4 | Like a chamber of horrors
First bankruptcy, then decay. And finally redevelopment. An old electroplating shop looked like a chamber of horrors.

6 | Hot job
Regular job at a Thyssen furnace. With 300 degrees centigrade under their feet, the men at Lobbe need to keep a cool head at all times.

8 | High pressure at the gasometer
Telescopic gasometers are not exactly ten a penny. But wherever they are, they do need regular maintenance.

10 | Comprehensive provider
One-stop shopping has proved its worth. When the acrylic acid unit was shut down, Lobbe handled the entire process.

12 | Playing it safe
It’s good to be in control. The safety expert turns up unexpectedly at the VCM turnaround. This is one reason for the zero accident rate.

14 | Uncompromising
Bitterfeld has developed from an environmental heap of rubble to a model industrial site. Contaminated sites are uncompromisingly redeveloped.

16 | Pure kerosine
Working at an old military airport, Lobbe pumps pure kerosine out of the groundwater – in the quality of a refinery. 10,000 litres a month.

18 | Waiting patiently
Tröbitz is a small town in the district of Elbe-Elster. The redevelopment of this industrial landfill removed some deep scars of the past.

20 | A challenge: tar
The redevelopment of an old tar landfill was quite a challenge for Lobbe. Extremely narrow specifications in terms of time and volumes.

22 | "World class" in the States
"World class from southern Westphalia in Germany" was the headline in a report on Lobbe’s vertical mill as used in the States.

24 | An appointment with "Heidi"
"Heidi" is always a red-letter item in the calendar. Lobbe regularly gives a hand with Block H at the RWE power station in Niederaussem on the Rhine.

26 | "Molto bene" – good stuff!
The little town of Parona is situated south of the Alps and west of Milan. The biggest building is an incinerator. Revision.

28 | Tailor-made
Lobbe has a location that is totally geared towards solar cell manufacturers. Transport and treatment of hydrofluoric acid.

30 | During full operation
Like elsewhere, some of the building material at Paderborn University contains asbestos. Redevelopment during full operation.

32 | Valuable
The most important food item is water. To keep running water as pure as possible, filter systems need to be given an overhaul.

34 | Thunder and lightning
Three days between hope and fear, but finally the job is finished. Dismantling a settling tank at Schwarze Pumpe.
INTRODUCTION TO SPECIAL EDITION 2010

Standing out among the crowd

Lobbe Industrial Services has become well established in the market

“Best of” might have made a good title, but terms such as “cross section” and “overview” are more suitable. In this special edition of our customer magazine TatSachen (“Facts”), we would like to present a range of original reports with a retrospective overview of industry service activities that now have been available for well over a decade. Lobbe has become established in this multifaceted service segment as one of the best-known and indeed most powerful medium-sized companies at the national level. We are reliable partners who are consistent at all times and who are particularly valued for excellent performance, credibility and fairness.

Another positive element that is valued by customers is Lobbe’s innovation capacity. This quality is currently a frequent focus of attention in industrial services, as we seek to replace manual activities in hazardous areas either completely or partially by automated routines.

“Zero accident rates” are of course a major challenge. Like our industrial customers, we rigorously pursue our safety targets in every possible way.

In this effort, our strategic decisions have the strong and unqualified support of our company owners, the Edelhoff family. Operating from Iserlohn, they have warranted continuity and stability over the years, contributing their business expertise and foresight to our development and helping us move in the right direction. It means that our workforce of some 800 staff have good long-term prospects and secure jobs.

The foundations of Lobbe have been decisively strengthened through the acquisition and perfect integration of MIDI Industrieservice, Pfeifer Industriereinigung, the Kluge Group and KWS Kraftwerkservice. Another major component that has helped us in the further development of our industrial services was the redevelopment of industrial wasteland which had been used for the storage of surplus tar. This is an area where Lobbe is seen as the uncontested market leader.

Industrial services are among the most rapidly changing markets. A range of studies and also several forecasts from market experts have shown that the coming years are set to open up an increasing number of opportunities for medium-sized service companies. The most important qualities are flexibility, independence and of course – as a valuable emotive component – a passion for the task at hand. To ensure cost efficiency, manufacturing groups will need to set greater priorities in their core business and will need to spin off certain activities to a greater extent than before. This is a good opportunity for further growth – and thus also for Lobbe.

Nevertheless, it seems sensible to keep our feet firmly on the ground. Markets cannot be expanded indefinitely. From a certain point forward it will become necessary for us to invent ourselves a bit and to do so with a great deal of sensitivity. Undoubtedly, of course, this process will not be easy. However, we’ve had plenty of practice already. In fact, if we hadn’t had so much practice, there would be no successful Lobbe Industrial Services today.

We are hopeful that you will enjoy reading this magazine and that you will find it informative. So do please have a good browse, pick out a few articles or even read the magazine from cover to cover. Even if you know us quite well by now, you’ll undoubtedly discover quite a few new things at Lobbe.

Red penguin as a symbol of Lobbe’s individuality. Lobbe presented a clear message with this photographic motif at the Entsorga waste disposal fair in Cologne in 1998: “We never produce off-the-shelf solutions.” This has been and will continue to be our principle at all times.
Kirchen an der Sieg. Spring hasn’t come to these parts yet. “That’s just fine by me”, says project manager Dietmar Bödingmeier, commenting on the weather. It makes the work of the ten-man Lobbe team much easier at the town of Kirchen an der Sieg, where the temperature is just above freezing. This is the site of a dilapidated former electroplating shop that has been raising everyone’s temper for many years. A mere glance at the old narrow halls sends a shudder down your spine. Everywhere there are pits containing liquids of unknown composition edged with crystalline incrustations that glitter a violet colour. There are barrels scattered about and cables hanging from the ceilings. In the pale daylight filtering through the dirty window panes, many an observer can imagine this place would be the ideal setting for a horror film.

In a way, you cannot stop thinking that the men in their yellow- and orange-coloured protective clothing really look as if they were on a film set. Especially since they all wear protective masks. The personal protective clothing is not part of a film script. It is in fact a stipulation of the “Lobbe directors” to protect the men from toxic chemicals. “There’s enough cyanide here to kill an entire city”, is the flippant remark of the skilled workers from Brilon, Marienhede and Hagen, all towns in the German Sauerland hills. They know only too well they are talking about hydrogen cyanide, a poison that paralyses the lungs and results in death by asphyxiation.

They are deployed for a total of three months in Kirchen an der Sieg. Around 400 metric tons of “mixed hazardous waste” are recovered, containered safely for transport and disposed of in the appropriate manner. Working in protective clothes is arduous. The suits restrict movement and the sauna feeling comes free of charge. Behind the masks, breathing is not exactly an easy task. All in all, the men come very close to their physical limits several times a day. Nonetheless, the men who accept jobs like this know exactly what their limits are. “None of us risks overdoing it”, they say. The men are also trustworthy when it comes to personal self-assessment. Despite this, all of them underwent stringent medical examination for suitability to carry out these hard jobs.

