

Date Signed: July 18, 1991

MEMORANDUM

SUBJECT: Policy for Applicability of the SWT Regulation to  
Seawater

FROM: Connie Bosma, Chief  
Drinking Water Branch

TO: Drinking Water/Ground Water Protection Branch Chiefs  
Regions I - X

This memorandum is intended to clarify the intent of a letter from Mike Cook to Ms. Charlene Denys of the Alaska Department of Environmental Conservation. Ms. Denys had asked whether the Public Water Systems (PWSs) on oil rigs, which use reverse osmosis to purify seawater, should be required to comply with the requirements of the Surface Water Treatment (SWT) Rule.

Mike Cook's response to Ms. Denys is attached. Our response recommended to States that PWSs using water from open seas not be required to comply with the SWT Rule. We made this recommendation for three reasons. First, seawater is not generally affected by surface runoff, due to depth and volume -- the rate of dilution in sea water is much more substantial than in fresh waters. Second, pathogenic organisms are inactivated quickly due to the high salt concentrations in seawater. Third, and most significantly, seawater is generally treated through reverse osmosis or distillation. These processes achieve a removal and inactivation of viruses that far exceeds the levels required under the SWT Rule.

However, note that water from sources such as estuaries, river deltas and inland salt lakes is not considered to be seawater. Such sources are required to comply with the SWT Rule.

I would like to clarify another point. The attached letter was intended to excuse seawater systems from monitoring according to the provisions of the SWT Rule only. Seawater systems are vulnerable to contaminants covered by other drinking water regulations. For example, contamination from Volatile Organic Chemicals (VOCs) is a risk. Also, storage reservoirs and distribution systems, regardless of the source, are always vulnerable to bacteriological growth, so coliform monitoring must be performed.

Please call Clive Davies with any questions. He can be reached at (202)260-1421.

Attachment

March 11, 1991

Ms. Charlene Denys  
Manager, Drinking Water Program  
Dept. of Environmental Conservation  
P.O. Box "O"  
Juneau, Alaska 99811

Dear Ms. Denys,

I am writing to confirm our understanding of a series of telephone conversations between yourself, Wendy Mabile of BP Exploration and Stig Regli, the person who chaired the development of the Surface Water Treatment (SWT) Rule. The discussion involved the question of whether systems that obtain water from open seas and treat water using distillation or reverse osmosis are subject to the SWT Rule. During the phone calls, Mr. Regli stated that EPA did not intend to regulate such systems under the provisions of the SWT Rule.

"Surface waters" are regulated by the SWT Rule. The definition of surface water in the SWT Rule is water open to the atmosphere and subject to surface runoff. It is our view that seawater sources are not, by virtue of their depths and volume, generally affected by surface runoff. Accordingly, such sources would not come under the definition of "surface waters." Moreover, seawater sources of drinking water are generally treated by distillation or through reverse osmosis. These processes achieve a removal or inactivation of viruses and Giardia cysts that far exceeds the levels required under the SWT Rule. Additionally, the health risk from pathogens is generally much less significant in sea water than in fresh surface water sources. Typically, pathogenic organisms are quickly inactivated in sea water due to the high salt concentration. Also, the rate of dilution of pathogens released into sea waters is generally much more substantial than in fresh waters.

Once a state adopts regulations, interpretation of definitions and the scope of State regulations is left to State discretion as long as any changes result in a regulation which is more stringent than Federal requirements. **We recommend to states that PWSs using seawater sources not be required to comply with the SWT rule.** States should, however, ensure that design and operating conditions of systems using seawater sources are optimized.

We intend to propose and promulgate amendments to the SWT Rule in June 1993 and June 1995 respectively. These amendments will include special provisions for systems using sea water as their source water and recognize the technologies of reverse osmosis and distillation as a means for achieving compliance.

Please call Clive Davies of my staff with any questions. Clive can be reached at (202)260-1421.

Sincerely yours,  
Michael B. Cook, Director  
Office of Drinking Water

cc: Wendy Mabile  
EPA Drinking Water/Ground Water Protection Branch Chiefs, Regions I-X