



## Ammonia Reduction in Petrochemical Wastewater

**Ammonia Treat (AM)** is a multi-strain *Bacillus* product formulated for efficient ammonia removal in wastewater treatment systems. It contains high-CFU ammonia reducing bacteria for wastewater that target ammonia and related nitrogen compounds. AM contains both hyper-ammonia-utilizing and denitrifying bacteria for faster, more reliable biological ammonia removal than conventional wastewater blends.

AM lowers operational cost while helping facilities meet effluent ammonia compliance and permit limits. Beyond reducing ammonia in effluent, AM is also effective for animal waste systems, aquaculture (TAN control), and odor management in waste-handling operations.

- Reduces Ammonia Fast:** lowers ammonia ( $\text{NH}_3/\text{NH}_4^+$ ), nitrite, and nitrate for improved effluent quality
- Supports Nitrogen Removal:** boosts biological denitrification and supports existing nitrification performance
- Lowers BOD, COD & Sludge:** decreases nutrient load, improves treatment capacity, and accelerates organic conversion
- Improves Solids Separation:** supports stable floc formation and settling for clearer effluent
- Controls Odors:** mitigates ammonia, hydrogen sulfide, mercaptans, and other odor-causing compounds
- Performs Across Conditions:** reliable in aerobic and anaerobic environments across wide pH and temperature ranges

### SYSTEM CHARACTERISTICS

Daily treating amount: 6,000 tons  
Retention time: 6 hours  
Ammonia before BGP treatment: 6-8mg/L  
Ammonia after BGP treatment: 0.7-0.8mg/L

### PROBLEM

Petrochemical wastewater treatment could not effectively remove ammonia, which was continually in the range of 5-8mg/L. New discharge standards required ammonia to be below 5mg/L. The plant tried various nitrifying bacteria products, domestic and imported, without success

### TREATMENT

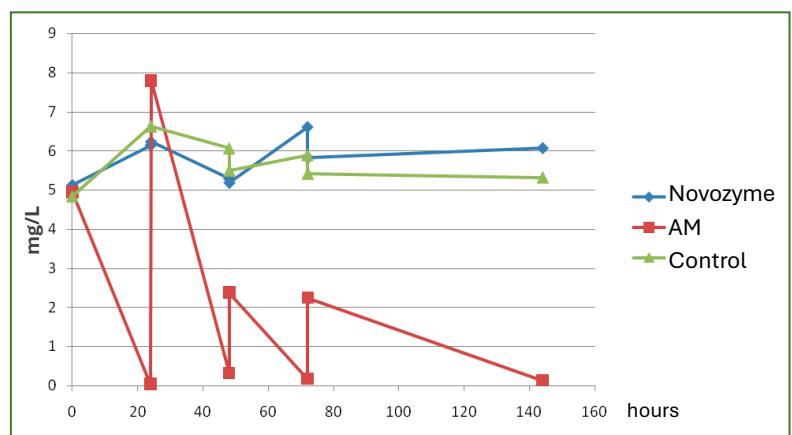
After lab tests, it was determined to apply 1.06kg of BGP Ammonia Treat (AM) per day to the facility.

### RESULT

3 days after adding AM microbes, ammonia dropped to 2mg/L and stayed below 1mg/L thereafter. BGP AM bacteria are heterotrophic and consume carbon. COD was also reduced.

### LAB TEST RESULT

Measurement	Time (hr.)	Novozyme nitrifiers	BGP AM	Control
Ammonia level (mg/L)	0	5.12	4.94	4.84
	24	6.14	0.029	6.62
	48	5.29	0.310	6.06
	72	6.61	0.168	5.89
	144	6.07	0.124	5.32



AM delivered the best reduction