Besides the recovery and disposal of various hazardous liquids and solid waste as described above, Lobbe clears up everything and completely. A look in the smallest nooks and crannies brings many a surprise to the light of day. Under covers there are pits filled with paint; seemingly harmless water/oil emulsions float around in containers; and then there are the highly toxic solvents. Finding your way about in all this devastation full of chemicals, rubble, scrap, dirt, waste, pits, gratings and pipelines, and then handing it over all “ship shape and Bristol fashion” was certainly an enormous challenge. “We not only managed it to our own satisfaction, we did it to the client’s satisfaction”, say Dietmar Bödingmeier and Frank Michael – operational site engineer – giving a final summary of their multidisciplinary mission. By no means does it fit the description of normal everyday work. But doing “everyday jobs” all the time would be boring in the long term, anyway.

— Out of TatSachen No. 34, 07/2009 —
Under their feet are temperatures that sometimes reach over 300°C. Special shoes protect them from the enormous heat. The blast furnace tapping runners at ThyssenKrupp in Duisburg-Schwelgern have the function of separating the pig iron from the slag that runs off due to their different densities. Slag is lighter than pig iron and floats on top. At regular intervals, the refractory bricks on the tapping runners must be renewed and an excavator is required to remove them. Then Lobbe goes into action to remove the remaining residue.
Making pig iron flow again

Regular deployment at the Schwelgern furnace

Duisburg. Compared with the 15 million degrees Celsius on the sun’s surface, the 1,500°C of pig iron emerging from a blast furnace is relatively cool. There again, the 36°C of the human body is ice cold. The average person in our latitudes generally feels outdoor temperatures over 30°C as “hot”. Many enjoy a sauna at temperatures over 100°C, provided the air humidity is just right. Physical work, at least at high temperatures in summer, is regarded as relatively unpleasant.

But what must be, must be. The men who regularly clean the tapping runners of the blast furnaces at ThyssenKrupp in Duisburg-Schwelgern are used to temperatures of 300°C flowing under their feet and ambient temperatures of 90°C. Of course, they wear special heat protective shoes. Normal shoes would simply melt. Every blast furnace has four tapping runners in which the pig iron melted in the blast furnace is separated from the slag. The slag flows – it floats on top due to its lower density – into a separate hole, whereas the molten iron is fed to the torpedo wagon that stands at the ready to transport the pig to other parts of the plant for further processing. The time permitted to remove all the residue in the tapping runners is normally about three to four hours. Duisburg has the highest steel productivity in the world. Ultimately, this is mainly due to the highly organised operations that are carried out as part of the necessary maintenance work, and the fact that the contractual partners of ThyssenKrupp Steel basically think the same way as steelworkers.

A few small beads of sweat have finally formed on Steffen Müller’s brow. He is Lobbe’s deputy support manager at the steelworks. It is “warm”, to say the least. Work on blast furnace 1, tapping runner 2 is going exactly according to plan. It is roughly 25 metres long, starts at the tap hole of the blast furnace and runs into the ladle furnace lined with refractory bricks. The heat around the tap hole that is closed off after tapping with a kind of high-temperature resistant rapid setting cement, is almost unbearable. At the same time, blue flames of harmless blast furnace gas flicker out of the tap hole. The men can only work without interruption in this area for four to five minutes on average, at the most ten. Then they have to leave the area for a short cooling-down phase. But they are used to moving about here. Every move is rehearsed, every command crisp and clear. Only reliable technology is used.

Next door, on blast furnace 1, tapping runner 1, the same unique tapping scenario is taking place at the same time. Just a few minutes before, they blasted open the closed tap hole to allow the pig iron to flow out freely in a controlled operation. The digital thermometer indicates a temperature of 1,490°C. Perfectly normal. The pig iron glows bright red. Carbon reacting with air has the same effect as sparklers. From a safe distance, a blast furnace worker takes a sample with a ladle. The torpedo wagon is standing at the ready below on the railway track. The pig iron is then processed into quality steel, maybe destined for car manufacturers. There, new cars run off the assembly line. Probably with component parts originally made from hot Duisburg iron.

– Out of TatSachen No. 32, 08/2008 –
Teamwork on the telescopic gasometer

Important experience gained from Celanese

Oberhausen. Celanese is an international chemicals group. One of its production centres is in Oberhausen. Lobbe and Kluge had set up a joint team to clean a gasometer with a telescopic construction. It was an ambitious task during which the two companies proved their competence in an impressive way. Olaf Schwiers was co-ordinator for project planning and execution. Above all, the project benefited from the experience of the Kluge employees in the field of water jet cutting.

From the aspect of its functional principle, the gasometer is not a building as it would appear to be at first glance. In fact, it is a complex technical plant component that stores gas. In the case of Celanese, the gasometer stores waste gases produced on site and sends them to the power station to generate vapour and power. The enormous size of most gasometers belies the fact that the operation technology, that is the lifting and lowering of the cylinders, is complex. Above all, ensuring 100 percent leaktightness still places high demands on the quality and precision of maintenance work.

Lobbe and Kluge worked on the Celanese gasometer with high-pressure water. Two pumps with a peak performance of 2,500 bar (approx. 36,000 psi) were deployed for this purpose. The manual cleaning work and other manual activities had to be conducted using full protective suits since it was impossible to exclude emissions of gases from the sludge that had collected in the base and the inner cylinder walls.

Due to its construction, the telescopic gasometer in its time was only built with a manhole in the lower cylinder. After examining all the safety parameters, another hole was cut in the cylinder surface using water jets and this served as a rescue and supply opening. Finally, it was possible to remove and dispose of the sludge after the bottom telescopic section had been raised. Raising the gasometer when empty – referred to as “pulling” the telescope – was performed by another company.

After the scheduled handover of the gasometer at the end of September, the job for Lobbe and Kluge was completed. The results of cleaning work were assessed by an expert. “This was real teamwork here. Everything went well and we’re looking forward to the next gasometer”, concludes Olaf Schwiers. Telescopic gasometers are certainly not ten a penny but there are still a few to be found, especially in chemical plants. Eventually the time will come when they too need an overhaul.

– Out of TatSachen No. 27, 10/2006 –

Safety first, in every situation. Working with high-pressure water demands the right awareness. Olaf Schwiers (left) co-ordinated the entire project.
Böhlen. The only dash of colour on this dull grey mid-May morning comes from the many rapeseed fields in full bloom all around the city of Leipzig. The roads are wet, it is drizzling and there is a fresh, blustery wind blowing. The booms of the mobile cranes tower above the industrial facilities of the acrylic acid plant of the Dow Chemical site in Böhlen. The plant is shut down but safety is still at red alert. Flame retardant clothing, helmet and special protective goggles are specified, even for visitors. In passing, they are told that “acrylic” is also used to produce Pampers, for example. That is because the plastic substance is very absorbent. On the other hand, we are familiar with acryl in the form of “Plexiglas” (perspex), or as a material and image carrier in visual arts. In the kitchen it is used for salad spoons, or we look through it with our glasses; we wear it on our skins in clothing and use it to embellish our fingernails. In short, acryl has now become indispensable in our everyday life.

