more positive tubes per month from the monthly calculation if: (A) as approved on a case-by-case basis the State

determines and indicates in writing to the public water system that no unreasonable risk to health existed under the conditions of this modification. This determination should be based upon a number of factors not limited to the following: (1) the system provided and had maintained an active disinfectant residual in the distribution system, (2) the potential for contamination as indicated by a sanitary survey, and (iii) the history of the water quality at the public water system (e.g. MCL or monitoring violations); (B) the supplier initiates two consecutive daily check samples from the same sampling point within 24 hours after notification that the routine sample is positive, and each of these check samples is negative; and (C) the original positive routine sample is reported and recorded by the supplier pursuant to § 141.31(a) and § 141.33(a). The supplier shall report to the State its compliance with the conditions specified in this paragraph and a summary of the corrective action taken to resolve the prior positive sample result. If a positive routine sample is not used for the monthly calculation, another routine sample must be analyzed for compliance purposes. This provision may be used only once during two consecutive compliance periods.

(d) If an average MCL violation is caused by a single sample MCL violation, then the case shall be treated as one violation with respect to the public notification requirements of § 141.32.

6. Amending § 141.21 (a) and (c) to read as follows and adding (i):

§ 141.21 Microbiological contaminant sampling and analytical requirements.

(a) Suppliers of water for community and non-community water systems shall analyze or use the services of an approved laboratory for coliform bacteria to determine compliance with § 141.14. Analyses shall be conducted in accordance with the analytical recommendations set forth in "Standard Methods for the Examination of Water and Wastewater," American Public Health Association, 14th Edition, Method 908A, Paragraphs 1, 2 and 3—pp. 916-918; Method 908D, Table 908: I—p. 923; Method 909A, pp. 928-935, or "Microbiological Methods for Monitoring the Environment, Water and Wastes," U.S. EPA, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268—EPA-600/8-78-017, December 1978. Available from ORD Publications, CERL, U.S. EPA, Cincinnati, Ohio 45268. Part III, Section

Guid by laboratory

B 1.0 through 2.6.2, pp. 109-112; 2.7 through 2.7.2(c), pp. 112-113; Part III, Section B 4.0 through 4.0 4(c), pp. 114-118, except that a standard sample size shall be employed. The standard sample used in the membrane filter procedure shall be 100 milliliters. The standard sample used in the 5 tube most probable number (MPN) procedure (fermentation tube method) shall be 5 times the standard portion. The standard portion is either 10 milliliters or 100 milliliters as described in § 141.14 (b) and (c). The samples shall be taken at points which are representative of the conditions within the distribution system.

(c) The supplier of water for a non-community water system shall be responsible for sampling coliform bacteria in each calendar quarter that the system provides water to the public. Such sampling shall begin ~~within two~~ ^{1/2} years after promulgation. The State can adjust the monitoring frequency on the basis of a sanitary survey, the existence of additional safeguards such as a protective and enforced well code, or accumulated analytical data. Such frequency shall be confirmed or modified on the basis of subsequent surveys or data. The frequency shall not be reduced until the non-community water system has performed at least one coliform analysis of its drinking water and shown to be in compliance with § 141.14.

(i) The State has the authority to determine compliance or initiate enforcement action based upon analytical results or other information compiled by their sanctioned representatives and agencies.

7. Amending § 141.22(a) to read as follows and adding (e):

§ 141.22 Turbidity sampling and analytical requirements.

(a) Samples shall be taken by suppliers of water for both community and non-community water systems at a representative entry point(s) to the water distribution system at least once per day, for the purpose of making turbidity measurements to determine compliance with § 141.13. If the State determines that a reduced sampling frequency in a non-community system will not pose a risk to public health, it can reduce the required sampling frequency. The option of reducing the turbidity frequency shall be permitted only in those public water systems that practice disinfection and which maintain an active residual disinfectant in the distribution system, and in those

cases where the State has indicated in writing that no unreasonable risk to health existed under the circumstances of this option. The turbidity measurements shall be made by the Nephelometric Method in accordance with the recommendations set forth in "Standard Methods for Examination of Water and Wastewater," American Public Health Association, 14th Edition, pp. 132-134; or Method 180.1.1-Nephelometric Method.

