

ENVIRONMENTAL PROTECTION AGENCY  
345 CONSTITUTION STREET, N.E.  
ATLANTA, GEORGIA 30303

APR 17 1979

REF: 4W-WS

Honorable Strom Thurmond  
United States Senate  
Washington, D.C. 20510

Dear Senator Thurmond:

This is in response to your March 27, 1979, letter concerning the fluoride drinking water standard for the Town of Hemingway, South Carolina.

The fluoride standard is that promulgated by the State of South Carolina in its administration of primary enforcement responsibilities under the Safe Drinking Water Act (SDWA). Under this Act, State drinking water regulations may be no less stringent than National Interim Primary Drinking Water Regulations (NIPDWR) established by EPA. The maximum contaminant level (MCL) of 1.6 mg/l fluoride is twice the optimum level for dental health protection. Many studies have shown that as the fluoride concentration in drinking water exceeds the standard level, the risk of dental fluorosis increases. Mild dental fluorosis is primarily noticeable as a slight discoloration of teeth. Moderate to severe dental fluorosis is characterized by substantial discoloration, pitting and destruction of enamel. The standard is intended to protect the public from moderate to severe fluorosis.

It is not appropriate to remove fluoride from the primary standards because, it can cause adverse health effects (moderate to severe dental fluorosis) at levels found in some drinking water. EPA is conducting epidemiological studies to further define the dental health risks and the standard level. Technology development is also being pursued to provide additional means of controlling fluoride.

Violation of a primary (health related) MCL requires that the Town of Hemingway provide periodic public notice of this fact and take prompt action to remedy the problem. The MCL violation also leaves the Town vulnerable to citizen suit and other legal proceedings. In an effort to assist the Town meet its responsibilities without fear of penalty, the South Carolina Department of Health and Environmental Control has issued a fluoride MCL exemption for Hemingway. This exemption extends the deadline for meeting the MCL and allows the Town additional time to study the problem and develop alternative methods for meeting the fluoride limit. The Hemingway fluoride exemption and more than 50 others from South Carolina communities in the same coastal region are currently under review in this office. It is too early to determine how many of these communities may need treatment facilities to reduce excessive fluorides to safe levels but the large number of communities involved indicates that correction of this problem will likely have significant financial impact on coastal South Carolina.

Although the fluoride limit and other constituents named in the NIPDWR have existed for many years as Public Health Service Drinking Water Standards, they were enforced only at State option. Under the SDWA all community water supplies were required to meet the NIPDWR limits beginning June 24, 1977. The SDWA does not provide for water system construction grants. Financial assistance for water system construction has traditionally been provided through Farmers Home Administration, Department of Housing and Urban Development, Economic Development Administration and Appalachia grants and loans. EPA has recently entered into an agreement with the Farmers Home Administration for priority consideration of small water systems which fail to meet drinking water standards. In addition to the above, the Coastal Plains Regional Commission and U.S. Geological Survey have also expressed interest in assisting these coastal South Carolina communities with their fluoride problems.

I hope the above provides the background you need concerning the problem in Hemingway. If I can be of any further assistance, please let me know.

Sincerely yours,

Original Signed By:

John C. White  
Regional Administrator

cc: Victor J. Kimm, Deputy Assistant  
Administrator for Drinking Water  
Lewis Shaw, Director - SC Department  
of Health & Environmental Control