Lobbe put together the Dow shutdown packet completely on their own for Industrieservice (Industrial Services) and Abfallentsorgung (Waste Disposal) – a totally unusual and new development for all those responsible. “If all goes well, we’re in; if all goes badly, we’re still in”, says Heinz Schneider, regarding the situation realistically. For this project, he is even sticking his neck out for Lobbe. This time, the preparations took a little longer. The reason was that Dow made it a requirement to find new waste management methods to reduce the quantity of waste and costs. The success came really unexpected. “We spent a lot of time and effort on this new subject – we didn’t want to let anything to chance, under any circumstances.”

Sven Franz, turnaround manager at Dow and responsible for the acrylic acid plant, names concrete figures: “With Lobbe’s help, we realised we could reduce our waste volumes by over 60 percent.” The initial scepticism with which they held Lobbe as the new general contractor for high-pressure cleaning, chemical cleaning and disposal management for acrylic acid, quickly vanished. Franz explains that co-operation was highly professional. Everything worked impeccably. This also came out in the supplier evaluation. What is more, Dow was impressed that Lobbe maintained active client communications. We were able to call up comprehensive information about work progress at any time. Any problems that arose were referred immediately and directly to the turnaround management so that immediate solutions could be worked out.

On the one hand, the stipulation was to achieve a highly efficient disposal management. On the other hand, this equally applied to project engineering for personnel deployment and the use of technical resources. 30 heat exchangers were chemically cleaned, 80 heat exchangers and 11 columns with high-pressure water. In addition, there were around 200 “minor units” such as vessels, pipes and other plant parts. To complete everything on time within a tight schedule was the real acid test. Lobbe passed with flying colours. That’s because their attitude and organisation were spot on.

– Out of TatSachen No. 34, 07/2009 –

With Lobbe, Dow brought an associate on board who uses reliable modern technology to manage standstill processing.

Shutdown organised at Dow with perfect results

Lobbe is sole contractor for the first time
Nothing happens without safety personnel

Again a "zero" accident rate

Schkopau. Safety personnel stand above it all. Safety personnel must stand above it all. Their function is something similar to internal policing. Otherwise they are worth nothing. For the turnaround (TA) of Dow’s vinyl chloride plant in Schkopau, Jens Jaenisch, safety officer for Industrieservice responsible for the East branch, goes through his check items regularly. He has them all in his head. Are vehicle doors closed when staff are absent? Are all the pumps not only shut off but also switched off? Are all the UVV test certificates (Accident Prevention Regulations) affixed to high-pressure machines? Is everyone wearing their full vision safety goggles, even when they are going for a break? What about their helmets? And gloves? The right antistatic flame retardant clothing? And their working shoes: do they conform to the specified Category S 3? Is everybody familiar with other safety regulations – no meals may be taken in the plant, mobile phones may not be used, seat belts must be worn when driving, handrails must always be used when climbing stairs?

The 56 year old is an old hand. But he never overdoes it with finger-wagging. He believes in common sense and understanding in dealing with safety: he knows the people under his surveillance. "The others have got used to me. For instance when I arrive unannounced and can see at a glance whether every regulation is really being taken seriously."

When the chips are down, Jens Jaenisch can even guess the speed of a vehicle to the
You can see he is a specialist by his helmet. “S” stands for safety officer. During the course of his career, Jens Jaenisch has become an indispensable contact person. He has all the accident regulations at his fingertips and he checks them. But primarily, he imparts knowledge and to do this, he always has to delve into the client’s corporate philosophy and culture.

Constructive co-operation is a special feature when processing turnarounds. Matthias Gusowski bears the operational responsibility for Lobbe for this shutdown. Vinyl chloride is the base product for many plastics, the most well known being PVC. Floor coverings made of this material were very popular for a long time.

On this job, there are just over 300 jobs in Schkopau that were once planned with very great care and are now being drawn down. Heat exchangers, vessels, reactors, filters are all on the list as well as other plant equipment of various categories, sizes and designs. Then a dozen columns require cleaning. With some of them, the tower packings need to be removed and then refilled.

At the same time, other work is scheduled in adjacent or connected plants, such as the Dow plant in Teutschenthal, the associated pipeline and the plants belonging to INEOS and VINNOLIT on the Schkopau site. At peak times, around 20 special-purpose machines and vehicles and the technical equipment for chemical industrial cleaning are deployed.

“You had all our hands full but we managed in time”, says Gusowski in conclusion. The topic of industrial safety also received positive ratings. The number of accidents was again “zero”.

– Out of TatSachen No. 35, 12/2009 –

Of course, he does not check every single door lock, but he makes regular random checks. Jens Jaenisch also has to think about little things. For example, the staff airlocks: is the compressed-air horn within easy reach (see black plastic bucket) in order to raise the alarm in case of emergency. The safety officer knows his way around all the warning signs – even recent ones.
Radical clearing-up concept for chlorobenzenes in Bitterfeld

Lobbe cleans highly contaminated soil using thermal vacuum process

Bitterfeld. The men are not wearing masks to give the situation a spectacular atmosphere. The soil is full of chlorobenzenes. These are organic solvents that are chemically very closely related. They can cause skin irritation and acid burns in the respiratory tract and also damage internal organs. The chemical industry and military chemists use them in totally different applications. Chlorobenzenes were first produced in Bitterfeld in 1925. Meanwhile, the production facilities have long been razed to the ground. The Agency for Contaminated Sites of the State of Saxony-Anhalt (Landesanstalt für Altlastenfreistellung, LAF) and the Central German Clearing and Disposal Company (Mitteldeutsche Sanierungs- und Entsorgungsgesellschaft, MDSE) are responsible for clearing contaminated sites.

It is suspected that about 750 metric tons are lying just below the surface here in Bitterfeld, not far from the demolished chlorobenzene plant that belonged to the former chemical combine. They have already extracted hundreds of tons from the groundwater. In the long term, this proved to be too expensive and is not the final solution to the problem. As such, therefore, Bitterfeld bears a heavy burden inherited from the past in many respects. But now they are tackling the damage caused by chlorobenzene with a vengeance. A special machine literally drills out the contaminated soil with an average burden of 2,000 milligrams per kilo and replaces it with clean soil. Lobbe takes over the contaminated material on site, transports it in gas-tight containers and subjects the soil to a thermal vacuum process. This neutralises its toxicity and the material can be deposited for long-term storage on specially approved landfills.

Nothing is left to chance on the site located on the present Area B of the Bitterfeld Chemical Plant. Every filled container is verified for gas-tightness. The containers and the transport vehicles are carefully cleaned in a roofed industrial tent before they leave the site. Every day there are 22 trips.

After the usual start-up phase, onsite operations are now running smoothly to plan. By the end of June, about 20,000 tons of soil had already been replaced. According to the present schedule, the remaining volume of roughly 30,000 tons will have been removed by the end of August. Lobbe project manager Mario Waldheim says: “There were a few delays but despite everything, we are still making good time.”
The soil contaminated with chlorobenzene is remediated in the thermal vacuum treatment plant at the Lobbe location in Rositz. The material is heated. Heat helps to expel the chlorobenzene accompanied by water vapour. The resulting condensate is recooled in a further treatment step and collected. The result is a mixture of water and chlorobenzene that is all sent to the hazardous water incinerator without exception. It is not possible to recover the chlorobenzene in what is referred to as a “pure phase”. On the other hand, other substances, for example mercury, can be extracted using the thermal vacuum process at a purity of over 98 percent.

