



## Summary of Recent Projects

Area of Work: Wastewater System Design & Evaluation

### Project Description: Nitrogen Removal of a Paper Mill Effluent Through Biological Nitrification/Denitrification

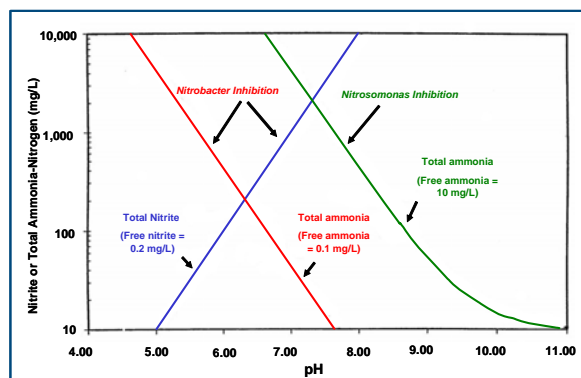


AquAeTer provided the following services to its client for this project:

- Evaluation of existing plant performance data;
- Wastewater characterization;
- Application of the Eckenfelder Biological Treatment Model;
- Nitrification/Denitrification treatability study;
- Cost evaluation; and
- Concept Development of treatment plant upgrades

AquAeTer was retained by this confidential client, a pulp and paper mill, to comply with future effluent limitations for nitrogen discharge. The project initially involved evaluation of the current plant performance data. Under the technical direction of Dr. Wesley Eckenfelder, AquAeTer staff proceeded with wastewater characterization and the application of the Eckenfelder-based kinetic biological treatment model for nitrification/denitrification. Treatability studies were conducted to develop the process design criteria. From the treatability study, AquAeTer developed the most cost-effective process design concept that the client could use for future compliance.

#### Ammonia and Nitrite Inhibition to Nitrification



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BRENTWOOD, TN  
(615) 373-8532

CENTENNIAL, CO  
(303) 771-9150

HERSHEY, PA  
(717) 533-0241