#### IMPROVING OPERATIONAL EFFICIENCY & BIOGAS PRODUCTION



# AN ORGANIC SOLUTION FOR WASTEWATER TREATMENT



Today, facility managers face tremendous challenges with more stringent environmental and fiscal constraints. These challenges have to be met with new and innovative approaches for continuous improvement that will reduce costs and optimize operational conditions.

Prodex<sup>®</sup> offers the wastewater treatment industry a proprietary liquid organic biostimulant called **BAE**<sup>®</sup> (*Biological Activity Enhancer*) that is produced using patented blending and processing techniques to yield a powerful humic extract. Facilities can benefit from the use of BAE<sup>®</sup> in both aerobic and anaerobic environments to improve operational efficiency and maximize renewable energy production. This low cost organic liquid provides operators an alternative to costly capital investments, while complementing environmental initiatives.

#### MAXIMIZING THE MICROBIAL WORKFORCE™

The complex microbial population is at the center of the wastewater treatment process. The stability of this population in wastewater environments is critical and can become difficult to balance. BAE's<sup>®</sup> unique ability to accelerate the growth of existing microbial populations and enhance their activity in both aerobic and anaerobic environments makes it an essential tool for operators today.

#### **INCREASING RENEWABLE ENERGY PRODUCTION**

BAE® helps operators take full advantage of the energy source right at their finger tips by enhancing the anaerobic digestion process.

- Maximizing methane gas production
- Treating increased volume of solids loadings
- Improving dewatering of sludge

#### **IMPROVING OPERATIONAL EFFICIENCY**

By optimizing the microbial environment, BAE<sup>®</sup> has proven to provide operators with an organic alternative to maximize the efficiency of their operations.

- Improving overall operational stability
- Enhancing sludge settling
- Helping to meet permit requirements with less biomass
- Accelerating recovery from upsets

#### A REWARDING RETURN ON INVESTMENT

BAE<sup>®</sup> is effectively priced for a rewarding return on investment and has been proven to drive down operational costs such as energy, chemicals, and sludge hauling.



# FIELD TESTED AND PROVEN

BAE<sup>™</sup> is benefiting communities every day. These Case Histories record actual, on-site BAE<sup>™</sup> usage as shown.

# **CASE HISTORIES**

## CASE HISTORY #1 ) Food Waste to Energy

Bio-solids being treated at a 6 MGD plant were supplemented using BAE<sup>™</sup>. This stabilized the materials in the digester and as a result:

- ✓ Biogas output increased by 37%
- Facility is now generating \$150K/yr. in revenue & growing
- Increased buffering capacity & throughput

## CASE HISTORY #2

## **Biogas Production**

BAE<sup>™</sup> was added to four digesters at a 60 MGD plant. The results were astounding:

- ✓ Digester gas production increased by 41%
- $\checkmark$  Cost avoidance for facility due to additional gas produced equates to \$392K/yr.

## CASE HISTORY #3 ) Solids Handling

BAE<sup>™</sup> was used at a 60 MGD plant to improve solids handling treatment.

- ✓ Plant saved \$353K/yr. on re-treatment costs due to return stream clean up
- Cake solids increased & less polymer used
- $\checkmark$  A reduction of 2.28 tons per day of sludge cake disposal= reduced tipping fees

## **CASE HISTORY #4**

### Nitrogen Removal

A 27 MGD plant treating Waste Activated Sludge & Primary Sludge was experiencing high amounts of Nitrogen in the plant effluent. The use of BAE<sup>™</sup>:

Srought effluent numbers from 39 mg/L in Nov. 2019 down to 4 mg/L in Aug. 2020 (a 90% reduction after one year)

## **CASE HISTORY #5**

## Maintenance Dosage/ Emergency Use

A well maintained 12 MGD plant stores BAE<sup>™</sup> to use when they experience dramatic changes in the plant influent. The use of BAE<sup>™</sup> in the aeration basins:

- Created a strong microbiology for quick response & recovery
- Provided stabilization for smooth plant operation
- $\checkmark$  Cleaned up gray water & enabled facility to meet contractual obligations







#### JOIN US IN MAKING THIS A HEALTHIER AND MORE ENVIRONMENTALLY FRIENDLY WORLD TO LIVE IN.

#### **OUR STORY**

Prodex<sup>®</sup> is the Wastewater Treatment division of JSH international (JSHi), a global Bio-Environmental company located in Mount Laurel, New Jersey. The Company develops, manufactures and markets Eco-Friendly products designed to have a positive impact on our environment.

The vision behind Prodex<sup>®</sup> comes from the founder of JSHi, Jirair S. Hovnanian. Mr. Hovnanian understood the powerful and positive impact that unique products derived from natural materials could have on our lands, waters, and energy production. His vision remains with us today and is the driving force behind the Company's mission to "harness the power of natural materials to promote environmental stewardship, operational efficiency, sustainability and a healthier work place while being cost effective and socially responsible in creating business opportunities."

Industry optimized variations of this organic product are offered within the JSH international family of companies and manufactured in the U.S.A. Visit **www.JSHinternational.net** to learn more.

**Kevin Mulvihill** CEO, JSH international



From the Earth...for the Earth<sup>®</sup> A division of JSH international<sup>™</sup> LLC



Member of the Water Environment Federation

www.ProdexProducts.com

900 Birchfield Drive | Mount Laurel, NJ 08054 | 856.234.4540