

Press release

20 December 2022

Hazardous waste: Veolia Starts Operations of a State-of-the-art GeoMelt® Nuclear Waste Vitrification Facility in Texas to treat legacy waste

- *Groundbreaking patented technology makes management of low-level nuclear waste safer, simpler and more cost effective to treat and dispose*
- *GeoMelt® technology has the potential to become a new benchmark solution for the treatment of complex waste, both in the United States and across the globe*
- *Legacy waste originates from nuclear decontamination and decommissioning activities at U.S. Government sites*

Andrews, Texas – Veolia, via Veolia Nuclear Solutions - Federal Services (VNSFS)¹, has started operations on its new GeoMelt® vitrification facility in Andrews, Texas. The VNSFS team has already successfully vitrified one full stream of low-level radioactive waste from the Idaho National Laboratory (INL), melting the waste into glass that's 10 times stronger than concrete, more economical to dispose of, and significantly safer to the environment. This is the second commercial vitrification facility in the United States, the first one also built by Veolia in Richland, Washington.

Vitrification is the process of converting nuclear waste into glass and is the preferred method of nuclear waste management for many types of material. The leach-resistance of the resulting glass is among the highest of all materials in the world. But for years, vitrification has been considered too costly and complicated to utilize widely and commercially.

By reducing process complexity and pretreatment needs, Veolia's patented GeoMelt® process has made vitrification the most cost effective and safe method for treating low level, reactive metal wastes. Now, with Veolia's new vitrification facility, located on the Waste Control Specialists site

In Texas, the company has grown the commercial availability of vitrification technology in the United States and is poised to expand the types of low level nuclear materials for which it can be used for disposal.

Pioneered by Veolia, the GeoMelt® technology has the potential to become a new benchmark solution for the treatment of complex waste, given its advantages over existing technologies and its relatively simple industrial implementation, as well as its significant reduction in the volume of waste after treatment, especially compared to current cement-based immobilization technologies. In France, Veolia has recently launched jointly with French electric utility company EDF "Waste2Glass," a joint venture to develop innovative solutions to treat low level radioactive waste using the GeoMelt® technology.

This technology has already been used to treat more than 27,000 tons of radioactive and hazardous waste worldwide.

¹ the U.S.-based subsidiary of Veolia Nuclear Solutions

“Our GeoMelt® technology has the potential to make the process of managing nuclear waste simpler, safer for the environment and more cost effective. That’s why this is a major milestone for our company and the industry. As we further mature the technology, we hope to expand the application of GeoMelt® to higher levels of nuclear material,” **said Brett Campbell, Vice President of Technology Deployment, VNSFS.**

The GeoMelt® process is designed to drastically reduce the cycle of contamination that nuclear waste goes through during processing. Using a batch process, GeoMelt® places the waste in a container, treats it and then disposes of the waste in the same container.

“Idaho National Lab is like most other DOE (U.S. Department of Energy) sites and even some commercial nuclear facilities around the United States. We all have decades-old legacy waste that has not had a viable, cost-effective disposition path. GeoMelt® is a simple solution that works very effectively,” **said Bob Miklos, INL Director of Production Facilities: Fuel Recycling, Nuclear Fuels Management and Waste Management at INL.**

Miklos said *GeoMelt® and Veolia are helping INL now and in the future. “We’ve got a great vision for how this enables the Idaho National Lab mission to deal with our legacy waste and the enduring mission of the national laboratory. Our mission, our strategy is to dispose of our waste off site. That’s our primary preference. We couldn’t do it unless we partnered with industry – with Veolia and Waste Control Specialists. The vision for how we can utilize this now and for even expanding waste streams in the future is viable now because of this.”*

To learn more about GeoMelt® technology and the new VNSFS facility in Texas, view this video.

Veolia Nuclear Solutions (VNS) aims to be the future leader in the decontamination and decommissioning of nuclear installations. It offers the most comprehensive range of technologies and services for facility management, decommissioning, and the treatment of radioactive waste, all nurtured by nuclear experts and backed by thousands of Veolia staff worldwide. It is helping to clean up significant global environmental threats by providing bespoke technologies and services for the most challenging environmental cleanup and decommissioning & dismantling projects. www.nuclearsolutions.veolia.com. Veolia Nuclear Solutions – Federal Services (VNSFS) is a company formed to deliver Veolia’s robust capabilities to the U.S. Government, which it does through its five Business Lines: Waste Management, D&D and Remediation, Technology Deployment, Engineering, and Facility Services & Operations. www.vnsfederalservices.com.

Veolia group aims to become the benchmark company for ecological transformation. With nearly 220,000 employees worldwide, the Group designs and deploys game-changing solutions that are both useful and practical for water, waste and energy management. Through its three complementary activities, Veolia helps to develop access to resources, preserve available resources and renew them. In 2021, Veolia supplied 79 million people with drinking water and 61 million people with wastewater services, produced nearly 48 million megawatt hours of energy and treated 48 million metric tons of waste. Veolia Environnement (Paris Euronext: Veolia Environnement (Paris Euronext: VIE) achieved consolidated revenue of 28.508 billion euros in 2021. www.veolia.com

Contacts

Veolia Nuclear Solutions Communications

Valerie Bielstein

Tel. +44 (0)1235 522119

valerie.bielstein@veolia.com

Veolia Nuclear Solutions Media Relations

John Tomlin

Tel. +1 914 703 1655

jtomlin@actumllc.com