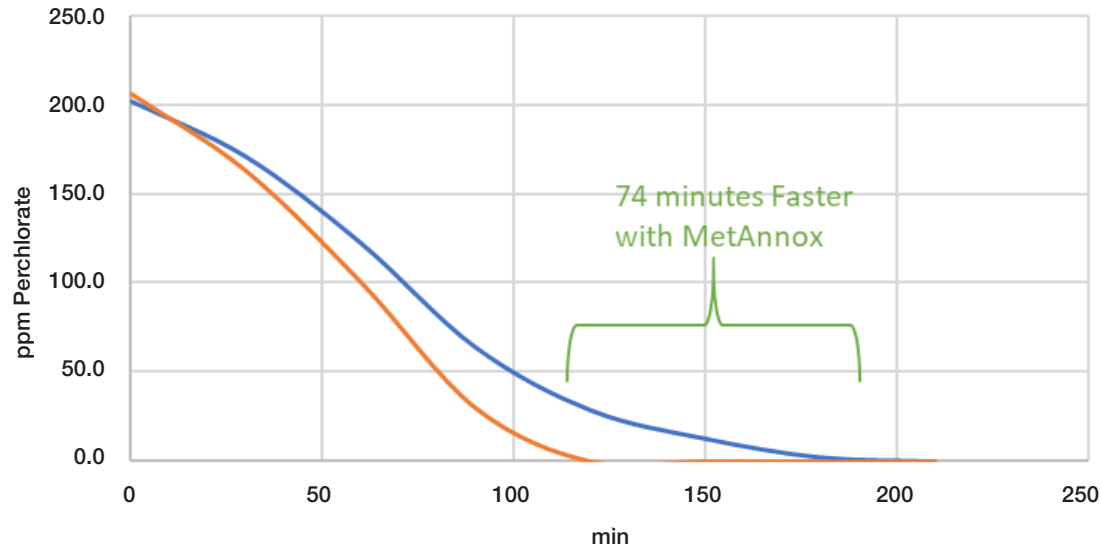


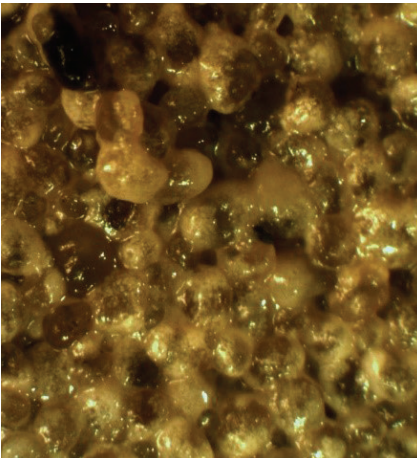


## Bioremoval of Perchlorate



— Perchlorate Before MetAnnox

— Perchlorate After MetAnnox



### 01 THE SITUATION

A ground water perchlorate removal facility was struggling with consistent removal of perchlorate using their biological anoxic treatment unit. The facility was required by the Federal and State government to maintain effluent aquafer recharge quality below detectable limits. Inspection of the unit found white growth biofilaments around the sand media.

### 02 THE PROCESS

ChemtronRiverBend came in to and reviewed the mechanics and operations of the facility. All proper macro nutrients, distribution and carbon source looked correct. A review of the long term data was done to look for any adjustments in the system that may have caused the effect, as well as a review of the internals. A Biological Health check was done on the system to look for any physical problems.

### 03 THE SOLUTION

After careful review of the system CHM-RBL recommended a slight adjustment to the ORP and the addition of a custom blended Met Source Annox solution that included micronutrients geared specifically for maximizing the growth and kinetics of anoxic bacteria that remove nitrate and perchlorate. This allowed the facility to meet their required permit values and stay in compliance with a stable bioprocess. The faster removal rates allowed the client to utilize their existing equipment Hydraulic residence time and not have to add more reactors at high capital costs.

