PROJECT SHEET

JEA Bio Solids Facility

2025

ABOUT THIS PROJECT:

Market Segment:
Wastewater Collection & Treatment

Owner:
JEA

Products Used:
Xypex Bio-San

Location:
Jacksonville, USA

Engineer:
Carollo Engineers

General Contractor:
Wharton-Smith

Concrete Contractor:
VMG Concrete Contractors

The JEA Buckman Bio Solids Facility required durable concrete protection for new sludge holding tanks and the overhead structural slab exposed to aggressive wastewater conditions. These structures operate under continuous exposure to hydrogen sulphide and microbial activity that can lead to microbial induced corrosion. The project demanded a long-term solution capable of protecting concrete integrity without reliance on surface applied linings or membranes that require ongoing maintenance.

Xypex Bio-San was incorporated directly into the concrete mix as an integral admixture to provide permanent protection against microbial induced corrosion. The bio active mineral solids inhibit the growth of acid producing bacteria, while the crystalline technology reacts with moisture to form non soluble crystals throughout the concrete matrix.

This reaction permanently seals capillaries and micro cracks, improving resistance to water ingress and chemical attack. Bio-San was used in the sludge holding tanks and overhead slab to ensure long term durability in high exposure wastewater conditions.

By using Xypex Bio-San as an integral solution, the project team eliminated the need for external coatings or membranes while achieving long term corrosion resistance and waterproofing performance.

The crystalline system remains effective even if the concrete surface is abraded, providing a low maintenance solution suited to critical wastewater infrastructure. The application supports JEA's long term asset protection goals and contributes to extending the service life for the facility.