



**Services and technologies
for a better environment**

OUR PARTNERS



COMPANY PROFILE

DEKONTA is an international environmental services and technologies supplier. Established in 1992, it has successfully undertaken thousands of projects in Europe, Asia and Africa. We have provided tailor-made solutions to the environmental challenges and issues of different industrial sectors, international and national organizations. Our services include:

- Investigation and remediation of contaminated sites
- Hazardous waste management and treatment
- Odour removal & air emission treatment
- Water and wastewater treatment
- Sustainable water management
- Environmental emergency service
- CBRN (chemical, biological, radioactive and nuclear) protection and decontamination
- Laboratory services
- Environmental R&D
- Environmental consulting
- Demolitions and earthworks
- Drilling works
- Industrial cleaning

DEKONTA in figures

- ✓ **More than 200 trained and experienced employees**
- ✓ Average annual turnover over 30 million EUR
- ✓ About **500 projects** implemented **all over the world** annually
- ✓ ISO 9001, ISO 14001, and ISO 45001 certified company, Responsible Care®

Personal, material and technical background

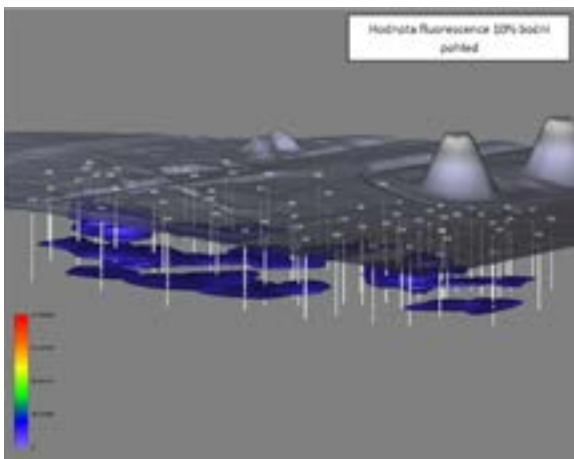
- Multidisciplinary team with international experience
- 16 biodegradation platforms
- Chemical, microbiological, R&D and technological laboratories
- WWTPs and hazardous waste storages operation
- State-of-the-art HW and SW equipment for collection, storage, visualization, evaluation of data and mathematical modelling
- Technical equipment for:
 - remediation of contaminated sites by physical, chemical, and biological procedures
 - field investigation - drilling equipment, sampling equipment, field measurements and testing
 - excavation, transport, and treatment of waste
 - round-the-clock environmental emergency service



INVESTIGATION AND REMEDIATION OF CONTAMINATED SITES

We use the **most state-of-the-art** technical **equipment for carrying out the investigation.** In addition to standard methods for sampling and analytical evaluation, we use equipment for real-time pollution detection in the field (MIP, OIP, etc.).

These are methods of the so-called direct investigation (**direct sensing**) that are able to find pollution with VOCs (chlorinated hydrocarbons, BTEX, etc.) by the MIP (**Membrane Interface Probe**) method, or presence of petroleum compound phase by means of the OIP (**Optical Image Profiler**) probe.



Our services include:

- ✓ Complex problem solving and management of contaminated sites
- ✓ Laboratory and pilot verification of the remediation methods
- ✓ Operation of *in-situ* and *ex-situ* remediation technologies
- ✓ Biotechnological remediation approaches
- ✓ High-pressure injections of remediation agents into the geological environment
- ✓ Closure and reclamation of landfills
- ✓ Revitalisation of brownfields
- ✓ Remediation of oil sludge lagoons
- ✓ Remediation and post-remediation monitoring
- ✓ Supervision of remediation projects

DEKONTA has at its disposal **technological know-how**, extensive experience supported by its own development, as well as the necessary materials and technical equipment for remediation of contaminated sites.

The solutions are always custom-designed according to the local conditions at the site and the nature of the pollution.



Ex-situ remediation

- Excavation of contaminated soils and/or groundwater pumping, and subsequent decontamination. We offer complex solutions, including temporary storage of contaminated soils, and proposal of the best available treatment method

In-situ remediation

- Soil and/or groundwater decontamination directly in the area of their natural presence (without excavations and pumping). During *in-situ* remediation, we use the most a wide range of physical, chemical, and biological remediation methods





ENVIRONMENTAL EMERGENCY SERVICE



The DEKONTA company ensures emergency service in the case of releases of toxic and foreign substances into the environment.