The conspicuous technical highlight on site is the “BG 40”. “BG” is German and stands for drilling machine. “40” is the performance rating. The yellow monster was developed and built by Bauer. The company based in Schrobenhausen, Bavaria, has almost 7,000 employees in the whole of Europe and is regarded as a specialist for remediating contaminated sites and land recycling. Its original core activity was underground engineering. This extensive know-how is exactly what is needed here in Bitterfeld due to the complex damage profile. The Bauer environmental group and Lobbe have cooperated several times in the past few months, for example in remediating the gasworks in Hohenstein and Chemnitz and clearing the brick factory in Hohndorf.

Waldheim: “Our co-operation has proven to be very fruitful and the division of labour has brought many benefits.” In the end, each company can concentrate fully on its speciality.

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**Bitterfeld in the rear-view mirror**

No-one has ever said that the “Spiegel” (German news magazine, meaning “mirror”) was one for mincing words. It is now more than 18 years ago that the Hamburg-based magazine aimed its guns at Bitterfeld. The article’s authors challenged the “Toxic kitchen of the GDR”. They described the reality, took stock of the situation and came to a conclusion. Bitterfeld was plainly a worst-case environmental catastrophe. It was almost part of the apocalypse in reality. Its graphic description of the situation (under features headed “Foreign Neighbours”) merely brought about a short-lived response from the citizens of West Germany when the article appeared in the Spiegel. Very few West Germans took the trouble to travel there to make a personal comparison between the chemical industry in the East and the chemical industry in the West after the fall of the Berlin Wall. Many who failed to do anything after the reunification today admit they may have been too easygoing and missed a great opportunity. But there’s no turning back now. The omission has become a historical fact.

The Bitterfeld region in the GDR days competed with Espenhain for the title as dirtiest town in the country. Since the public named Espenhain close to Leipzig, the Spiegel rated Bitterfeld without further ado as the dirtiest town in Europe. Bitterfeld in times of socialism was the centre of the paint, agrochemical and military chemistry industry and many sectors were based on chlorine chemistry applications. Environmental protection was unheard of. The leaves on Bitterfeld trees already turned brown in June; the rivers washed toxic slurry cocktails away; the air was full with the emissions of power plants, pesticide factories, aluminium mills and the foil factory and paintworks. A dome of brownish-yellow smog constantly hung over the whole region. Today, the pall is no longer to be seen or smelt. Of course, Bitterfeld has not yet become the type of place where people would decide to spend their annual holidays. But the region stands as an example of environmental remediation and structural change. The tax money pumped into Bitterfeld is definitely money well invested.

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"We only have one life": page from SPIEGEL Special Edition 2/1990.
The cause of the kerosine leak has more or less been clarified. When the former airfield was cleared, the troops opened up all the stopcocks without further ado. This was tantamount to residual drainage. The consequence is a major groundwater remediation operation ("phase extraction"). Plant operation is largely automatic.
Berlin. At one time, it was discussed whether to turn the site of the former largest Soviet military training area on the territory of the GDR into a new major airport for Berlin and Brandenburg. Since these plans were shelved, it has been very quiet on the nearly 20 acre site. But just ten years after the last Russian turned his back on the site, the past caught up with the present. Due to extremely high groundwater levels, kerosine fuel was swimming ten centimetres above the ground in the middle of the forest in February 2003. Since then, Lobbe has been remediating the groundwater. About 10,000 litres of kerosine are pumped up from underground every month. And there is no end in sight.

A stroller walking through the forest accidentally discovered the “kerosine well” and informed the authorities. About 200 square metres in the middle of the remotest part of the forest must have been flooded with kerosine. It is obvious where it came from. When the Soviet troops left to return home, their orders were to leave the nearby tank farm “rest-drained”. No sooner said than done. The fuel that still remained in the tanks and railway wagons was emptied and seeped into the ground. What everybody had suspected but could not prove now came to the light of day.

At present, the kerosine well seems to be never-ending. In fact the district responsible had calculated that remediation would only take a few months at the most. “At first the flow of kerosine coming out of the ejector pumps was only a trickle. Since we have been working on lowering the groundwater level, the flow has increased a thousand-fold”, explains Corina Fiskal, the project manageress. We had to create a depression funnel to achieve an optimum solution between phase inflow and the technical resources required for groundwater remediation.

The ejector pumps are pneumatic, adapt their position automatically to the groundwater level and convey the supernatant phase to a large tank without forming any emulsion. Meanwhile, the entire equipment is housed in a winterproof hall. The kerosine, a cross between diesel and premium grade petrol, is fetched by tank trucks at regular intervals. Since the kerosine is as good as refinery quality, the disposal costs remain reasonable.

At present, there are still no definite estimates about how much kerosine remains on the groundwater. Investigations covering the whole area are in full swing. The former Russian tank farm is situated about 300 metres from the leakage point and the ground slopes slightly. According to official estimates, the fuel has spread over the years in one general direction but along different aquifers.

Just by the way, the “resident” wild boars were using the kerosine floating in puddles for their personal hygiene and were bathing in it. One forester knew the reason why: “To drive away the pests from their bristles.” In the past, it used to be one of the hunters’ favourite recipes to attract wild boars with a few drops of diesel (a mineral oil closely related to kerosine) in order to get them into their gun sights faster. But perhaps that is just a hunter’s tale.

The site has a long history as a military development, testing and training area dating back to the year 1877. During the Third Reich, the region was the largest and most important testing ground of the German Army. After World War II, the Russian troops used the south-eastern area as a bombing area. The airfield was a transport support centre and an absolutely prohibited no-go area during the GDR era until the troops pulled out.

— Out of TatSachen No. 21, 02/2004 —

*Almost as pure as when it came fresh from production*, says Corina Fiskal about the quality of the pumped-off kerosine. The raised groundwater level flows through oil separators, water filters and an iron removal facility. Last November, the equipment was in the open air. Now everything is housed in a hall (winterproof).
The deep traces of the past almost removed

Landfill for pollutants in Tröbitz remediated

Tröbitz (Elbe-Elster District). Just a reminder:
The inhabitants of Tröbitz and the surrounding area were already protesting at the time of the reunification against the continued uncontrolled tipping of liquid, pasty and solid pollutants in the former residual hole pipe of the Dornsdorf open-cast mine. At the beginning of 1990, the tip was finally forced to close. The Environment Agency of Finsterwalde District had just been set up then and they initiated many surveys and analyses. 14 years after the first resistance, the “Tröbitz pollutant landfill” is merely a thing of the past. But for Lobbe, it is another top remediation reference. 60,000 tons of sludge and oil residue were remediated.

200 to 300 GDR firms had disposed of their mostly hazardous waste in the residual hole pipe since the 1960s. Experts estimated some 100,000 tons of original mass, a “symbiosis” of industrial sludge, oil residue, soil enriched with pesticides, pickling agents, corrosive liquids and many other environmental toxins.

