

## TOXICITY IDENTIFICATION/REDUCTION EVALUATION (TI/RE) MODIFIED APPROACH

Hello. I'm Frank Doherty, Founder and President of Aquatox Research.

The focus of the previous video was on the traditional approach to conducting TI/REs. An alternate approach to resolving significant toxicity issues incorporates a less structured format and focuses on indirect methods for identifying sources and patterns in toxicity.

The indirect approach begins with an extensive discussion between ARI and the facility's representative and relies heavily on the knowledge and experience of plant staff. These discussions may reveal areas for evaluation. For municipal wastewater treatment plants, are influents to the facility primarily domestic waste or a combination of domestic and industrial wastewater. Is the treatment system biological or chemical in nature? For industrial manufacturing facilities, what types of processes are involved? Does the facility use an extensive chemical treatment program?

Rather than attempt to analytically identify a toxic chemical in the final waste stream, one could catalogue chemicals in use in a facility and rank them on the basis of known toxicity. If the application rate exceeds the toxicity for a chemical product, you could then go to the Phase III confirmation phase.

Another indirect approach would be to perform WETT tests on samples drawn from various points within a system to determine the point of entry of a toxic substance and thereby narrow the scope of possible toxic materials.

A third indirect approach would be to catalogue patterns in toxicity associated with activities within a facility. Does toxicity vary on either a temporal or spatial basis? Ultimately, assessing toxicity issues and eliminating their presence is a very site-specific effort requiring both flexibility and creativity.

It has been our experience that the Toxicity Testing Unit of the NYS DEC supports testing activities or philosophies that ultimately lead to satisfying the toxicity limits for a facility.

Please join me in the final video of this series where I summarize our philosophy for assisting permittees in meeting their regulatory obligations.

Thank you for your time. I look forward to discussing any questions you may have about our services.

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