(e) The State has the authority to determine compliance or initiate enforcement action based upon analytical results or other information compiled by their sanctioned representatives and agencies.

8. Amending § 141.23(a)(3), adding (a)(4) and amending (f) (1) through (10) to read as follows:

§ 141.23 Inorganic chemical sampling and analytical requirements.

(a) * * * (3) For non-community water systems, whether supplied by surface or ground sources, analyses for nitrate shall be completed by December 24, 1980. These analyses shall be repeated at intervals determined by the State.

(4) The State has the authority to determine compliance or initiate enforcement action based upon analytical results and other information compiled by their sanctioned representatives and agencies.

(f) * * * (1) Arsenic—Method 1206.2, Atomic Absorption Furnace Technique; or Method 1206.3, or Method 4D2972-78A^B, or Method 2301-A VII, pp. 159-162, or Method 2I-1052-78, pp. 61-63, Atomic Absorption—Gaseous Hydride; or Method 1206.4, or Method 4D-2972-78A, or Method 2404-A and 404-L(4).

* "Methods of Chemical Analysis of Water and Wastes," EPA Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268 (EPA-600/4-79-030), March 1979. Available from ORD Publications, CERL, EPA, Cincinnati, Ohio 45268. For approved analytical procedures for metals, the technique applicable to total metals must be used.

2 "Standard Methods for the Examination of Water and Wastewater," 14th Edition, American Public Health Association, American Water Works Association, Water Pollution Control Federation, 1976.

3 Techniques of Water—Resources Investigation of the United States Geological Survey, Chapter A-1, "Methods for Determination of Inorganic Substances in Water and Fluid Sediments" Book 5, 1974, Stock #024-001-03177-9. Available from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

4 Annual Book of ASTM Standards, part 31 Water, American Society for Testing and Materials, 1910 Locust Street, Philadelphia, Pennsylvania 19103.

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Spectrophotometric, Silver Diethyldithiocarbamate.

(2) Barium—Method 1208.1, or Method 2301-A IV, pp. 152-155, Atomic Absorption—Direct Aspiration; or Method 1208.2, Atomic Absorption Furnace Technique.

(3) Cadmium—Method 1213.1, or Method 43557-78A^B, or Method 2301-A II or III, pp. 148-152, Atomic Absorption—Direct Aspiration; or Method 1213.2, Atomic Absorption Furnace Technique.

(4) Chromium—Method 1218.1, or Method 4D-1687-77D, or Method 2301-A II or III, pp. 148-152, Atomic Absorption—Direct Aspiration; or Chromium—Method 1218.2, Atomic Absorption Furnace Technique.

(5) Lead—Method 1239.1, or Method 4D-3559-78A or B, or Method 2301-A II or III, pp. 148-152, Atomic Absorption—Direct Aspiration; or Method 1239.2, Atomic Absorption Furnace Technique.

(6) Mercury—Method 1245.1, or Method 4D-3223-79, or Method 2301-A VI, pp. 156-159, Manual Cold Vapor Technique; or Method 1245.2, Automated Cold Vapor Technique.

(7) Nitrate—Method 1352.1, or Method 4D-992-71, or Method 2419-D, pp. 427-429, Colorimetric Brucine; or Method 1353.3, or Method 4D-3637-79B, or Method 2419-C, pp. 423-427, Spectrometric, Cadmium Reduction; Method 1353.1, Automated Hydrazine Reduction; or Method 1353.2, or Method 4D-3867-79A, or Method 2605, pp. 620-624, Automated Cadmium Reduction.

(8) Selenium—Method 1270.2, Atomic Absorption Technique; or Method 1270.3, or Method 2I-1667-78, pp. 237-239, or Method 4D-3859-79, or Method 2301-A VII, pp. 159-162, Hydride Generation—Atomic Absorption Spectrophotometry.

(9) Silver—Method 1272.1, or Method 2301-A II, Atomic Absorption—Direct Aspiration; or Method 1272.2, Atomic Absorption Furnace Technique.