- Quick primary intervention preventing spread of the released contaminant
- Interventions in the case of accidents with releases of petroleum substances and chemical accidents
- Remediation of contaminated soils, groundwater and surface water
- Disposal of hazardous waste and toxic substances
- Expert risk assessment
- Free phone consultancy

Environmental **emergency service** is ensured **nonstop 24 hours a day, 365 days a year**, for the whole territory of the Czech Republic. Departure of the emergency vehicle is guaranteed within 30 minutes from obtaining information on the accident.

NON-STOP EMERGENCY NUMBER:
+420 602 686 622



DEKONTA FIREMEN

Within the DEKONTA company, a **fire protection unit** has been established, trained and equipped for

- Interventions in the case of accidents with releases of chemicals into the environment
- Ensuring fire supervision and assistance during works in the environment with increased fire risk



The DEKONTA company has concluded a cooperation agreement No. PO-2801/IZS-2006 with the Ministry of Interior - General Directorate of the Fire Rescue Service of the Czech Republic, in accordance with the Act No. 239/2000 Coll. on the integrated rescue system of the Czech Republic.

EQUIPMENT

- ✓ Off-road intervention vehicles
- ✓ Intervention motorboats
- ✓ Earthmoving machines
- ✓ ADR tanker trucks
- ✓ Aircrafts
- ✓ Pumps for hazardous substances
- ✓ Protective equipment for work with toxic substances
- ✓ Decontamination facilities
- ✓ Detectors of chemical substances
- ✓ Electronic databases of hazardous substances

The Environmental Emergency Service has been integrated into the TRINS system and the Emergency Safety System of the Capital City of Prague.

CBRN PROTECTION AND DECONTAMINATION

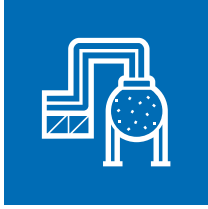
- Development and manufacturing of decontamination technologies, equipment, and their testing
- Large-area **decontamination of CBRN substances and materials**, in particular of critical infrastructure sites
- Cooperation with the Integrated Rescue System during emergency situations with



presence of highly hazardous agents - chemical, biological and radioactive ones

- Development of **personal protective equipment** against highly hazardous substances and materials
- Education and practical training in the field of protection against chemical, biological and radioactive materials





INDUSTRIAL CLEANING



Our company is committed in the industrial cleaning field in the long term. The scope of our activities is quite wide, from common cleaning projects to **projects requiring special and individual preparation**, approach and measures, in accordance with specific requirements of the client.

An important part of the services we offer is disassembling and **assembling of industrial units and technologies**, in particular in the petrochemical industry.

The staff members are equipped with the necessary PPE and have experience with work in difficult conditions, including work in SCBA,

in view of the risk of presence of explosive or unbreathable atmosphere.

A part of the offered services is also pumping of contaminated and flammable liquids and their disposal, and exhaustion of flammable fumes and their disposal in catalytic incinerators.

The working group is fully equipped for work in zone 1. The equipment includes, among other things, ventilators, lamps, pumps, detectors, SCBAs, etc.

In the case of works with increased fire hazard, the DEKONTA company ensures assistance of firemen, by means of its own fire protection unit.



Services:

- ✔ Cleaning of tanks and technology equipment in petrochemical and chemical industries
- ✔ Assembly and service activities in industry, both in standard and difficult conditions
- ✔ Tightness tests of tanks
- ✔ Deep cleaning of industrial equipment and its maintenance
- ✔ Technical work and activities in unbreathable atmosphere and spaces with explosion hazard
- ✔ Handling of chemical substances and hazardous waste



HAZARDOUS WASTE MANAGEMENT AND TREATMENT

The DEKONTA company provides complex services in the field of hazardous waste management. In the field of biotechnological waste treatment, DEKONTA ranks among the leading companies active in Central and Eastern Europe. It has a network of more than 16 decontamination centres located both in the Czech Republic and abroad.



