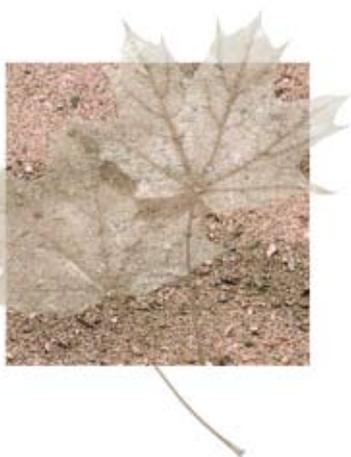
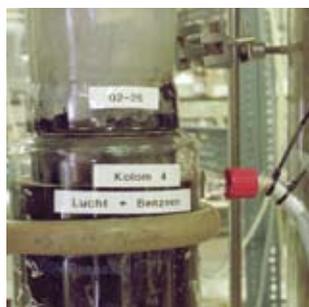


TERRECO - SPECIALIST IN SOIL REMEDIATION

Soil Remediation: Expense or Profit?

Many companies view the soil contamination on their site as an expense. However, contrasted with an often serious investment in remediation is a return on that investment which is not immediately visible. But, in Terreco's experience, there has been a change in the way that the business world views remediations. The chemical industry in particular has seen the advantages of soil remediation in recent years. Generally, a remediation project carried out during a financial recession turns out to be a good investment. In a resurgent economy there is always a rising demand for industrial land.



Appreciation

The most important reason for selling is the strong growth of many companies due to takeovers. Because of this, activities are often combined and installations and production processes are optimised. The result is that locations that were in use for years suddenly become redundant. These companies usually have a long history and consequently a number of 'inheritances' in the soil that hinder a successful sale. The buyer will always want to make a reduction to an (overly) high sum for the purchase price. The seller, on the other hand, is of the opinion that the soil remediation can be carried out at a much lower price. The result is that the deal usually does not go through, or does so with an undesirable delay. Another aspect is that the profit for the seller is 'stuck' in the books as a result of the soil contamination. The money only becomes available upon appreciation of the land - which requires remediation. For this reason the larger companies, especially from the chemical industry, preferably start remediation before the sale or at the latest during the sale process. In this regard they commit to remediating the soil for the new owner without additional costs and without interrupting daily operations on the premises.

Costs

How much will a soil remediation cost? This is a difficult question, to which many contractors have no clear answer, especially with regard to in situ remediation. In many cases, the fixed price that is quoted turns out to be no more than a price for the required number of years that are necessary for the remediation. If afterwards the results are still not achieved, then the client is once again confronted with costs.

A different way of working

Terreco utilises its patented in situ remediation technology, almost always for a fixed price, with guaranteed results. This means that the seller's problem is taken off his hands, so to speak. The

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EDITORIAL

Terreco is broadening its horizons in Eastern Europe. After Hungary, an extensive soil remediation project was launched in Poland. In addition, several remediation projects were successfully completed recently, in each of which Terreco achieved the agreed targets at a fixed price that was agreed in advance. A very successful MTBE remediation project was carried out at Odfjell Terminals Rotterdam in the Rotterdam harbour district. Joris Lap, the soil representative at Odfjell, will be commenting on this himself in this newsletter. Terreco has become the specialist in remediation of MTBE soil contamination. If you have questions about MTBE remediations, or would like more information, please feel free to contact us. Naturally, you can turn to us for any other soil contamination problems as well.

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costs are known in advance of the remediation. In addition, the buyer has no disruptions to deal with, not even if the remediation takes place beneath buildings or infrastructure. This eliminates the price discussion between the buyer and seller regarding the contaminated soil. With this approach, Terreco has launched successful remediation projects at locations that are up for sale or have recently been sold.



INTERNATIONAL REMEDIATION PROJECTS - EASTERN EUROPE

Terreco Successful in Poland

A major producer of paint, coatings and specialty chemicals is active globally with more than 55,000 employees. Manufacture of innovative products for industry and consumers takes place in Poland, among other places. With a takeover, the company added a big name to the range of popular paint brands on the Polish market.