(10) Fluoride—Electrode Method, or SPADNS Method, Method 2414-B and C, pp. 391-394, or Method 1340.1.

"Colorimetric SPADNS with Bellack Distillation," or Method 1340.2. "Potentiometric Ion Selective Electrode;" or ASTM Method 1D1179-72; or Colorimetric Method with Preliminary Distillation, Method 2603, Automated Complexone Method (Alizarin Fluoride Blue) pp. 614-616; or Automated Electrode Method, "Fluoride in Water and Wastewater," Industrial Method #380-75WF, Technicon Industrial Systems, Tarrytown, New York 10591, February 1976, or "Fluoride in Water

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and Wastewater Industrial Method #129-71W," Technicon Industrial Systems, Tarrytown, New York 10591, December 1972; or Fluoride, Total, Colorimetric, Zirconium-Eriochrome Cyanine R Method 1-3325-78, pp. 365-367.

9. Amending § 141.24(a)(3), (e) and (f) to read as follows:

§ 141.24 Organic chemical sampling and analytical requirements.

(a) . . .

(3) The State has the authority to determine compliance or initiate enforcement action based upon analytical results and other information compiled by their sanctioned representatives and agencies.

(e) Analysis made to determine compliance with § 141.12(a) shall be made in accordance with "Methods for Organochlorine Pesticides and Chlorophenoxy Acid Herbicides in Drinking Water and Raw Source Water," available from ORD Publications, CERI, EPA, Cincinnati, Ohio 45268; or "Organochlorine Pesticides in Water," 1977 Annual Book of ASTM Standards, part 31, Water, Method D3062 or Method 509-A, pp. 555-565; or Gas Chromatographic Methods for Analysis of Organic Substances in Water, USGS, Book 5, Chapter A-3, pp. 24-39.

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(f) Analysis made to determine compliance with § 141.12(b) shall be conducted in accordance with "Methods for Organochlorine Pesticides and Chlorophenoxy Acid Herbicides in Drinking Water and Raw Source Water," available from ORD Publications, CERI, EPA, Cincinnati, Ohio 45268; or "Chlorinated Phenoxy Acid Herbicides in Water," 1977 Annual Book of ASTM Standards, part 31, Method D3062 or Method 509-B, pp. 555-569; or Gas Chromatographic Methods for Analysis of Organic Substances in Water, USGS, Book 5, Chapter A-3, pp. 24-39.

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§ 141.27 Alternate analytical techniques.

(a) With the written permission of the State, concurred in by the Administrator of the U.S. EPA, an alternate analytical technique may be employed. An alternate technique shall be accepted only if it is substantially equivalent to the prescribed test in both precision and accuracy as it relates to the determination of compliance with any MCL. The use of the alternate analytical technique shall not decrease the frequency of monitoring required by this part.

11. Amending § 141.28 to read as follows:

§ 141.28 Approved laboratories.

(a) For the purpose of determining compliance with § 141.21 through § 141.27, samples may be considered only if they have been analyzed by a laboratory approved by the State except that measurements for turbidity, free chlorine residual, temperature and pH may be performed by any person acceptable to the State.

(b) Nothing in this Part shall be construed to preclude the State or any duly designated representative of the State from taking samples or from using the results from such samples to determine compliance by a supplier of water with the applicable requirements of this Part.

12. Amending § 141.31 (a) and (c) and adding paragraphs (d) and (e) to read as follows:

§ 141.31 Reporting requirements.

(a) Except where a shorter period is specified in this part, the supplier of water shall report to the State the results of any test measurement or analysis required by this part within (A) the first ten days following the month in which the result is received or (B) the first ten days following the end of the required monitoring period as stipulated by the State, whichever of these is appropriate.

(d) The water supply system, within ten days of completion of each public notification required pursuant to § 141.32, shall submit to the State a representative copy of each type of notice distributed, published, posted, and/or made available to the persons served by the system and/or to the media.

(e) The water supply system shall submit to the State within the time stated in the request copies of any records required to be maintained under § 141.32, then in existence which the State or the Administrator is entitled to inspect pursuant to the authority of

§ 1445 of the Safe Drinking Water Act or the equivalent provisions of State law.

