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

AUG 31 2000

OFFICE OF WATER

Dr. Mort Lippmann
Interim Chair
Science Advisory Board
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dear Dr. Lippmann:

Thank you for your letter of June 30, 2000, providing comments on the Environmental Protection Agency's (EPA) draft proposal for the Ground Water Rule (GWR). The Office of Water is pleased to receive comments and recommendations from the Science Advisory Board (SAB). As you know, the Office of Water is in the process of reviewing public comments and developing the final GWR. The comments provided by SAB will be very helpful as EPA prepares the final rule. In addition, we appreciate the need to provide relevant technical materials to the committee prior to any discussions on a proposed rule by the committee. In the future, OW will make every effort to provide the committee with this material in a timely manner.

Please express my appreciation to all the members of the SAB for their assistance. Attached are brief responses to each of the SAB recommendations. These will be expanded upon and put forth in more detail as part of the formal comment response and final rulemaking decision process. If you have any questions, please feel free to call Cynthia C. Dougherty, Director of the Office of Ground Water and Drinking Water, at (202) 260-5543.

Sincerely,

/S/

J. Charles Fox
Assistant Administrator

Enclosure

EPA Response to SAB Specific Comments

3.1 Fecal indicators.
SAB recommendation: The Committee recommends that the Agency propose monitoring for both bacterial and viral indicators for both routine and triggered monitoring. Specifically the Committee recommends that the Agency propose the use of E. coli or enterococci and coliphage. /And,] to save on costs of monitoring, the Agency should develop and.validate the use of a common host to simultaneously detect both male-specific and somatic coliphage. The Committee recommends that the Agency define the term "enterococci " because different media and methods may detect different sets or sub-sets oforganisms, and there is some confusion about this term in the international scientific literature.

OW Response. As SAB notes, the occurrence data available shows that no single indicator is clearly superior as a fecal indicator. SAB is recommending testing with both a viral and a bacterial indicator under the assumption that the combination of the two will be more effective at detecting fecal contamination than a single indicator. EPA believes there is substantial logic and validity to this view and requested comment on this issue in the Proposed GWR (65 FR 30227). EPA is actively considering this approach in the context of other related requirements that may be included in the final rule. With respect to combining the coliphage tests, some of the literature suggests that there is interference between the two phages when used together that may make the combination less effective than either phage used alone. OW is evaluating all of these options in light of the available occurrence data and increases in monitoring costs. OW agrees that the term "enterococci" needs to be further defined and will provide clarification in the final GWR.

3.2 Hydrogeologic Assessment.
SAB recommendation: The committee recommends that all ground water sources be required to monitorfor bacterial indicators and coliphagefor at least one year - regardless of sensitivity determination.

OW Response. As noted by SAB, contamination of a ground water system's source can occur in any type of aquifer type through a variety of site-specific hydrogeologic conditions. Specifically, SAB noted that there is data indicating rapid viral movement through sandy aquifers. OW proposed the hydrogeologic sensitivity assessment as a screening tool to identify the aquifers very likely to be at risk from fecal contamination. The hydrogeologic assessment was not intended to identify all ground water systems that could be contaminated through underground sources. The GWR depends on the combination of sanitary surveys, source water monitoring and hydrogeologic sensitivity assessment to protect against fecal contamination in the belief that no single element (e.g., source water monitoring) is effective all the time. However, OW agrees that requiring monitoring for all systems will likely increase protection and OW is currently analyzing the increased costs and benefits associated with this option.

3.3 Source Monitoring.
SAB recommendation: The Committee recommends that all ground water sources should be monitored for a year and that all untreated sources should continue to be monitored at some

frequency that should be based on the size of the population served, hydrogeological assessment, well logging information, and well head protection programs. Source sampling of at least once per year should be requiredfor all systems.

As previously noted, OW believes that requiring routine monitoring for all systems, including on-going routine monitoring for untreated systems, will likely increase protection and is analyzing the increased costs and benefits associated with this option. OW also recognizes that the frequency of source water monitoring can be based on many different elements. There are a very large number of GWSs and source water monitoring is a costly regulatory element. Therefore, OW's goal in the proposal was to target a subset of all GWSs for source water monitoring based on indicators of risk. OW chose a TCR positive in the distribution system and a sensitive hydrogeology as the most reliable indicators of risk. EPA considered well construction as an indicator of risk but concluded that wellconstruction records (e.g., well logs) may not be available or reliable for a large number of systems and the methods used to reconstruct the data (e.g., down-hole test methods) would be too costly. Similarly, EPA considered whether an EPA approved State Wellhead Protection Program (WHPP) would be a reliable indicator of risk. Given the inherent variability of State and local wellhead protection programs, EPA has concluded it would not be an appropriate indicator of risk within the context of a national rule.