

ARCHIVE: Archived because VAP rules promulgated in 1996 (OAC Chapter 3745-300) render this guidance unnecessary. However, this document is accurate under Interim Program prior to promulgation of OAC Chapter 3745-300. Refer to VA30007.03.005 for the updated document.

TITLE: Filtration of Ground Water Samples

DATE

EFFECTIVE: 1995

KEYWORDS: unfiltered ground water sample, field filtered ground water sample, monitor well.

RULES: ORC 3746.07

QUESTION: When are field filtered ground water samples considered acceptable to be submitted for laboratory analyses in support of NFA letters?

ANSWER: ORC 3746.07 Standards and requirements governing until rules take effect, states that a covenant not to sue shall not be issued during the interim phase of the VAP, if ground water underlying or emanating from the property is contaminated. There are no (VAP) regulations (1995) or definite guidance dictating whether field filtered or unfiltered samples more appropriately represent actual ground water quality. Available guidance suggests that the decision as to whether or not to field filter should be based on a site specific basis.

EXAMPLE: The analysis of an unfiltered ground water sample from a monitoring well located down gradient from the area where foundry sand was deposited, indicated the presence of chromium at a level less than the maximum contamination limit (MCL). Analysis of the filtered sample from the same well did not indicate the presence of chromium in excess of the detection limit. The Certified Professional (CP) concluded, that for this particular site, field filtered samples were more representative of ground water quality than unfiltered samples because of the relatively low particle mobility conditions associated with the hydraulic conductivities that were characteristic of the shale bedrock and clay till that the wells were completed in. The CP also reported that chromium was detected in an unfiltered sample from an up gradient monitor well and concluded that chromium in the unfiltered samples is due to a natural source in the soil or bedrock.

The agency accepted the CP's justification for using field filtered ground water samples at the site considering the above-mentioned site-specific circumstances. As a result, the ground water at the property was not considered contaminated above the MCLs and therefore the site was eligible for participation within the VAP.

SUMMARY:

In the absence of specific guidance or regulations, the decision as to whether or not to field filter should be based on a site specific basis. Factors to consider, include the hydraulic conductivity of the horizons that the monitor well(s) were installed in, and the effectiveness of well construction and development.

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For any questions concerning this issue, please contact the VAP central office at (614) 644-2924.