13. Amending § 141.32 (b)(3) and (d) to read as follows:

§ 141.32 Public notification.

(b) . . .

(3) Except that the requirements of this subsection (b) may be waived by the State if it determines that the violation has been corrected promptly after discovery, the cause of the violation has been eliminated, and there is no longer a risk to public health.

(d) If a non-community water system fails to comply with an applicable MCL established in Subpart B of this part, fails to comply with an applicable testing procedure established in Subpart C of this part, is granted a variance or an exemption from an applicable MCL, fails to comply with the requirements of any schedule prescribed pursuant to a variance or exemption, or fails to perform any monitoring requirement pursuant to section 1445(a) of the Act, the supplier of water shall give notices by continuous posting of such failure or granting of a variance or exemption to the persons served by the system as long as the failure or granting of a variance or exemption continues. The form and manner for such notices shall be prescribed by the State and shall ensure that the public using the system is adequately informed of the failure or granting of the variance or exemption.

14. Amending Subpart E to read as follows: add the following:

Subpart E—Special Monitoring Regulations for Organic Chemicals and Otherwise Unregulated Contaminants

§ 141.41 Special monitoring for sodium.

(a) Suppliers of water for community public water systems shall collect and analyze one sample per plant at the entry point of the distribution system for the determination of sodium concentration levels; samples must be collected and analyzed annually for systems utilizing surface water sources in whole or in part, and at least every three years for systems utilizing solely ground water sources. The minimum number of samples required to be taken by the system shall be based on the number of treatment plants used by the system, except that multiple wells drawing raw water from a single aquifer may, with the State approval, be considered one treatment plant for determining the minimum number of samples. The supplier of water may be required by the State to collect and analyze water samples for sodium more

*Techniques of Water—Resources Investigation of the United States Geological Survey, Chapter A-3, "Methods for Analysis of Organic Substances in Water," Book 5, 1972, Stock #2401-1227. Available from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

frequently in locations where the sodium content is variable.

(b) The supplier of water shall report to EPA and/or the State the results of the analyses for sodium within the first 10 days of the month following the month in which the sample results were received or within the first 10 days following the end of the required monitoring period as stipulated by the State, whichever of these is first. If more than annual sampling is required the supplier shall report the average sodium concentration within 10 days of the month following the month in which the analytical results of the last sample used for the annual average was received. The supplier of water shall not be required to report the results to EPA where the State has adopted this regulation and results are reported to the State. The supplier shall report the results to EPA where the State has not adopted this regulation.

(c) The supplier of water shall notify appropriate local and State public health officials of the sodium levels by written notice by direct mail within three months. A copy of each notice required to be provided by this paragraph shall be sent to EPA and/or the State within 10 days of its issuance. The supplier of water is not required to notify appropriate local and State public health officials of the sodium levels where the State provides such notices in lieu of the supplier.

(d) Analyses for sodium shall be performed by the flame photometric method in accordance with the procedures described in "Standard Methods for the Examination of Water and Wastewater," 14th Edition, pp. 250-253; or by Method 273.1, Atomic Absorption—Direct Aspiration or Method 273.2, Atomic Absorption—Graphite Furnace, in "Methods for Chemical Analysis of Water and Waste," EMSL, Cincinnati, EPA, 1979; or by Method D1428-64(a) in Annual Book of ASTM Standards, part 31, Water.

5. Adding a § 141.42 to read as follows:

§ 141.42 Special monitoring for corrosivity characteristics.

(a) Suppliers of water for community public water systems shall collect samples from a representative entry point to the water distribution system for the purpose of analysis to determine the corrosivity characteristics of the water.

(1) The supplier shall collect two samples per plant for analysis for each plant using surface water sources wholly or in part or more if required by the State; one during mid-winter and one during mid-summer. The supplier of

the water shall collect one sample per plant for analysis for each plant using ground water sources or more if required by the State. The minimum number of samples required to be taken by the system shall be based on the number of treatment plants used by the system, except that multiple wells drawing raw water from a single aquifer may, with the State approval, be considered one treatment plant for determining the minimum number of samples.