Offered services:

- ✓ Waste decontamination by biotechnological (biodegradation, composting, etc.), physical (stabilisation / solidification, washing, etc.), and chemical (oxidation, neutralisation, reduction etc.) methods
- ✓ Hazardous waste disposal in contract landfills and in incinerators
- ✓ Liquid waste treatment
- ✓ Waste collection and transport
- ✓ Waste reprocessing to alternative fuels
- ✓ Recycling and material recovery of industrial waste
- ✓ Remediation and reclamation of waste landfills

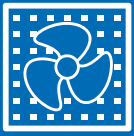
RENTAL AND SELLING OF EQUIPMENT FOR HAZARDOUS WASTE TREATMENT

We offers containerized equipment for temporary operations or pilot testing to process any type of industrial sludge and dust:



- Soil washing plants
- Disk pelletizers
- Homogenizers (waste blenders)
- Solidification and stabilization units
- Indirect thermal desorption plants
- Floating Pumping Station

Simultaneously, DEKONTA ensures all the associated services in accordance with the needs and requirements of the client - including the provision of containers, loading, waste weighing and transport from the client to the disposal or treatment site, processing, analysis, and assessment of hazardous properties of waste.



ODOUR REMOVAL & AIR EMISSION TREATMENT

Thanks to a policy of continuous development, our R&D department has filed more than 50 patents, leading to many innovations in the field of the waste air treatment.

We are able to provide cost-efficient solutions for removing dust, odour, volatile organic compounds (VOCs) and inorganic pollutants or their mixtures from waste air.

We **have supplied equipment to a number of European and Asian countries**, where it is used successfully in many various application fields, including:

- Machine and automotive industries (in particular, paint shops)
- Manufacturing of laminates
- Chemical industry
- Wastewater treatment plants
- Composting plants and waste sorting plants
- Biogas plants
- Paper mills and wood processing industry
- Pharmaceutical and cosmetics industries
- Food and tobacco-processing industries
- Animal farms, slaughterhouses, and rendering plants



Our offer:

- ✓ Biofilters
- ✓ Wet scrubbers
- ✓ Regenerative sorption filters with activated carbon
- ✓ Catalytic incinerators

The biofiltration technology of the DEKONTA company was awarded the European award «Seal of Excellence».

We provide a full package service:

- Emission measurements and pilot tests at the customer's plant
- Renovations and modernizations of existing gas treatment systems
- Monitoring and maintenance
- Design according to a site specific conditions
- Supply and installation of equipment



WATER & WASTEWATER TREATMENT



Our **technologies** are **custom-designed for the specific plants**, both industrial and municipal.

WATER TREATMENT

We offer technologies always designed in

relation to the required quality of the output water, taking into account its further utilisation – drinking water, supply water for boilers and generators, technological water, wash water, irrigation water.

WASTEWATER TREATMENT

We offer various biological and chemical approaches to wastewater treatment.

Both biological and chemical WWTPs may be designed either as **permanent water management structures** or as **container units** that may be transported between different plants, as necessary.

The technological solutions are offered separately or in their optimal combination, utilising the following methods:

Precipitation, sedimentation, filtration, ion exchange, adsorption, disinfection, membrane treatment, photochemical oxidation, electrochemical coagulation, root zone WWTPs, and denitrifying bioreactors.

Services:

- ✓ Drawing up a feasibility study – determination of the proper technical solution and evaluation of investment and operating costs
- ✓ Laboratory and pilot tests of the proposed technologies
- ✓ Drawing up the project and obtaining the permissions necessary for the implementation
- ✓ Turnkey implementation, training of the operators, and monitoring during pilot operation
- ✓ Long-term operation and maintenance

SUSTAINABLE WATER MANAGEMENT

The DEKONTA company offers the broadest spectrum of activities and **technologies in the fields of water** and wastewater **management**.

The DEKONTA company regards water and water management as the crucial raw material and field of activity for future sustainable development of utilisation of natural resources.

The key areas our company is engaged in are: water retention in the landscape by means of pools, ponds and biotopes, and its utilisation, service water treatment, treatment of industrial and municipal wastewater, utilisation of wastewater and pre-treated water in agriculture and as technological water in industry and households, and water utilisation in environmentally-friendly and economically sustainable installations and technological units.



All the **services** and **technologies** we offer are usually designed for the **specific conditions**, according to the requirements of the clients.

The technological solutions are offered separately or in their optimal combination, utilising the technology spectrum from nearly natural to high-tech technologies - root zone WWTPs, precipitation, sedimentation, filtration, ion exchange, adsorption, disinfection, membrane treatment, photochemical oxidation, electrochemical coagulation, denitrifying bioreactors etc.