In the meantime, the “contaminated site” of Tröbitz is no longer recognisable. Excavators, conditioning machines, bulldozers and other heavy equipment have done a great job as part of the combined remediation, safety and surveillance concept. Soon only the jagged southerly succession scarp of the pipe and a small fenced area of the solid substance dump will remain as reminders of the largest contaminated waste site of the Elbe-Elster District. In its time, it was a real source of danger and hit the headlines. What will also remain is a comprehensive monitoring system, in particular for the groundwater. The inhabitants had the opportunity on two occasions to find out about progress achieved by remediation work on the site of the “landfill”. In the words of project manager Dr Dieter Patzig: “This progress is also attributable to the work of Lobbe industrial services. They guaranteed compliance with target figures for the reuse of materials.” Even the continuous change in sludge consistency had no negative impact.

Meanwhile, Lobbe has completed its work in Tröbitz. This is a signal for the final spurt.

– Out of TatSachen No. 22, 09/2004 –

The western part of the Tröbitz pollutant landfill shortly before completion of remediation work in September 2005. Once again, Lobbe guaranteed remediation success by deploying the vertical cutter. Sludge and oil residues were solidified.
Rositz. Even after darkness has fallen, the "Neue Sorge" tar landfill is still bustling with activity well into the evening. The scene can turn a little ghostly when the light from the headlamps of the trucks and excavators refracts in the rising clouds of mist in the autumn and winter weeks of the year 2003. The silhouette of the small town of Rositz is still recognisable on the horizon to the south west. Street lamps, a couple of houses, a water tower encased in scaffolding. Somewhere the horn of an ambulance howls, its plaintive tone mixed with the noise of car engines driving fast along the B180. Evening rush-hour traffic.

Today, work went well on the "Neue Sorge" tip. Site engineer Rüdiger Latz nods contentedly, leafs through the consignment notes and does some calculations. The vertical cutter treated over 800 tons on this Thursday shortly before Christmas. Latz and Detlev Karpuschewski, his right hand, together manage four "normal" excavators and one fitted with the vertical cutter on the site. Material is removed cubic metre by cubic metre from two areas. "It smells of tar", says visitors, "like in the past when the roads were being resurfaced". "It smells like that always", says the inhabitants of Rositz. They've had a rough ride. For decades, they have been forced to bear the burden of a "hydrocarbon"-heavy climate. Now they are longing for the end of the "Neue Sorge". Land ahoy, light at the end of the tunnel, hope of better times. In any way possible.

When night falls on the tar landfill in Rositz

New hope for award of contract to Lobbe

Rositz and the "Neue Sorge". The chapter of local history of the former tar processing factory that was closed down in 1990 could almost have become a never-ending story. When work started in the autumn of 1996 on the remediation of the largest contaminated site in Thuringia, everyone placed their trust on a high tech concept. This trust lasted until the summer of 2003. Then the client, the LEG Thüringen (State Development Corporation of Thuringia) pulled all the brakes. Lobbe was selected as the new contractor on September 9th 2003 as part of an emergency action. The contract was limited to six months and it...
stipulated that the "Neue Sorge" must be reduced by 50,000 m³. It was uncertain whether this would become a long-term job for Lobbe: The LEG issued a pan-European call for bids for remediation work. The call will be for another 65,000 m³.

Since Lobbe has been working on the "Neue Sorge", the people here as well as the LEG have started to regain their former confidence. Everyone can see that progress is being made. Lobbe has brought movement into the course of things. According to official figures issued by the German Environment Agency, the former tar processing factory in Rositz produced approximately 17.5 million tons of brown-coal low-temperature distillation tar, more than nine million tons of petroleum and about 0.6 million tons of other raw materials, including 0.2 million tons of sulphuric acid, caustic soda and potassium hydroxide between 1917 and 1990. Residue that was no longer processible was tipped into the residual hole of the "Neue Sorge" open-cast mine. The location grew to become the largest contaminated waste site in Thuringia by 1990. It was and still is the source of acute danger for the groundwater. Groundwater measuring points in the direct vicinity of "Neue Sorge" indicate high concentrations of pollutants. The contamination is so high that the German Environment Agency lists the pollutants on its website, namely benzene, toluene, ethyl benzene, xylene, polycyclic aromatic hydrocarbons (PAH), aliphatic hydrocarbons (AH) and phenols. The aim of remediation must therefore be to reduce or totally eliminate the emission of pollutants into the groundwater form the "Neue Sorge".

Official estimates assume that remediation could be completed by the end of 2004, at the latest by the spring of 2005. That is, provided work continues at the current pace. Lobbe publishes information itself in the form of neutral objective flyers describing progress as well as the sometimes serious emission problems linked to removal of the tar. These flyers are distributed to households in the surrounding area. The response so far has been extremely favourable. Besides a distinct interest from the press, the local citizens’ initiatives (CIs) are monitoring work on the "Neue Sorge" with hawk eyes. The exchange of information is running well. CI representatives are regularly invited to visit the site to see for themselves.

For Lobbe Managing Director Dr Reinhard Eisermann, the "Neue Sorge" project is "one of the most complicated projects we have ever dealt with". From many aspects, Eisermann regards the project as a job performed under arduous conditions. On the one hand, the high expectations of the public and flaring emotions, sometimes unnecessarily fueled by media reports. On the other hand, a tight time schedule of six months to remove around 50,000 m³ of tar of varying consistencies and generally difficult logistic conditions on the work site.

– Out of TatSachen No. 21, 02/2004 –
Salt Lake City. Lobbe did not quite make it to the front page of the regional issue of the “Daily Herald”. But the successful conclusion of a pilot project to stabilise tar would have been worth a headline. However, it was not the intention with the contract from an American real estate investor to make headlines but to document the performance of the Lobbe vertical cutter in a number of different remediation variants. The success when it came was impressive – and representatives of the US Environmental Protection Agency (EPA) were there to witness it. Excellent preparations and a flexible onsite project management paid off in the end.

Lobbe had to complete three tasks on site: 1. Stabilise tar residue with the aim of leaving the material in situ. 2. Prepare the tar into an additive for incineration. 3. Conditioning tar to obtain a conventional substitute fuel. Despite the wide range of experience gained in Germany during rehabilitation contracts in past years, the project team headed by Jörg Schmitz and Mario Waldheim was faced with a totally new ball game. The rule says that no tar is like another and this proved to be true once again. The composition and consistency of US tar confronted all those involved with the situation of practically having to throw almost all of their previous findings overboard. Nevertheless, Lobbe was able to submit a total of 15 conditioning variants after two weeks and the results are currently under careful scrutiny at several locations.
Meanwhile, there have been further contacts with the investors. The possible projects were awarded to contract. To start with, they involve three open tar lakes with an estimated volume of 200,000 tons of residue. "We are one significant step further", explained Lobbe Managing Director Dr Reinhard Eisermann after talks with the potential employers who are negotiating on behalf of a major US corporation. The corporation is apparently convinced in principle of Lobbe's technology and processes. There are sound arguments for each of the three named variants. The details regarding further procedure were under review. Nonetheless, says Eisermann, it is still too early to announce an entry onto the American remediation market. "We know well enough from the past how long negotiations can drag on until a contract is awarded and the first ton of tar is remediated." But Lobbe is ready to go into action almost immediately. The vertical cutter remained at one of the tar lakes at the request of the Americans. This is certainly an indication that the Americans are negotiating seriously with Lobbe.

