

Specialist Press Release

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Contact:
Katharina Weinmann
BAUER Aktiengesellschaft
BAUER-Strasse 1
86529 Schrobenhausen, Germany
Phone: +49 8252 97-3947
public.relations@bauer.de
www.bauer.de

500,000 m³ of water in four years: Cleaning of polluted groundwater from railway car production

Düsseldorf, Germany – On the former DUEWAG factory premises on Königsberger Strasse in Düsseldorf, countless rail vehicles, for instance streetcars and freight cars, were manufactured for the whole of Germany over a period of more than 70 years. But many years of production at this legendary railway wagon factory have left their mark: a contamination of the groundwater with tar oil residues. The Bauer Umwelt Division of BAUER Resources GmbH is now playing a major role in remediating the area and revitalizing it for the development of a new industrial site. This includes first and foremost the purification of the polluted groundwater.

In December 2020, the specialists from the Bauer Umwelt Division began with a range of demolition tasks and earth works in order to prepare the 240 m² site for the construction of a groundwater treatment plant. Once this was completed, the individual equipment components were transported to the site in five truckloads. Within just three weeks, the team led by Heinrich Unger, Sales Manager West for the Bauer Umwelt Division, prepared the site for operation step by step: this involved constructing the catch basin including all supply and disposal lines, setting up pre-fabricated components such as screens, tanks and containers and connecting them by means of internal pipe work. To prevent damage to the frost-susceptible components during the cold winter months, winter protection was installed. On March 1, 2021, the groundwater treatment plant was finally commissioned – with great success. “A fantastic performance in terms of the short installation period”, highlights Heinrich Unger and adds: “This requires experience and perfect scheduling.” Furthermore, special attention is necessary: in addition to the groundwater contamination originating from the site, there is a plume of highly mobile pollutants (so-called "PFT"), which flows in from outside the site and for which the plant also had to be designed.

Since its commissioning, the plant with a maximum throughput capacity of 25 m³/h cleans approximately 12.5 m³ of water every hour that is polluted with contaminants such as PAH, manganese, CHC and PFC. “Specifically, the polluted water is pre-treated in a 40 m³ tank with a sedimentation, aeration and storage chamber as well as gravel filtration. Then the contaminants are absorbed using three successive liquid phase activated carbon filters,” explains Heinrich Unger. Once the cleaning process has concluded, the clean water is reintroduced into the waste water channel via an interim buffer system. In this way, approximately 500,000 m³ of polluted water will be cleaned by the end of operations in 2025. During the remaining run-time, control of the most important plant functions will be carried out via remote control and maintenance will be performed directly on site at regular intervals using the system controls in the technical container.

Apart from groundwater treatment, extensive rehabilitation work will be carried out on the grounds of the former railway car factory. “For projects of this kind, what we need above all are expertise, experience, technical capabilities and a strong team. We have already demonstrated this with the successful commissioning and smooth operation of the site, and hope to receive more follow-up orders in the future,” remarks Heinrich Unger in conclusion.

Photos: **2021-12_BAUER_Groundwater+purification+Duesseldorf ...**



(1) The Bauer Umwelt groundwater treatment plant purifies 12.5 m³ of polluted water per hour.



(2) Control of the most important plant functions will be carried out via remote control and maintenance will be performed directly on site at regular intervals using the system controls in the technical container.

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About BAUER Resources Group

The regionally organized BAUER Resources GmbH is aligned to projects around the world with its subsidiaries in Germany, Africa, the Middle East and South America and has extensive expertise in the areas of drilling services and water wells, environmental services, constructed wetlands, mining and rehabilitation. With more than 30 years of experience, BAUER Resources GmbH's Bauer Umwelt business division is one of the leading specialists in site remediation, soil remediation and waste disposal, both in the domestic market and internationally. As an expert in pollution reduction, Bauer Umwelt offers a diverse range of services for all environmental issues. Other companies of the BAUER Resources Group are the GERMAN WATER and ENERGY GROUP (GWE) – manufacturers of pioneering products and developers of integrated applications for well-drilling and geothermal – as well the Site Group for Services and Well Drilling Ltd. in Jordan. More at bre.bauer.de

About Bauer

The BAUER Group is a leading provider of services, equipment and products dealing with ground and groundwater. With over 110 subsidiaries, Bauer can rely on a worldwide network on all continents. The Group's operations are divided into three forward-looking segments with high synergy potential: Construction, Equipment and Resources. Bauer profits enormously from the collaboration of its three business segments, enabling the Group to position itself as an innovative, highly specialized provider of products and services for demanding projects in specialist foundation engineering and related markets. Bauer therefore offers suitable solutions to the world's greatest challenges, such as urbanization, the growing infrastructure needs, the environment, as well as water, oil and gas. The BAUER Group was founded in 1790 and is based in Schrobenhausen, Bavaria. In 2020, it employed about 11,000 people in around 70 countries and achieved total Group revenues of EUR 1.5 billion. BAUER Aktiengesellschaft is listed in the Prime Standard of the German Stock Exchange. More information can be found at www.bauer.de. Follow us on [Facebook](#), [LinkedIn](#) and [YouTube](#)!