Services:

- ✔ Consultancy and data collection
- ✔ Hydrogeological investigation and feasibility study
- ✔ Project preparation
- ✔ Installation and commissioning
- ✔ Maintenance and post sales assistance
- ✔ Mediation of grant financing





DEMOLITIONS AND EARTHWORKS



DEKONTA ensures demolition works and earthworks concerning individual structures, as well as projects of **complex decommissioning of industrial plants**, including all the associated activities that may comprise investigation of buildings and industrial structures, sampling and analyses, preparing the demolition plan, recycling / reuse project, waste disposal and transport.

In the context of demolition of structures, we provide also further services:

- Investigation, project preparation, elimination and monitoring of structures with the presence of asbestos
- Inventory of structures
- Assessment of stability of structures and securing the affected structures

Equipment for transport, construction and demolition works:

- ✓ Trucks for transport of bulk materials
- ✓ Trucks and trailers for transport of containers
- ✓ Tank trucks for transport of liquid substances
- ✓ Trailers for transport of heavy loads
- ✓ Wheel and tracked excavators including accessories
- ✓ Mini excavators
- ✓ Demolition machine with a high demolition arm
- ✓ Front loaders
- ✓ Skid-steer loaders
- ✓ Mobile equipment for crushing and recycling of construction waste
- ✓ Separation and homogenisation equipment
- ✓ Mobile truck scale

DRILLING WORKS

DEKONTA has at its disposal a **wide spectrum of drilling equipment** (ZIF 650M, HVS 497, HVS 496, HVS 09, WIRTH B2, WIRTH B1α, GEOPROBE 7822 DT) and it offers the following types of drilling:

- Hydrogeological wells
- Investigation and monitoring wells
- Wells for heat pumps
- Drilled wells for water extraction
- Drilling for engineering geology
- Remediation, application, and injection wells for utilisation of chemical and biological methods in situ
- Anchorage and micropile drilling
- Geodetic points (stable)



Wells are drilled using various technological methods:

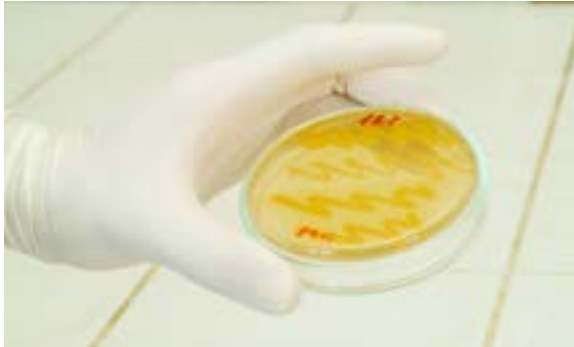
- ✓ Dry rotary core drilling
- ✓ Wet core drilling
- ✓ Rotary core drilling using a diamond bit
- ✓ Core hammer drilling (taking undisturbed soil samples))
- ✓ Wet rotary non-core drilling (roller bit)
- ✓ Rotary non-core hammer drilling with air wash (so-called hammer)
- ✓ Spiral drilling

Our activities further include:

- Maintenance and liquidation of wells
- Engineering activities (mining projects, supervision, projects for liquidation of wells)



LABORATORY SERVICES



DEKONTA carries out a broad spectrum of analyses and tests in its **analytical, microbiological, and technological laboratories**:

- ✓ Chemical (both organic and inorganic) analyses of samples of soils, waste, sediments, sludge, composts, construction debris, water, leachates, waste air / gases
- ✓ Complex microbiological analyses, ecotoxicity determination
- ✓ Laboratory tests of various remediation procedures using real samples
- ✓ Pilot tests of thermal desorption and stabilisation using real samples



Analytical and microbiological laboratories (in Usti nad Labem and in Dretovice) are equipped with **state-of-the-art laboratory equipment and apparatuses**. Analyses of the samples are carried out in accordance with the corresponding currently valid legislation, as well as individual needs of the customer. Both the workplace and the staff meet all the requirements on the laboratory capacity ensuing from the standard CSN EN ISO/IEC 17 025. Bacterial preparations for biodegradation of contaminated waste and contaminated sites are prepared in **biotechnological laboratories** in Dretovice and Ostrava.