Lobbe gained experience in the field of tar residue remediation (known by the technical term "tar-oil solid mixtures") by performing several major ecological projects since the year 1999. This included, among others, the remediation of the Terpe/Zerre tar landfill (Schwarze Pumpe) successfully completed in September 2006 with a total of 550,000 tons, and earlier remediation measures at the "Lauta tar lake", "Magdeburg-Rothensee tar lakes" and the "Tröbitz contaminated site". Currently, Lobbe is working on the "Neue Sorge" tar landfill (Thuringia, Altenburger Land District). So far, over 200,000 tons of substances containing tar have been conditioned at the Rostitz location.

Lobbe has remediated more tar than any other company in Europe. The tar is stabilised mechanically at the rate of about 500 tons a day with the help of additives, one of the most important conditions for further handling. The conditioning machine developed by Lobbe and their know-how are unique in the world. "World class from Southern Westphalia", or so a German daily newspaper wrote some time ago. And certainly a good thing for America, too.

– Out of TatSachen No. 30, 12/2007 –
Grevenbroich. The speed with which countries can be forced to their knees by energy supplies is regularly reflected in situations when the big gas taps are turned off – wherever that may be – or when a regional political crisis leads to crude oil prices that are well and truly astronomical. Or when there are poor weather conditions in the world’s oceans. A lot of it is pure speculation.

Although Germany has no significant crude oil or gas reserves itself, it does have more than 77 billion metric tonnes of lignite deposits. These deposits are distributed over three open-cast mining areas: the Rhineland, Lausitz and the central German coal fields south of Leipzig. 55 billion tonnes are situated in the Rhineland. RWE extracts about 100 million tonnes per year and creates electricity and district heat in its power plants. All of them are equipped with highly effective systems to protect the environment from harmful substances contained in the flue gas, such as sulphur, nitrogen oxides and dust.

Two new blocks are currently being built at the power plant in Grevenbroich-Neurath. Over the next few years RWE is investing 2.2 billion euros – true to its advertising slogan: “RWE – The energy to lead”.

Even though electric power is a convenient commodity that comes from a power point and although 230 volt is not subject to fluctuations, even under peak load, coal-fired power stations are by no means maintenance-free. Like many other medium-sized contractors, Lobbe makes a small contribution to ensuring a continuous power supply for households, industry and small businesses. It does so through a base with permanent establishment status at the Frimmersdorf plant, a base which it has run for quite a few years now.

This is where Stjepan Makar and Heinz-Günter Bergmann organise jobs at various power stations. “Our core team consists of 25 industrial service specialists. We are on standby 24/7 and – if required – can engage up to 30 additional staff”, says Heinz-Günter Bergmann as he describes the company’s flexible scheme which has proved its worth in so many situations and which has been set up specially for lignite-fired power plants on the Lower Rhine. They are situated in Frimmersdorf, Niederaussem, Neurath, Weisweiler and Goldenberg. The framework contract also includes the waste incinerator in Weisweiler.

Today, they are conducting a regular maintenance job at “Heidi’s” – Block H at the Niederaussem power plant. The boiler has been shut down due to repairs, and the temperature in the gigantic boiler house is...
Safe, clean, fast and professional: These are the hallmarks of Lobbe’s work at RWE power stations.

quite pleasant today. The lift takes us up to 115 metres. Then it’s a few flights of stairs down again, to a level of 108 metres. “We regularly remove the lignite dust that settles here.” A low hissing noise can be heard close by, where Renato Aslanowski has manoeuvred his slim, supple body into a transverse trolley. The lack of space for his legs and arms does not exactly make it easy for him to work on the suction nozzle. Thankfully, however, he does not need to stay in this uncomfortable half-squatting half-standing position for too long, as the new air pumps are now far more efficient, so that the cleaning process takes less time than ever. It shows that technical investments serve not only progress in general but also improvements to working conditions.

A few yards further on Hans Egles is putting on his safety harness to secure himself against falling. It’s the same equipment that is used by mountaineers and industrial climbers. As he puts on his gear, he is helped by others who check carefully that his straps are secure and that there are no signs of wear and tear. It’s important not to hurry. Finally, a spring clip with a line is clicked into an eyelet on the harness attached to his back. He is now ready to start working on his job and as he does so, he is well and truly in safe hands.

Lobbe has a lot to offer to the RWE power plants: 24/7 on-call service throughout the year, skilled staff who are available quickly and promptly, hyper-modern air pumping equipment for work on e-filter funnels, coal distributors, ash silos, lime silos, flue gas ducts, combustion chambers for fluidised beds and turbines, to name but a few, as well as state-of-the-art pressurised water jets for cleaning the trickle grid sections of cooling towers and also pipes and sludge pumps. All this to make sure that our power points never run out of power.

– Out of TatSachen No. 34, 07/2009 –
Milan. Parona is about 40 kilometres to the west of Milan in Lombardy. If you approach the small town along the main SS 494 road from the Gotthard tunnel, you can’t miss the gigantic waste incineration plants of “Lomellina Energia”, even from a distance. The two chimney stacks towering more than 120 metres high are known as the “highlights” of Parona in addition to the small church on the market square. Very few business travellers or holidaymakers visiting the region called “Lomellina” know that it is the world’s biggest rice producer after China. They think the paddy fields full of water are agricultural land flooded after heavy rains.

The strategy which Lobbe Industrial Services uses to offer their services on foreign markets seems to have paid off. Now it is the turn of the waste incinerators in Parona. This is the first time the Power Plant Service department was called upon to provide their services to perform overhaul work on the complicated fluidised bed line in the plant. After the last overhaul in November, the second line was only in operation for a few weeks before it had to be shut down again.

In order to burn treated domestic and industrial refuse in fluidised bed incinerators, the two incinerator lines at the Lomellina Energia plant work with a new process. In principle, this technology permits a much less complex design of the flue gas cleaning system than conventional plants with grate firing. Lobbe’s mission is to clean the separator which removes all particulate materials suspended in the flue gas. Using tried and tested spraying methods and a new spray medium, comparatively hard and heavy residue can be pulverised so as to produce a suctionable material. It requires about 50 tons of spray medium and the amount of material suctioned off is 250 cubic metres weighing around 600 tons. The onsite technical facilities comprise compressed-air generators, waste filter containers and an air conveyor system.

The core working area for the Lobbe specialists consists of six so-called “cyclones” that remove the dust from the flue gases. The cyclones have a diameter of about three metres, they are eleven metres high and are accessible on foot. Normally, entry is through a “manhole” in the base just about shoulder-width in size. But not all the cyclones are accessible in this way. Five are completely closed off to full height. The dust suspended in the flue gases that flow into the cyclones at temperatures of about 400°C cake into a solid mass. Entry is therefore only possible through flue gas ducts leading from the evaporator. Here, too, the Lobbe specialists are faced with man-high dust pillars. This means “extra time”, two full days of additional work.

"Molto bene" is Italian for "just great"
Lomellina Energia also recovers energy from waste. The enormous cyclones had become clogged after a few weeks of operation. Removing the residue using mining techniques brought many a large chunk “to the surface”. The flue gas ducts, in which dust pillars had formed, were no longer passable either. Work inside the cyclones could only continue using hammer and chisel, jackhammers and spray blasting techniques. Works manager Paolo Vinci was very satisfied with Lobbe.

