

**Drinking Water Quality Institute
Treatment Subcommittee Meeting Minutes
August 9, 2006 (12-1:30)**

Members Present: Barker Hamill, Ravi Patruju for E. Murphy, Laura Cummings (PVWC), Carol Storms (Aqua NJ)

Teleconference: Russell Ford, Paul LaPierre (Chair)

Others Present: Sue Shannon & Diane Pupa (DEP), John Dyksen (Black & Veatch), Rhea Brekke (NJCAT)

John Dyksen provided a summary of two documents authored by Black and Veatch (Chapters 1-5) following a literature review on drinking water treatment options for various unregulated organic chemicals. These unregulated chemicals are found in industrial, commercial and household items; they eventually find their way into the waste stream and eventually end up in ground water and surface water drinking water supplies.

There were common themes in each report: a classification system for categorizing these chemicals, grouping like chemicals together by chemical characteristics; and then identifying the most applicable treatment technology(ies) with associated operation and maintenance (O&M) costs.

In general, any detections found are usually at very low levels and very near the method detection level. If these chemicals “can” be identified, there are no known health effects information about them. Generally, for most of these chemicals there is no good single treatment option, but rather multiple treatments (in-series) are needed to reduce their concentration(s). Common problems discussed that affect treatability of these chemicals include, but are not linked to, lack of information on each chemical, varying concentration(s) from site to site, competition between chemicals, etc. Although, not practical, the best way to determine how treat each chemical at the site are: a.) perform isotherm tests, or b.) conduct pilot tests at each system.

I.) Summary of Treatment Choices for GW from Literature review:

For Ground Water Systems: adsorption with GAC & Advanced Oxidation Processes (AOP) is probably the most effective, followed by oxidation & air stripping, and biological treatment & membranes.

II.) Summary of Treatment Choices for SW from Literature review:

For Surface Water Systems: oxidation with GAC is probably the most effective, however, even using multiple treatments will not likely remove All chemicals in NJ surface waters. GAC/UV is the most costly to initiate (Capital Costs) and most costly to maintain annually.

Also discussed was the potential for future/additional funding of the Demonstration Project through grants from AwwaRF and USEPA (Cincinnati research Lab).

Also discussed was inclusion of unregulated contaminant data results obtained from the USGS -PVWC project. L. Cummings will provide more info to the entire subcommittee. Black & Veatch will evaluate the data and consider inclusion into the final reports upon review.

Minutes Prepared by:
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August 15th, 2006