New methods and technologies for remediation and waste management are being developed and tested in **technological laboratories** in Dretovice, Slany, and Ostrava.



FIELD ANALYZERS AND MOBILE LABORATORIES

RAMAN SPECTROMETER

By means of this unique field device, it is possible to determine promptly **more than 6,000 organic and inorganic chemicals** and their mixtures, including explosives and drugs.

HANDHELD XRF ANALYZER DELTA

State-of-the-art field analyzer providing immediate information on contents of toxic metals and further important pollutants in polluted soil and sediments.

ECOPROBE 5

Flexible and reliable device for detection and analysis of volatile organic compounds at the site. It includes a flame analyzer for measurement of volatile organic pollutants in soil air, and a selective infrared analyzer for measurements of methane, petroleum hydrocarbons, and carbon dioxide concentrations.



DEKONTA supplies, rents, and operates mobile laboratories equipped in accordance with specific needs of the clients, such as:



- Analytical laboratory
- Microbiological laboratory
- Laboratory for preparation of samples

The mobile laboratory may be rented separately, or it may be provided including experienced staff.



RESEARCH AND DEVELOPMENT

DEKONTA has a long-term tradition in the field of research and development, focusing, in particular, on progressive and promising technologies, procedures, and equipment for commercial applications. **Development of innovative technologies** for remediation of contaminated sites and for hazardous waste treatment is carried out by an experienced team of experts.



The company participates in a number of both European and national research and development programmes, attends local and foreign professional conferences and fairs, and offers opportunities for educational stays of university students within the framework of European educational programmes. Thanks to the research and development projects, the company ensures significant **introduction of innovative technologies in the field of environmental protection** into practical utilisation, both in the Czech territory and abroad.

At present, we focus on research in the following areas:

- ✓ in-situ groundwater treatment (ISCO/ISCR, utilisation on nZVI, hydraulic fracturing, and support of biological reductive dechlorination)
- ✓ Advanced physical-chemical methods for soil and water treatment (photochemical oxidation, electrocoagulation of heavy metals, thermal desorption using microwave warming)
- ✓ Root zone WWTPs for treatment of municipal wastewater and surface water
- ✓ Waste gas treatment (thermophilic biofiltration, photochemical oxidation, removing odour substances, catalytic treatment)
- ✓ Investigation and treatment of sewage sludge (biodrying, composting, stabilisation)
- ✓ Bacterial production of biopesticides



ENVIRONMENTAL CONSULTING

WE PROVIDE:

- Audits in accordance with valid **Czech legal regulations**, or with **requirements of EBRD and the World Bank**, respectively, in the field of environmental protection, safety at work, and social impacts (Sustainability, EHS phase I, Environmental phase II, etc)
- Documents and assessments assessing environmental impacts of structures, activities and technologies according to the Act No. 100/2001 Coll. (**EIA**)
- Noise studies concerning stationary and line noise sources
- Pollution dispersion studies and expert opinions on air pollution sources
- Analyses of environmental health risks according to the Ministry of Environment methodology
- Operating rules, emergency and flood plans
- Assessment of climate change impacts and adaptation measures
- Biological investigation and assessment

IN ADDITION:

- Implementation of integrated management systems (**QMS + EMS + OHSAS**), and, optionally, separate systems of the management of quality (ISO 9001), environment (ISO 14001), and/or protection of health and safety at work (ISO 45001)
- Getting an integrated permit according to the Act No. 76/2002 Coll. (**IPPC**), including preparation of an application for issuance of an integrated permit, and preparation of a basic report
- Supervision (independent protection supervision) during implementation of environmental projects
- Documents in accordance with the Act on Prevention of Serious Accidents, evaluation of the risks according to the Act on Prevention of Environmental Damage and its Rectification
- Consultation services in the waste (including hazardous waste) management field, and in the field of air and water protection



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www.dekonta.com

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Further, DEKONTA has **commercial representatives** in the following countries:

Albania, Armenia, Belgium, Belarus, Brazil, Bulgaria, China, Egypt, Georgia, Croatia, Italy, Israel, Jordan, Canada, Kazakhstan, Kuwait, Hungary, Macedonia, Malta, Moldova, Mongolia, Poland, Germany, Nigeria, Netherlands, Russia, Greece, Saudi Arabia, Turkey, Ukraine, USA