It also means heavy physical exertion for the men, especially in the cyclones. They wear dust-tight suits, dust masks or even protective masks. The residue, both in the ducts and the cyclones, can only be loosened using mining equipment. In the confined spaces where movement is restricted, they use normal everyday hammers. Sometimes, removing the spoil is only possible lying down. When there is more space to manoeuvre, the cavity is filled with the piercing noise of jackhammers. This is a burden more for the ears than for the arms. The enormous chunks are carried out through the manhole bucket by bucket, and from there in BigBags by crane to ground level. Residue that can be suctioned off is removed by the Vacupress through hoses and deposited in the silo. It is then filled into BigBags on the vehicle.

Although the actual work goes very smoothly, Lobbe is struggling this time with the machinery. A compressor broke down, just before the weekend at all times. The mechanics from Milan could only arrive on site on Monday. So the Kraftwerksservice department flew off a specialist from Düsseldorf on Saturday and fetched him from the airport in Milan-Malpensa. The fault was traced relatively quickly and with the help of the company workshops, a remedy was found by the afternoon.

Lomellina plant manager Paolo Vinci was full of praise: “I am very satisfied. Excellent service.” By the way, the breakfasts served to the Lobbe specialists for ten days at the lodgings also merited the rating “excellent”: scrambled egg, ham, bacon, sausage, cheese, jam, brown bread and bread rolls. The unanimous opinion: “Molto bene – just great”. Apparently, project manager Tiziano Stevanin plied his charm on the kitchen staff. Sometimes it’s important to be a little nice. Then there’s no problem obtaining a “German breakfast”, even in Italy.

– Out of TatSachen No. 32, 08/2008 –
Espenhain. When Lobbe started operations with a so far unique type of waste treatment plant a good two and a half years ago, it attracted intense interest from solar cell producers. In the meantime, Lobbe has disposed and treated a considerable share of all liquid production residue produced in Germany – mainly hydrofluoric acid originating from this branch of industry – at its plant in Espenhain, Saxony. Due to the rise in volumes the previous year, the plant was extended and is now capable of neutralising 72 tons a day, that is three times more than the original 24 tons a day, without any trade-off in safety. In fact, quite the opposite is the case. The special tank train recently put into service to transport acids now sets new standards.

Handling hydrofluoric acid requires extreme care, many years of experience with hazardous waste and an associated knowledge of chemistry. Classic liquid waste, such as emulsions and oil/water mixtures, bears no comparison with the amount of resources required to treat hydrofluoric acid safely.

Klaus-Peter Kramer, head of Lobbe’s operations in Espenhain, is highly knowledgeable in the subject and knows especially that he can rely 100 percent on his laboratory assistants, his facility staff and his truck drivers. Every person is thoroughly vetted for their technical qualifications and continuous further training is an obligation. They must understand chemistry, be capable of estimating hazards and also complete their duties with the necessary routine.

Kramer also knows that Lobbe has earned a high reputation in the past as a reliable business partner. Such reliable partners is just what the solar industry needs to plan their production, knowing full well that disposal is carried out safely by qualified suppliers.

Extensions to the plant were discussed with the industry as well as changing over transport logistics to articulated tank trucks. "We can’t always read the wishes from our customers’ eyes. But so far we have always been able to achieve whatever is within our capabilities", says Kramer taking stock of the situation. At the same time, he has a new goal in his sights: recycling acids into high quality fertilisers. The fertilisers would be liquid, free from heavy metals and would have top product quality. The experimental set-ups for conversion to liquid fertiliser have already passed the laboratory stage. At present, the remaining technical issues are being clarified. Finance from Lobbe’s own funds has been earmarked for an industrial-scale implementation and is standing at the ready.

The additional investment in vehicles, machinery, research and development will certainly be worthwhile, in Kramer’s opinion. “Not exactly tomorrow,” he says, in view of the economic situation, “but this investment is justified when viewed in the mid-term and definitely in the long term.” Renewable power generation from photovoltaics will continue to grow in the next few years. During this time, it is assumed at Lobbe that more new companies will relocate to the Bit-terfeld region as well as other central German regions.

“We grew up with large-scale industry. The acceptance is there. There are excellent professionals of all ages and of course there is plenty of industrial sites available”, according to Kramer. He need not look very far. They are just “round the corner” here in Espenhain, only a stone’s throw away from Lobbe’s company site. Favourable conditions for investors, citizens with a positive attitude, authorities just waiting to issue approvals and a functioning infrastructure.

– Out of TatSachen No. 34, 07/2009 –
Lobbe has tripled the capacity of its neutralisation plant. Very strict safety regulations are applied. Extremely hazardous liquids are only unloaded using a special pumping station. This totally rules out a sudden uncontrolled leak.
Pollutant remediation at the University of Paderborn

Library stays open nevertheless

Paderborn. The students in the library of the University of Paderborn are immersed. Either in the books they are just reading or in the information displayed to them on screen. Apparently they seem totally unimpressed by what is happening around them. At the moment, there are clearly more workers than students. They are either building scaffolding in between the book shelves or fitting new — pollutant-free — ceiling panels in another area. Someone is vacuum-cleaning as well.

A notice on the entrance door to the university library explains that materials containing pollutants used for the building are being removed and replaced by pollutant-free materials. Altogether, all the skilled workers will be on the job at the Paderborn university for more than seven months.

“Building work in progress, business as usual.” A peek behind the scenes reveals that the extent of this work is much greater than for normal renovation or restoration work on buildings. The suspended ceiling they have fitted in this library separates the contaminated area from the cleaned area. A vacuum helps prevent particles of MMM (man made ineral fibres) released by ceiling panels from reaching the library tract unhindered, if the worst came to the worst.
Before setting up the contaminated area, a number of preparations have to be completed, for example removing the halogen lamps.

Hundreds of metres of industrial adhesive strip measuring about a hand’s width seal the transitions between plastic sheeting, walls and ceilings. The workers are still working here without respiratory protection. As soon as work starts on removing the ceiling panels, the area will be declared a contaminated zone and then strict safety regulations will come into force. There is a total of 7,000 square metres of ceiling panels to be removed in phases of 500 square metres each. And this means that every time, the contaminated area and the clean area must be reinstalled.

Klaus Schauneweg is head of the project for which the “Kluge Sanierung GmbH” was awarded the contract in April from a pool of five bidders after a public call for bids with restricted competition. The actual restoration work started at the beginning of June and is originally scheduled to last until the end of March 2010. "So far", says Schauneweg, giving a situation report at the beginning of December, "we are well on target." So well that restoration work on the library will already be terminated by the end of the year. The sections renovated so far were all released without any objection. Release is an expert inspection to test whether there are still pollution particles in the contaminated area after renovation. The limits must be undershot whatever happens.

The same applies to the work outside the library continuing in parallel in other parts of the university. This includes restoration work in the building utilities centre, which is the subject of a separate contract. The centre is housed in the basement. Fire dampers and service shafts with components containing asbestos have to be removed. Here, the job also calls for setting up and dismantling a contaminated area including all peripheral equipment. One featured component is the airlock comprising four separate chambers.