(2) Determination of the corrosivity characteristics of the water shall include measurement of pH, calcium hardness, alkalinity, temperature, total dissolved solids (total filterable residue), and calculation of the Langelier Index in accordance with paragraph (c) below. The determination of corrosivity characteristics shall only include one round of sampling (two samples per plant for surface water and one sample per plant for ground water sources). However, States may require more frequent monitoring as appropriate. In addition, States have the discretion to require monitoring for additional parameters which may indicate corrosivity characteristics, such as sulfates and chlorides. In certain cases, the Aggressive Index, as described in paragraph (c), can be used instead of the Langelier Index; the supplier shall request in writing to the State and the State will make this determination.

(b) The supplier of water shall report to EPA and/or the State the results of the analyses for the corrosivity characteristics within the first 10 days of the month following the month in which the sample results were received. If more frequent sampling is required by the State, the supplier can accumulate the data and shall report each value within 10 days of the month following the month in which the analytical results of the last sample was received. The supplier of water shall not be required to report the results to EPA where the State has adopted this regulation and results are reported to the State.

(c) Analyses conducted to determine the corrosivity of the water shall be made in accordance to the following methods:

(1) Langelier Index—"Standard Methods for the Examination of Water and Wastewater," 14th Edition, Method 203, pp. 61-63.

(2) Aggressive Index—"AWWA Standard for Asbestos-Cement Pipe, 4 in. through 24 in. for Water and Other Liquids," AWWA C400-77, Revision of C400-75, AWWA, Denver, Colorado.

(3) Total Filtrable Residue—"Standard Methods for the Examination of Water and Wastewater," 14th Edition, Method

208B, pp. 92-93; or "Methods for Chemical Analysis of Water and Wastes," Method 160.1.

(4) Temperature—"Standard Methods for the Examination of Water and Wastewater," 14th Edition, Method 212, pp. 125-126.

(5) Calcium Hardness—EDTA Titrimetric Method "Standard Methods for the Examination of Water and Wastewater," 14th Edition, Method 309B, pp. 202-205; or "Annual Book of ASTM Standards," Method D1126-67 *pp 189*

(6) Alkalinity—Methyl Orange *end point* pH 4.5. "Standard Methods for the Examination of Water and Wastewater," 14th Edition, Method 403, pp. 278-281; or "Annual Book of ASTM Standards," Method D1067-70B; or "Methods for Chemical Analysis of Water and Wastes," Method 310.1.

(7) pH—"Standard Methods for the Examination of Water and Wastewater," 14th Edition, Method 424, pp. 460-465; or "Methods for Chemical Analysis of Water and Wastes" Method 150.1; or "Annual Book of ASTM Standards," Method D1293-78 *D1293-78*

(8) Chloride—Potentiometric Method. "Standard Methods for the Examination of Water and Wastewater," 14th Edition, p. 306.

(9) Sulfate—Turbidimetric Method. "Methods for Chemical Analysis of Water and Wastes," pp. 277-278, EPA, Office of Technology Transfer, Washington, D.C. 20460, 1974, or "Standard Methods for the Examination of Water and Wastewater," 14th Edition, pp. 496-498.

(d) Community water supply systems shall identify whether the following construction materials are present in their distribution system and report to the State:

- Lead from piping, solder, caulking, interior lining of distribution mains, alloys and home plumbing.
- Copper from piping and alloys, service lines, and home plumbing.
- Galvanized piping, service lines, and home plumbing.
- Ferrous piping materials such as cast iron and steel.
- Asbestos cement pipe.

In addition, States may require identification and reporting of other materials of construction present in distribution systems that may contribute contaminants to the drinking water, such as:

- Vinyl lined asbestos cement pipe.
- Coal tar lined pipes and tanks.

Appendix A—Response to Public Comments

Comments submitted to the Agency and statements presented at the public hearing in

ENVIRONMENTAL PROTECTION AGENCY

Docket No.

40 CFR Part 141

National Primary Drinking Water Regulations; Amendments
Correction

AGENCY: Environmental Protection Agency

ACTION: Final Rule; Correction

SUMMARY: This document corrects amendments to the National Interim Primary Drinking Water Regulations that appeared on August 27, 1980, (45 FR 57332). This action is necessary to correct typographical errors, errors in citations for analytical methods, and to clarify certain effective dates for the purpose of implementing these regulations on the calendar quarter basis.

