

PNCWA Advanced Thermal Treatment of PFAS Webinar
June 28, 2023, 10:00 AM- 12:00 PM

Presentation Title	Overview of Advanced Thermal Treatment	BFT Pyrolysis Unit Process Overview
Presenter	Micah Blate	Valentino Villa
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Employer	Hazen and Sawyer	Bioforcetech Corporation
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Summary of Lesson Content	Presentation will include: (1) PFAS Overview (2) PFAS in the water cycle (3) Advanced thermal processing introduction and overview (4) process benefits (5) biochar production and uses.	This presentation investigates one opportunity to reduce the environmental impact of biosolids by diverting it from landfill and creating a biochar product from it. The technology that will be used to illustrate the potential of this biosolids management option is, at the time of writing, the only full scale biosolids pyrolysis installation in the United States and is designed and distributed by Bioforcetech Corporation. Bioforcetech (BFT) has developed an innovative thermal processing system, consisting of a BioDrying and pyrolysis technology, for managing biosolids from Water Resource Recovery Facilities (WRRFs). BFT's BioDrying process harvests energy from a combination of natural microbial oxidation of the biosolids and heat recovered from the pyrolysis operation. The combination of BFT's BioDrying and pyrolysis operations provide for a biosolids management option with a low carbon footprint relative to existing options. The process may be energy neutral, reduces the mass of the biosolids and generates biochar that both sequesters carbon and improves soil health when used as a soil amendment.
Bio	Micah has 11 years of experience and serves as Hazen's Northeast Biosolids Lead, supporting the biosolids group regionally and nationally. Micah has supported utilities across the US and Canada with the process modeling and optimization, feasibility, planning, and design of wastewater and biosolids processing facilities. Micah is a PhD candidate at Drexel University researching anaerobic digestion, anammox, and PFAS destruction.	Valentino Villa is the Co-Founder and Chief Operating Officer at Bioforcetech Corporation. He earned the status of an Italian professional designation for an industrial expert in the field of engineering that is recognized as an industrial engineer outside of Italy. Since Co-founding Bioforcetech, Valentino and his team have been rethinking every step of biosolids management to prepare for a carbon free future. Valentino believes that Bioforcetech's biochar, OurCarbon™, is a resource, which is why he and his team are investing in research and development to expand the applications for biochar far beyond soil amendment. Valentino lives in California with his wife and two sons, Leonardo and Luca.

Anaergia Pyrolysis Unit Process Overview	Edmonds WWTP Gasification Case Study
Devon Barry	Dion Banks
Project Manager	Director of Sales, Marketing, & New Business
Anergia	Ecoremedy, LLC
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416.453.4388	443-521-4498
Anergia's high temperature pyrolysis process for PFAS destruction in Biosolids	The evolution of Ecoremedy, LLC's gasification technology and a review of Edmond's WWTP plant and developments to date.
Devon has nearly a decade of experience in pyrolysis process desing and research, as well as plant design and commissioing.	Dion Banks serves as Director of Business Development, Sales, and Marketing for Ecoremedy® and brings more than two decades of international business experience to the Ecoremedy team. Dion endeavors to live a life of service, acting as a conduit for awareness, development, and empowerment. He completed his undergraduate studies at the University of Kentucky and earned a bachelor of arts in business management while serving in the U.S. Army. During his career in the military, Dion earned The Army Achievement Medal, The Army Commendation Medal, Good Conduct Medal, Southwest Asia Service Medal, Kuwait Liberation Medal – Saudi Arabia, and the Kuwait Liberation Medal – Kuwait.