



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MEMORANDUM

OFFICE OF ENFORCEMENT

TO: Regional Enforcement Directors
Regional Permit Branch Chiefs
NPDES State Directors

FROM: Deputy Assistant Administrator for Water Enforcement (EN-335)

SUBJECT: Fecal Coliform Bacteria Limits

The following statement provides current program direction for the issuance of municipal permits under the National Pollutant Discharge Elimination System (NPDES). An amendment to Secondary Treatment Information Regulation (40 CFR 133) regarding fecal coliform bacteria and pH requirements was published in the Federal Register on July 26, 1976. The fecal coliform requirements were deleted and the pH provisions changed. This guidance is intended to simplify the procedure for assigning effluent limitations for indicator organisms so that a transition from effluent based to water quality based requirements will be both efficient and effective.

POLICY

Disinfection requirements and limitations on the discharge of indicator organisms have been, and must continue to be directed at protection of public health. Such requirements are, and will continue to be, enforceable conditions of permits. Modification of permits to delete inappropriate fecal coliform limits, based on this policy statement, may begin at any time and should be scheduled in keeping with Regional priorities for modifying and reissuing municipal permits.

Where fecal coliform limitations or disinfection are required by State water quality standards, the following guidance is provided for their development:

- (1) Preferentially, effluent limitations for indicator organisms should be set in accordance with standard water quality procedures (i.e. predictive modeling techniques) developed for specific water quality limited segments.
- (2) As an alternative to the above methodology, effluent limitations for indicator organisms should be set at the same numerical value as the in-stream standard for the same indicator.

- (3) Where water quality standards are not definitive:
- a. The geometric mean of the value for effluent samples collected in a period of 30 consecutive days shall not exceed 200 per 100 ml; and
 - b. the geometric mean of the value for effluent samples collected in a period of seven consecutive days shall not exceed 400 per ¹⁰⁰ml.
- (4) Certain potential environmental problems can result from the uncontrolled use of chlorine. Effluent limitations on residual chlorine should be established in accordance with water quality standards or in the absence of definitive chlorine residual criteria in water quality standards guidance is provided in Quality Criteria for Water.^{1/}

DISCUSSION

The amendment for deletion of the fecal coliform limitations from 40 CFR 133 specified reliance on water quality standards in lieu of a uniform effluent standard for setting fecal coliform effluent limitations for POTW's. Normally, this would imply that a procedure involving assimilative capacities would be used to establish effluent limitations on a case-by-case basis.

There may be difficulty with using water quality modeling procedures for determination of fecal coliform limitations. Modeling procedures which account for such factors as dilution and die-off (or possibly regrowth) of indicator organisms to determine effluent limitations have not been fully developed. In lieu of reliable determinations based on modeling techniques, effluent limitations for fecal coliforms should be set at the same level as are required in-stream. For example, if the in-stream standard is 1000 fecal coliform bacteria per 100 ml, the effluent standard for discharges into the receiving water body would be set at 1000 bacteria per 100 ml. In instances where it has been determined that disinfection is necessary but a numerical fecal coliform standard does not exist, this policy calls for use of the bathing water criteria recommended in Quality Criteria for Water.

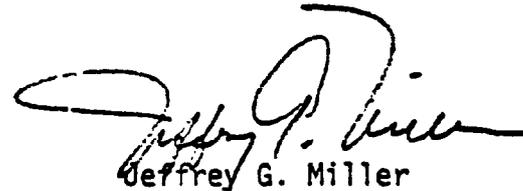
^{1/} The Agency published on July 26, 1976, Quality Criteria for Water, (Publication EPA 440/9-76-023) which is intended to be used as the basis for State water quality standards. Criteria for fecal coliform bacteria and chlorine residual are included. These criteria are available for use by the States in the development of water quality standards and the related disinfection requirements for publicly owned treatment works.

Guidance on municipal wastewater disinfection practices may be found in the final "Disinfection of Wastewater-Task Force Report." The report is available from the General Services Administration (8FY), Centralized Mailing Lists Services, Building 41, Denver Federal Center, Denver, Colorado 80225. The title and number of the report are: "Disinfection of Wastewater-Task Force Report," MCD-21: No. EPA-430/9-75-012.

As an additional note, be aware that the July 26, 1976, amendment to Secondary Treatment Information also modified pH as follows:

"(c) pH. The effluent values for pH shall be maintained within the limits of 6.0 to 9.0 unless the publicly owned treatment works demonstrates that:

- (1) Inorganic chemicals are not added to the waste stream as part of the treatment process; and
- (2) Contributions from industrial sources do not cause the pH of the effluent to be less than 6.0 or greater than 9.0"



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