

CASE STUDY



**water
treatment
services**

project: Post-DAF BOD Reduction
product: Coagulant, Flocculant and 7-CDS
industry: Food & Beverage
location: Sydney, NSW

background

A food manufacturer in Sydney releases their trade wastewater to the local municipal authority. The authority regulates trade waste from the plant to allay undue load on the public sewage treatment system.

The client had problems meeting Biological Oxygen Demand (BOD) limits set by the authority on their trade waste stream and have been non-compliant. They are treating their wastewater with a Dissolved Air Flootation (DAF) system, however, this was not enough to meet their strict waste release requirements.

The client is also looking to reduce the volume of waste sludge going to their sludge holding tanks to further reduce solid waste disposal costs. The client engaged WTS to identify and trial chemistry solutions to meet local municipal authority requirements and decrease the solids volume of their waste stream.

approach

We applied our four-phase solution development process to identify the chemistry challenge and develop the most effective, cost-efficient solution.

- Water samples collected and analyses conducted to understand the wastewater chemistry
- Lab trials with various WTS Flocculants, Coagulants, and combinations thereof
- Trials of WTS 7-CDS as an additional BOD control agent
- Conducted a pilot trial of a combined solution to determine real-life efficacy

WTS Solution

- Coagulant, Flocculant and WTS-7-CDS in a multi-stage treatment solution
- Supply of polymer preparation system and chemical dosing pumps for the trials
- Monitoring of sludge in sludge tank
- Detailed trial report and proposal of final solution
- Delivered extra value, recommending engineering changes for the pH control system to stabilise their pH levels.



Clearer DAF effluent after application of WTS chemistry solutions

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results and benefits

- **Compliance** Achieves required Trade Waste compliance
- **Successful trial.** WTS solution proved effective in reducing BOD and in reducing the solids loading into the sludge tank
- **Reduced Costs.** Identified reduced solid waste disposal during our trial, reducing the client's waste disposal costs
- **Convenience.** WTS identified problem, trailed & tested, and proposed an effective solution



Turbid DAF effluent before application of WTS chemistry solutions