DATES: These corrections are effective upon publication.

FOR FURTHER INFORMATION CONTACT: Joseph A. Cotruvo, Director, Criteria and Standards Division, Office of Drinking Water (WH-550), Environmental Protection Agency, Washington, D.C. 20460 (202-472-5016).

SUPPLEMENTARY INFORMATION: The following corrections are made in FR Doc. 80-26105 appearing at page 57332 in the issue of August 27, 1980:

1. On page 57332, column 3, eighteenth line in section titled, "Summary of Major Changes," the word "nitrite" should be corrected to read "nitrate".

MISCELLANEOUS CHANGES - FEDERAL RULES - CORRECTIONS

2. On page 57341, column 1, footnote to Table 1 should be corrected to read, "As noted previously, indices may not be an appropriate measure of corrosive characteristics in all cases."
3. On page 57342, column 3, section 141.6(c), line 2, "(c) and (d)" should be corrected to read "(d) and (e)". In line 3, "141.14(b)(1)(c)" should be corrected to read "141.14(b)(1)(i)." Omit "(c)," from line 8. The phrase "immediately upon promulgation." should be corrected to read "on August 27, 1980."
4. On page 57342, column 3, section 141.6(d) and (e), "18 months from the date of promulgation." should be corrected to read "on April 1, 1982." and "within 12 months following the effective date." should be corrected to read "by April 1, 1983."
5. On page 57342, column 3, section 141.11(a), line 4, "(d)" should be corrected to read "(e)"; line 5, "organic" should be corrected to read "inorganic".
6. On page 57343, column 1, line 3, section 141.11, "(d)" should be corrected to read "(e)".
7. On page 57343, column 1, section 141.11, "(d)" (corrected to read "(e)"), lines two, ten, and fifteen, "nitrate" should be corrected to read "nitrate as nitrogen".
8. On page 57343, column 1, section 141.11, "(c)" should be corrected to read "(d)".

9. On page 57343, column 1, preceeding amendatory paragraph 4, insert the following:

"4. Amending §141.13 by adding (c):
§141.13 Maximum contaminant level for turbidity

* * * * *

(c) If an average monthly MCL violation is caused by a two day average violation, then the case shall be treated as one violation with respect to the public notification requirements of §141.32."

10. On page 57343, column 1, "4" denoting the amendatory paragraph should be corrected to read "5".
11. On page 57343, column 1, section 141.14(a)(1), fourth line from the bottom, "notification" should be corrected to read "being notified by the laboratory".
12. On page 57343, column 2, section 141.14(b)(1)(i), line twenty-eight, "notification" should be corrected to read "being notified by the laboratory".
13. On page 57343, column 3, line twelve, "(iii)" should be corrected to read "(3)".
14. On page 57343, column 3, line eighteen "notification" should be corrected to read "being notified by the laboratory".
15. On page 57343, column 3, "8" denoting the amendatory paragraph should be corrected to read "6".

16. On page 57344, column 1, section 141.21(c), lines six and seven, "within two years after promulgation." should be corrected to read "on October 1, 1982.".
17. On page 57344, column 1, "9" denoting the amendatory paragraph should be corrected to read "7".
18. On page 57344, column 2, section 141.22(a), last line, "Nephrometric" should be corrected to read "Nephelometric".
19. On page 57344, column 2, "10" denoting the amendatory paragraph should be corrected to read "8".
20. On page 57344, column 2, section 141.23(f)(1), line three, "D-2972-78A" should be corrected to read "D-2972-78B".
21. On page 57344, column 2, section 141.23(f)(1), footnote 4, "1976, Race Street" should be corrected to read, "1916 Race Street".
22. On page 57344, column 3, section 141.23(f)(3), line two, delete "or B".
23. On page 57344, column 3, section 141.23(f)(8), line two, "Absorption Technique" should be corrected to read "Absorption Furnace Technique".
24. On page 57344, column 3, section 141.23(f)(9), line two, insert "pp. 148-151," preceding "Atomic Absorption"; "Atomic Absorption Techniques Furnace Technique" should be corrected to read "Atomic Absorption Furnace Technique".