The client for his part mainly underlined in his interim report that the library could be reused without restriction despite on-going renovation work. In the words of Dr Borbach-Jaehne, contact person for the library, there were no complaints of any kind about noise or other disturbances from the students although they were obliged to put up with provisional arrangements for their learning centre for several weeks.

– Out of TatSachen No. 35, 12/2009 –
Ludwigshafen. Helmut Kohl who lives in Oggersheim also receives his drinking water from the Ludwigshafen Technische Werke (TWL). What may be difficult to believe but is nevertheless true: the water that is pumped up from a depth of 40 to 420 metres has not seen the light of day for up to 20,000 years.

Andreas Hammer from the Maintenance/Repair department at the “Maudach/Oggersheim” Waterworks II goes even further: “Our water is up to 30,000 years old.” Over this long period, the groundwater has become enriched with hydrogen sulphide and methane and contains no oxygen, which is clearly recognisable by its smell. When it comes into contact with oxygen, excess iron and manganese precipitate in the form of small flakes which give the water a light to dark brown colour. The TWL do not want, and are not permitted, to supply their customers with water in this form. The water must first be treated in an aerator and a gravel filter.

The room where Hammer explains the details of water treatment has a water dispenser in the corner. “Take a sip.” Hesitantly, the visitors fill the beakers from the dispenser. The precious resource flows clear and pure. It tastes good. In fact, it even has an exquisite taste.

The water engineers do their utmost to achieve the high quality of their water. They called upon Lobbe to carry out the complete rehabilitation of a gravel filter that is coated

Drinking water also for ex-Chancellor Helmut Kohl

Rehabilitating gravel filters for even more quality
Among others, gravel filters are responsible for the excellent water quality supplied by the TWL. As part of a rehabilitation, it was necessary to remove the filter materials completely as well as the steel internals. This is intended to improve water quality even more. Not for the taste but for the regular chemical analyses.

Site engineer Sven Böhler observes every movement of his skilled workers attentively. Randolf Fandrich works in the filter that measures five metres both in height and diameter. He is one of those who shows enormous commitment irrespective of the job – in fact, no “job” is unimportant for him. Fandrich suctions off the filter material using the latest pneumatic conveying equipment. At the same time, water is flushed in to ensure better movement of the granulate material.

The Lobbe specialists from Duisburg then complete the next stages of the work quickly and precisely using the cutting torch and the “Flex”. Various internals made of steel and a bulky standpipe are then dismantled. Afterwards, the lime caked to the inner walls is removed by blasting. Finally, the entire interior is sandblasted, including the base plate.

The second phase of the total rehabilitation comprises extensive newly manufactured parts. They comprise risers, the collection pan, all distributor pipes including nozzle pipe flange connections, feed pipes and distributors in the gravel filter. The final item in the schedule is rebuilding the steel construction and the necessary repair welds. Then the TWL take over filling the filter material. There is talk that Lobbe may be chosen again for the next gravel filter that needs rehabilitation. This is the success of good work.

– Out of TatSachen No. 35, 12/2009 –

Among others, gravel filters are responsible for the excellent water quality supplied by the TWL. As part of a rehabilitation, it was necessary to remove the filter materials completely as well as the steel internals.
As if the world was coming to an end...

Thunder and lightning accompany the dismantling of Settling Tank 2.112

Schwarze Pumpe (black pump). The tank roof moves. Everyone breathes a sigh of relief. The tension resulting from three days of hope and fear gives way to a more inner feeling of quiet jubilation. An expression of joy fills across the tired faces. The crane raises the “lid” off the 10,000 m³ tank millimetre by millimetre. 75 tons are suspended from the hook. The crane driver operates the controls like a raw egg and swivels the suspended load gently from the imaginary vertical centre axis of the tank. Half an hour later the dome and skirt gently touch down on the intended “landing place”. At last, the technical masterpiece so spectacular in many ways is over.

Settling tank “2.112”, year of construction 1964, served as sedimentation and sludge container for coal oil products stemming from lignite refining processes at the Schwarze Pumpe (black pump) combine during the GDR era. The danger was that pyrophoric substances could be activated on contact with oxygen and this would lead to spontaneous combustion. Reactivity was controlled in a simple way: Nitrogen was fed into the tank to prevent anything from burning in the true sense of the word. The tank remained permanently “immersed in nitrogen” even while restructurisation work was continuing at the Schwarze Pumpe.

The conventional method of dismantling the monumental sheet metal cylinder piece by piece using cutting torches was therefore ruled out from the beginning. Instead, Lobbe decided to open the tank like a tin can by opening the tank roof. The concept document 100 pages long was produced together with an engineering firm in Spremberg, the Institute for Safety Engineering and the Hoyerswerda Mining Office. The concept defined the entire procedure down to the minutest detail and all the safety conditions. The in part meticulously worded instructions prevented the action from becoming a disaster. In fact, the “worst case scenario” actually took place. The power supply failed, cutting off the supply of nitrogen. This was caused by lightning strikes from a one-in-a-century thunderstorm over southern Brandenburg. However, this had no consequence on the operation thanks to the excellent preparations. The fire brigade immediately filled the tank interior with 5,000 m³ of high expansion foam.

However, there was another circumstance which proved to be critical and unforeseeable. The metal panels used to construct the tank were all about two millimetres thicker than specified in the archived as-built drawings. This raised the weight of the roof by several tons and exceeded the load-bearing capacity limit of the crane boom. The 75 tons calculated (including reserves) became over 80 tons. The five tons of excess weight were further reduced by removing the handrails on the dome and shortening the entire circumference of the skirt several times in painstaking work. What was also omitted in the documentation was the fact that the lid was welded at several points to the inner wall of the tank by pipes. Due to the incorrect or missing construction data, the time required for dismantling took 36 hours longer. This was the only fly in the ointment in an action that was otherwise organised and executed excellently.

Lobbe thanks all participants for their support. Without team work, it would not have been possible to complete the action successfully, says Klaus Isert, head of Lobbe’s operations in Spremberg, visibly relieved by the successful outcome. All the companies that were involved in the planning and execution and who experienced the tension here deserve our highest respect. This also applies to the works fire department and the company managers of LMBV and SVZ who were present the whole time. For all of those concerned, it was a job under the worst conditions.

What follows now is just routine. An immediate start will be made on dismantling the tank wall. At the same time, the roof will be cut into transportable pieces. An excavator will remove the waste from the tank for incineration in the SVZ (secondary raw material recycling centre).

Whether or not this action is a world premiere, nobody knows. “In any case, it was no everyday job. The experience we have gained from this job will be ploughed into other similar projects”, says Klaus Isert, looking to the future. This tank is already relegated to the past.

– Out of TatSachen No. 13, 11/1998 –

1) Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft
2) Sekundärrohstoff-Verwertungs-Zentrum Schwarze Pumpe
Lightning strikes flash down from the sky, hitting cooling towers and tanks. An apocalyptic feeling – sparked off by a heavy summer thunderstorm – accompanies the operation “Settling tank 2.112” in Schwarze Pumpe.