Pollution from the past

There was extensive contamination from the distant past at one of the Polish sites where paint and coatings were produced. In particular, soil contamination from aromatic hydrocarbons (BTEX). Completely in line with the high demands the manufacturer places with regard to sustainability, they pursue an active policy of cleaning the locations that have become polluted over time for future use. That is why a conventional remediation method has been applied to remove a portion of the contamination at the Polish location in recent years. However, the approach proved to be not sufficiently effective in ultimately achieving satisfactory results and provide clean premises for the company.

Alternative - PuriSoil®

After an extensive assessment of alternative options, contact with Terreco was sought. The patented PuriSoil® technology turned out to be the best alternative. The results that Terreco achieved with this technology in the past were decisive for the choice of PuriSoil®, as well as the positive experiences that Tauw, the environmental advisor at the chemical company, had with PuriSoil® technology. Other points that greatly contributed to the decision were the safety of the remediation technology, the low fixed price and the guaranteed results. Intensive negotiations preceded the definitive awarding of the assignment by the Polish organisation. A strong collaborative bond was developed with the Polish site management in this regard.

Collaboration with the Polish organisation

In the period of April through August 2010 Terreco started work on the first phase: the set-up of the remediation process that had to be done largely beneath existing buildings and infrastructure. A Terreco remediation team was present full-time at the Polish production location during those five months. The mutual trust that was established with the local organisation proved to be a productive foundation for the project's successful progress. The remediation was able to commence in late

August. Measurements taken since that time show that the remediation is effective. According to the schedule, the land is expected to be delivered clean by 2015.

Constructive collaboration in the remediation process

FACTS

The technical data of the remediation project...

- Most significant components: Aromatic hydrocarbons (BTEX)
- Initial concentrations: very high (LNAPL)
- Area of contamination: > 23,000 m²
- Water table: 3 to 4 metres below ground level
- Depth of contamination: 13 metres below ground level
- Soil: sand and clay



ODFJELL TERMINALS ROTTERDAM B.V.

MTBE Remediation With High Removal Efficiency

Odfjell is globally active in transport and storage of liquid chemicals, acids, food oils and various special products. The company is also represented in Rotterdam, where Odfjell Terminals Rotterdam B.V. operates one of the largest independent tank storage terminals in the world. MTBE contamination occurred in 2008, and action was immediately taken. Terreco was employed to provide a permanent solution.

Control measure

Odfjell Terminals Rotterdam has been active in the heart of the Rotterdam harbour district since 1957. The terminal consists of approximately 300 storage tanks varying in size from 735 m³ right up to 40,000 m³. With these, the company has a total storage capacity of more than 1.63 million cubic metres. Every tank has its own pipeline to a pump station, from which the tanks are accessible for client-specific, production-specific or multipurpose shore lines. The company maintains strict regulations for protecting safety, health and the environment. So when MTBE leaked in 2008, the company immediately went into action. The first measure was the construction of a groundwater extraction screen. But this control measure is not sufficient in the long term and so a sustainable solution had to be sought: addressing the source of the problem.

Experience in MTBE remediation

In this case of soil contamination, Odfjell Terminals Rotterdam had to deal mainly with MTBE. 'A fundamentally difficult component to remediate,' as Joris Lap, soil coordinator at Odfjell, can attest. 'So experience in this field constituted an important criterion in the selection of a remediation company. As one of few remediation companies, Terreco has that experience. In addition, Terreco has since achieved demonstrable results in other successful MTBE remediation projects. In combination with the fixed price and Terreco's guaranteed results, that was decisive for our ultimate choice.'

Results

Terreco began preparing the remediation project in July 2008. The remediation process was launched in August. The results were surprising for Odfjell. Just two months of cleaning were sufficient to shut down the groundwater extraction screen. The PuriSoil® technology proved capable of quickly stopping the spread of the contamination. Lap: 'The remediation was done very rapidly. We are now in contact with the Rotterdam-Rijnmond environmental protection agency

(DCMR) to take supplementary soil samples. The goal is to deliver the location completely clean. As it looks now, we're going to achieve that sooner than expected.'

Quick results in a difficult remediation project

FACTS

Surprising results! The technical data of the remediation project...

