

Evonik remediates groundwater in Hanau neighborhood in award-winning project

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- Evonik's EHC® Reagent is eliminating volatile organic compounds left over by military activities
- Former barracks being transformed into modern new Pioneer Park residential quarter
- Joint remediation efforts of Evonik, AECOM, and Sensatec win bronze medal at Brownfield Award® 2024

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Hanau, Germany. Evonik is remediating groundwater contaminated with volatile organic compounds (VOCs) at the **Pioneer Park** urban development site in Hanau. Once a military barracks, the area is undergoing transformation into a modern neighborhood set to house 5,000 residents. The project is utilizing Evonik's product **EHC® Reagent**, environmental consulting from **AECOM**, and field technology from **Sensatec** to remediate two contaminated areas. On 16 May, the partners were awarded the bronze medal in the category "Especially Sustainable" at the **Brownfield Award® 2024**.

The 50-hectare site has been under successive development into an urban living space since 2018. In 2020, two areas covering 11,000 square meters showed impermissible levels of VOCs in the groundwater, primarily caused by dry cleaning activities at the former barracks. In consultation with global infrastructure consultancy AECOM, the project owner LEG Hessen-Hanau – a BIG BAU Group company – together with the city of Hanau and local regulators selected Evonik's EHC® Reagent to resolve the issue.

EHC® Reagent is specially formulated to degrade VOCs – substances that are notoriously difficult to destroy. It combines controlled-release organic carbon with micronized zero valent iron (ZVI) to trigger chemical and microbiological degradation. From 2020 to 2023, Evonik worked together with field technology expert Sensatec to inject EHC® Reagent into the subsoil under high pressure. Monitoring in March 2024 demonstrated that this "in situ chemical reduction" (ISCR) is on track to degrade the VOCs down to levels significantly below permissible limits.

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“The advantage of ISCR is that it saves costs, energy, and time compared with other remediation methods,” said Mike Mueller, EMEA Business Manager for Soil & Groundwater Remediation at Evonik’s Active Oxygens business line. “There is no need to pump out the groundwater in order to treat it. ISCR is thus associated with significantly lower CO₂ emissions than alternative measures.”

Hanau Mayor Claus Kaminsky stated: “It is important to us that the soil and groundwater quality in Pioneer Park is completely within acceptable parameters. Thanks to the companies involved and Evonik’s reagent, we are on our way. The fact that Evonik, a company from the immediate vicinity, had the right solution ready makes it all the better. An excellent example of community at work.”

In fact, the remediation work at Pioneer Park was particularly recognized at the German Brownfield Award® 2024 on 16 May, taking the bronze medal in the “Especially Sustainable” category. The project was honored for its sustainable approach and contribution to local social and economic development.

EHC® Reagent is sustainably produced using recycled raw materials. It contains nutrients to activate biological decomposition which are derived from a grain-milling by-product, and the ZVI is sourced from scrap iron. Like all of Evonik’s soil and groundwater remediation portfolio, EHC® Reagent is non-toxic and, after breaking down contaminants into harmless molecules, fully degrades itself.

Read the full story of the Pioneer Park remediation project on the [Evonik Active Oxygens website](#).

Learn more about Evonik’s Soil & Groundwater Remediation business at [evonik.com/remediation](https://www.evonik.com/remediation).

Company information

Evonik is one of the world leaders in specialty chemicals. The company is active in more than 100 countries around the world and generated sales of €15.3 billion and an operating profit (adjusted EBITDA) of €1.66 billion in 2023. Evonik goes far beyond chemistry to create innovative, profitable, and sustainable

solutions for customers. More than 33,000 employees work together for a common purpose: We want to improve life today and tomorrow.

About Smart Materials

The Smart Materials division includes businesses with innovative materials that enable resource-saving solutions and replace conventional materials. They are the smart answer to the major challenges of our time: environment, energy efficiency, urbanization, mobility and health. The Smart Materials division generated sales of €4.46 billion in 2023 with more than 8,100 employees.

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