25. On page 57344, column 3, section 141.23(f)(10) should be deleted and replaced with the following:

"(10) Fluoride--Method¹ 340.1, Method² 414-A and 414-C, or Method³ E-1179-72A, Colorimetric Method with Preliminary Distillation; or Method⁴ 340.2, Method² 414-B, or Method⁴ D-1179-72B, Potentiometric, Ion Selective Electrode; or Method³ I-3325-78, pp. 365-367, Colorimetric Eriochrome Cyanine R Method; or Method¹ 340.3, Method² 603, Automated Complexone Method (Alizarin Fluoride Blue), pp. 614-616; or Industrial Method #129-71W, Fluoride in Water and Wastewater, Technicon Industrial Systems, Tarrytown, NY 10591, Dec. 1972; or Industrial Method #380-75WE, Automated Electrode Method, Fluoride in Water and Wastewater, Technicon Industrial Systems, Tarrytown, NY, February 1976."

- ✓ 26. On page 57345, column 1, "11" denoting the amendatory paragraph should be corrected to read "9".
- ✓ 27. On page 57345, column 1, section 141.24(e), line ten, delete "1977"; line twelve, "D3088" should be corrected to read "D-3086-79"; line sixteen, "A-5" should be corrected to read "A-3".
- ✓ 28. On page 57345, column 1, section 141.24(f), line ten, delete "1977"; line twelve, "D3478" should be corrected to read "D-3478-79"; line thirteen, "555-5692" should be corrected to read "565-569".
- ✓ 29. On page 57345, column 1, insert "10. Amending §141.25 to add (e):" in the space preceding "§141.25 [Amended]"; and delete line 1, section 141.25 [Amended] "12. Amending §141.25 to add (e):".

30. On page 57345, columns 1 and 2 delete amendatory paragraph 13 in its entirety. Section 141.2" remains unchanged in the regulations.
- ✓ 31. On page 57345, column 2, "14" denoting the amendatory paragraph should be corrected to read "11".
- ✓ 32. On page 57345, column 2, section 141.28(a), line three, insert after "§141.27," the following: "§141.41 and §141.42,".
- ✓ 33. On page 57345, column 2, "15" denoting the amendatory paragraph should be corrected to read "12"; delete "and (c)" in the first line.
- ✓ 34. On page 57345, column 2, §141.31(a), lines 10 and 11, delete "of these is shortest" and insert "is appropriate".
- ✓ 35. On page 57345, column 3, "16" denoting the amendatory paragraph should be corrected to read "13".
- ✓ 36. On page 57345, column 3, "17. Amending Subpart E to read as follows" should be corrected to read, "14. Amending Subpart E to add the following:"
- ✓ 37. On page 57346, column 1, "18" denoting the amendatory paragraph should be corrected to read "15".
38. On page 57346, column 3, section 141.42(c)(5) should be deleted and replaced with the following:

"(5) Calcium - EDTA titrimetric method
'Standard Methods for the Examination of
Water and Wastewater,' 14th Edition.
Method 306C, pp. 189-191; or Annual Book
of ASTM Standards, Method D-1126-67B."

- ✓ 39. On page 57346, column 3, section 141.42(c)(6),
lines one and two, "and paint" should be corrected
to read "end point".
- ✓ 40. On page 57346, column 3, section 141.42(c)(7),
bottom line "D-129378A or B" should be corrected
to read, "D-1293-78A or B".
- ✓ 41. On page 57346, column 3, section 141.42(c)(9),
lines 7 and 8, delete "13th Edition, pp. 334-335,".

AUTHORITY: Safe Drinking Water Act, Sections 1401, 1412,
1414, 1416, 1445 and 1450 of the Pub.L. 93-523, as amended
by Pub. L. 95-190, 96-⁶³46 and 96-502: (42 U.S.C. 300f, et seq.)

Victor J. Kinn
Deputy Assistant Administrator
for Drinking Water

Date