Initial concentration of MTBE: 675,000 µg/l. in the groundwater

Concentration after 6 months remediation: 20,000 µg/l.

Concentration after 24 months remediation: < 75 µg/l.

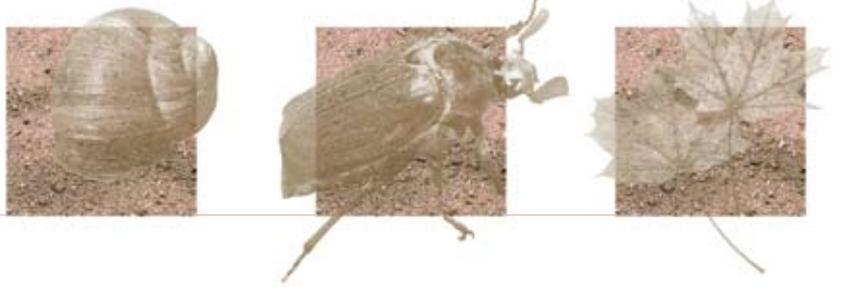
Removal efficiency 99.99%

Area of contamination: 400 m²

Water table: 3 to 4 metres below ground level

Depth of contamination: 12 metres below ground level

Soil: sand and clay



Project Update

Maarheeze

The soil remediation at a naphtha pipeline in Maarheeze is in its final phase. The ultimate target values for a contamination with mineral oils and arenes (BTEX) over an area of 2,400 m² have almost been reached.

Elsloo

The soil remediation beneath a petrol station in Elsloo, Limburg is progressing rapidly. Approximately 15,000 litres of diesel fuel ended up in the soil due to a leak in an underground diesel pipe. The contamination is 22 metres below ground level. No VOC emissions occurred during the remediation with PuriSoil®. Disruption has been kept to a minimum, meaning the station owner will not lose any revenue.



Geleen

The remediation project at Tankenpark 3 of the Chemelot location in Geleen is a success. A leak in an underground transport pipe resulted in benzene contamination up to 30 metres below ground level. A floating layer formed on the groundwater with a surface area of 27,000 m². Less than a year after Terreco launched the remediation project, the costly groundwater extraction screen, which the client had had installed himself, could be decommissioned. The remediation is progressing rapidly while everything on the premises is 'business as usual'.

Successful Completion

Hoek van Holland

The soil remediation that was launched at DSM Resins in Hoek van Holland was successfully completed. Terreco is more than proud of the results. The project was completed on schedule and the residual contaminant values that were achieved are far below the agreed targets. This result, the fixed price and the guaranteed results were enough incentive for DSM Resins to award another historic soil remediation project on the site to Terreco. This project is already started.



Geleen

The soil beneath a butadiene factory in Geleen is clean again. The remediation project at the petrochemical company was completed with a very nice score: a removal efficiency of 99.999%. MTBE was one of the most significant components that had to be remediated here.

News in Brief

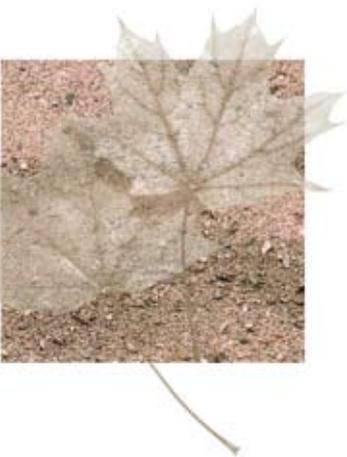
DSM sells share in Terreco

Terreco is entirely independent. DSM Venturing, DSM's venture capital group, has sold its share in Terreco to the company's management. After sale of the share, DSM has now transferred the PuriSoil® patents to Terreco as well.

NATO selects Terreco to carry out an in situ soil remediation

Terreco launched a soil remediation project in a residential area of Roermond on behalf of a housing corporation

Sabic Europe extends contract with Terreco



COLOPHON



TERRECO
environmental solutions

Terreco BV offers customised environmental solutions and specialises in complete cleaning of contaminated soils. Terreco uses PuriSoil® technology, among others. Remediation projects are carried out for a fixed price and with a guarantee of results.

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