



Results of Ferrate treatment on Jordan industrial wastewater and drinking water. Ferrate easily precipitates heavy metals and other contaminants and restores clarity, taste, and drinkability to water. December 14, 2019. Photo credit: Ferrate Solutions, Inc.

**FOR IMMEDIATE RELEASE**  
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### **Ferrate Solutions Successfully Completes First Non-U.S. Water Treatability Tests near Amman, Jordan**

Florida-based water treatment tech company positioned for expansive global growth in 2020

**(Melbourne, FL)** A key business milestone for Ferrate Solutions, Inc. was achieved last week when its team of engineers successfully performed treatability studies on contaminated water in the Middle East. The Florida-based water treatment company was launched in January of this year with a target date of Summer 2020 for the installation and operation of its first systems.

"It's very exciting to see the company moving forward, as planned," said Tom Waite, founder of Ferrate Solutions, Inc. "We are on track to seeing Ferrate in full commercial application, both in the Middle East and Southeast Asia, by mid-next year."

The tests were performed December 12 to 15 at different locations in Jordan. Ferrate was piloted on both contaminated industrial wastewater and samples of the area's drinking water. Ferrate is delivered in a closed-treatment system, which means it is never released to the environment. The compound, though bright purple in color, is considered "green", or environmentally-friendly because it is iron-based, contained in treatment, and does not produce carcinogenic disinfection by-products like chlorine does.

While powerful and versatile, Ferrate has yet to show its worth as a viable treatment option in the commercial marketplace, despite the fact that it has been studied and celebrated by researchers for more than 300 years.

Previous attempts to use Ferrate to its fullest capability failed because researchers could not figure out how to produce the compound at an affordable cost, or how to deliver it properly in unique treatment scenarios. The Ferrate Solutions team has been able to solve these problems and is bringing its systems design, equipment and water chemistry knowledge, to market.

Ferrate has been proven to remove some of the toughest contaminants from water, including radionuclides, heavy metals, pharmaceuticals, pesticides, bacteria, nutrient contamination like phosphorus and nitrogen, and has even shown positive results on treating fluorinated compounds (PFAS and PFOA, etc.) that are currently dogging the environmental community around the globe. Ferrate's ability to treat multiple contaminants at one time and in one treatment make it uniquely appropriate for tough applications like cleaning up oil and gas frack water, mine releases, and severely polluted drinking water in developing countries.

"The planet is facing such serious environmental challenges, especially when it comes to drinking water, and those challenges can seem overwhelming," said Waite, "But they don't have to be. There is hope. There are big solutions on the horizon, and Ferrate is one of them."

Ferrate Solutions is currently seeking designation as a "new technology" by Florida's Department of Environment to treat harmful algal blooms and remove nutrient contamination (Total Phosphorus and Total Nitrogen) in Florida and is in the process of developing projects in Thailand, China, Nepal and Jordan.

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**More about Thomas D. Waite PhD PE...** Thomas Waite is an internationally renowned environmental engineer with more than 40 years' experience in developing water and wastewater treatment technologies, including high-valence iron chemistries. His laboratories have led the research in these technologies, and he has designed and built full scale treatment systems. Dr. Waite brings a lifetime of experience as a researcher and practicing environmental engineer with a specialty in water quality control to this role. Dr. Waite has a PhD in Environmental Engineering from Harvard University, and has risen to several positions at the University of Miami and Northwestern University, including Professor of Civil and Environmental Engineering, Chairman of the Department of Civil Engineering, Associate Dean of the College of Engineering, and Director of the Laboratories for Pollution Control Technologies. In 2002 Dr. Waite was appointed Program Director of the Environmental Engineering Program at the National Science Foundation (NSF). In 2005 he became the Dean of the College of Engineering at the Florida Institute of Technology. He is the author, co-author or editor of four books and more than 150 technical reports and research presentations.

In addition to university-based scholarship and research, Dr. Waite has had extensive experience in consulting and practicing engineering, both domestically and abroad. Dr. Waite led research to develop advanced membrane systems for oil-water separation for the U.S. Navy in Annapolis Maryland. He spent a year working at the Nanyang Technological University in Singapore where he was the first to design and build processes for treatment of ships' ballast water. Based on this breakthrough research, Dr. Waite was included in the Singapore delegation to the International Maritime Organization (IMO) of the United Nations in London England. Dr. Waite developed the official treatment standards for ballast water treatment to prevent the transport of unwanted species which were formally adopted by the IMO and are in force today around the world. Dr. Waite has also participated as an international expert in marine pollution at the Helsinki Water Protection Laboratory in Finland. Dr. Waite led an industrial waste survey in Barbados, West Indies and Belize, Central America while being a consultant to the Caribbean Community Secretariate. He has been a go-to expert for the Pan-American Health Organization (PAHO) dealing with hazardous waste disposal issues throughout South and Central America. Based on results from these assignments, Dr. Waite was asked by the World Health Organization (WHO) to lead a working group on coordination of technical cooperation for improving access and quality of drinking water, globally.

Because of Dr. Waite's work with high-energy electron accelerators utilized for environmental treatment, he became a technical expert for the International Atomic Energy Agency (IAEA) of the United Nations. In this role he was sent on assignments as an expert to work with the governments of Brazil, Ecuador, Saudi Arabia, Korea, and Egypt.

Dr. Waite has also held appointments with both federal and state agencies in the US. He was a committee member on four National Research Council (NRC) committees dealing with marine pollution and transport of unwanted species by ships' activities. Dr. Waite was recently appointed to the Florida Oceans and Coastal Counsel by the Florida legislature.

**More about the global water treatment industry...** The global water and wastewater markets are expected to reach USD 674.72 billion by 2025, driven by the rising demand for fresh water for drinking, industrialization and agriculture. Water & wastewater treatment processes such as softening, deodorization and purification are essential in making water more useful and potable. Asia Pacific is the largest market area accounting for 43.9% of revenue share in 2016. The Asia Pacific municipal water and wastewater market is likely to grow at a CAGR of 5.3% over the forecast period. Additionally, the market size for water treatment chemicals was already valued at USD 14.92 billion in 2016 and is expected to grow. Industry experts are very aware that the increasing regional scarcity and rising cost of water will endorse larger stress on recycling and reuse of water, making efficiency and cost effectiveness a very high priority across industries. New technologies will play a critical role in meeting this demand.

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