



PAN AMERICAN HEALTH ORGANIZATION  
*Pan American Sanitary Bureau, Regional Office of the*  
WORLD HEALTH ORGANIZATION

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IN REPLY REFER TO: HPE/PER/CWS/010/28/1.1 CHOL

TELEPHONE 601-3200

May 7, 1991

Mr. William K. Reilly  
Administrator  
U. S. Environmental Protection Agency  
401 M Street, S.W.  
Washington, D.C. 20460

*[Handwritten notes and signatures]*

Dear Mr. Reilly:

On April 16, 1991 staff members from the Pan American Health Organization participated in a debriefing provided by the Federal Agencies who had investigated the cholera outbreak in Peru and hosted by the Department of Health and Human Services in Rockville, Maryland. During the discussion, our environmental health representative expressed his concerns that many Latin American Countries had misunderstood the rationale for U.S. Environmental Protection Agency's Maximum Contaminant Level for Trihalomethanes (THMs) in drinking water. Widespread publicity and the large number of scientific articles regarding the potential health significance of THMs in drinking water has caused many municipalities and communities of Latin America to abandon chlorination. This situation presents a serious problem at a time when the acute health risk due to enteric disease agents is four or five orders of magnitude greater than the chronic exposure risk from THMs.

The countries of Latin America do not have the economic and technical resources to remove the THMs or their precursors or to change to alternative methods of disinfection such as ozonation and ultraviolet light. Furthermore, these methods of disinfection are not suitable in the great majority of situations in Latin America because of the need to maintain a primary disinfectant residual such as would be possible with free chlorine. A strong chlorine residual is necessary due to the deficiencies of existing distribution systems, including lack of integrity, intermittent pressurization, cross connections and contamination events that degrade water quality in many drinking water systems.

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Although epidemiological studies have suggested a possible association between the long term consumption of chlorinated drinking water (over 40 years) and a small increase in the risk of bladder cancer, these studies are not yet sufficient to establish a cause-effect relationship.

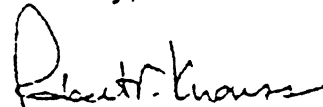
We understand that the maximum contaminated level (MCL) which EPA has established for THMs is based on animal studies and health risks that would avoid one additional case of cancer per million people after a lifetime (65 years) of exposure. The current death rate from cholera in Latin America is about 700 deaths per 100,000 cases. This does not include the hundreds of thousands of people who have suffered from the disease but who have not died. In addition, there are numerous other waterborne diseases which could be prevented by proper water chlorination practices.

We realize that EPA did not intend to discourage the only viable method of disinfection available to these countries. In fact, the excellent report, prepared by EPA's investigative team assigned to evaluate the cholera outbreak in Peru, strongly recommended the use of chlorine. The report not only recommends the use of chlorine, but recommends its use in such a manner that a detectable residual ( $>0.5$  mg/L) be maintained throughout water distribution systems. Moreover, the report also recommends that bleach containing chlorine be used to disinfect free standing water tanks used widely in homes, businesses and communities.

It would be most helpful at the present time if we could obtain a clarifying letter from you emphasizing that chlorination to control waterborne diseases should be afforded top priority. I believe that the current benefits of chlorine override any potential health risk due to long term exposure to THMs in Latin America.

Your cooperation in this matter will be of major assistance in improving public health practices in Latin America.

Sincerely,



✓ Carlyle Guerra de Macedo  
Director