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March 28, 2005

OW-Docket@epa.gov

Attention Docket No. OW-2004-0037

Comments on
**National Whole Effluent Toxicity (WET) Implementation Guidance Under the
NPDES Program**

Linda Boornazian, Director, Water Permits Division
US EPA Office of Wastewater Management

Please find presented below my comments on the **National Whole Effluent Toxicity (WET) Implementation Guidance Under the NPDES Program EPA 832-B-04-003**.

Overall Comment

My academic background includes a masters degree from the University of North Carolina School of Public Health with emphasis on water quality investigation/management in 1957 and a PhD degree in Environmental Engineering with emphasis on aquatic chemistry from Harvard University in 1960. My professional experience includes 45 years of work on water pollution control through 30 years of university graduate level teaching and research and serving as a part time consultant and 15 years as a full time consultant to governmental agencies, industry, environmental groups and the public. During my university teaching and research career I conducted over \$5 million of research on water quality investigations and management and published over 500 papers on this research. Since I became a full time consultant in 1989, I have continued to publish another 500 papers and reports on water quality issues. Since the mid 1970s my work has been in cooperation with Dr. Anne Jones-Lee. We have established a website, www.gfredlee.com where our more recent papers and reports are available as downloadable files. Also available at this site is information on our qualifications to submit these comments.

We are active in: Surface and groundwater quality protection,
 Domestic/industrial and agricultural wastewater discharges/runoff,
 Management of contaminated sediments,
 Excessive fertilization of waterbodies,
 Reclaimed wastewater reuse,
 Hazardous chemical sites/Superfund,
 Domestic water supply water quality,
 and related areas.

The focus of our work is on evaluation and management of chemicals in aquatic systems that can impact the water quality – beneficial uses of waterbodies. Early in my career I

(G. F. Lee) found that it is not possible to protect water quality from the impact of chemicals on aquatic life and many other beneficial uses based on chemical analysis alone. Based on this situation, I pioneered in the development of toxicity tests to evaluate whether a chemical(s) in a wastewater discharge/runoff or in ambient waters is in a toxic form as well as to identify toxicity that is due to chemicals that have not been identified in the discharge/runoff. I was involved as an invited peer reviewer to the National Academy of Sciences/Engineering “Bluebook” of water quality criteria of 1972. A key component of the expert panel of the NAS/NAE review was the incorporation of effluent toxicity tests. Throughout our careers we have been active in the use of toxicity tests to help in the protection of water quality from chemical impacts.

We support the US EPA’s efforts to establish,

*“1. **National Consistency:** provide the framework for a WET program that is nationally consistent across NPDES States, Tribes, and EPA Regions.”*

There is need for a national policy that is implemented in a consistent basis in order to adequately implement water pollution control programs in all areas of the US.

*“2. **NPDES Regulatory Compliance:** reinforce compliance with existing NPDES regulations, including the RP determination regulations at 40 CFR122.44(d) by reiterating the technical and regulatory basis for toxicity requirements in NPDES permits, while allowing flexibility consistent with the regulations where appropriate (e.g., allowing time to collect additional data for RP determination to supplement limited data sets).*

It is important that there is need for full national regulatory compliance with NPDES regulations covering the use of WET in regulating wastewater effluent discharges.

*“3. **Emphasis on Existing Guidance, Policy, and Regulations:** restate and clarify, where necessary, existing guidance, policy, and regulations on WET testing in the NPDES program, by referring the reader to portions of the TSD, WET test methods (USEPA 2002a,b,c), and various WET guidance documents.”*

The existing WET testing guidance generally provides a reliable technical basis for using the WET in a wastewater discharge NPDES program.

The NPDES permit covering the WET requirements should specify multi species testing where the test organisms (invertebrates and vertebrates) and test procedures are specified in the permit. It may be appropriate to include toxicity testing with algae if primary production in the receiving waters for the wastewater discharge appears to be limited.

The frequency of testing should be specified at no less frequent than monthly. For some types of wastewaters more frequent testing may be appropriate.

TIEs and TREs to identify the cause of the toxicity and develop a control program should be a requirement that is specified in the permit.

The permit should specify a follow up procedure of the type described by the US EPA in the Guidance of additional testing when the routine testing finds toxicity in the wastewater

The WET NPDES permit should contain specific enforcement procedures that will ensure that adequate toxicity testing is conducted and when found that procedures are implemented to control it.