

Dear Madam or Sir,

We hope this email finds you well.

In October, we participated in two international exhibitions: 1. the **Congress on Renewable Gas** in Valladolid (Spain) where we consolidated our network in the **Renewable Energies** sector and paved the way for new business cooperations with Spanish and international actors in the circular economy towards the implementation of Alpha Cleantec's environmentally friendly technology for **wastewater treatment** and the **pretreatment of municipal and agriculture sludge before the digestion for an increased biogas production**. 2. the **ACCUADUEO-H2O Bologna** (Italy), where we exhibited our **water, wastewater, and sludge treatment technologies**, equally launched new business cooperations and showcased Alpha Cleantec's references in groundwater, industrial and nuclear wastewaters' treatment in friendly cooperation with Isle Utilities. On both occasions, we measured once again the growing pressure and the commitment of institutional and industrial stakeholders towards the urgently needed more protective and sustainable management of natural resources.

We furthermore launched our positioning and business development in **Poland** in exclusive collaboration with a renowned local partner as well as new projects in the field of soil and groundwater decontamination in **Germany**, and initiated a collaboration with one of the main Engineering and Consulting companies in **Switzerland**, in the field of wastewater treatment.

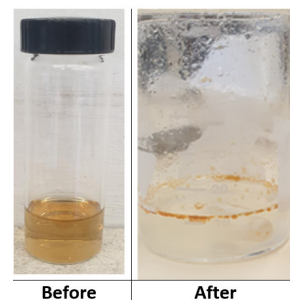
From our R&D department, we are happy to provide you with a new update regarding customer projects.

Successful Feasibility Study with Landfill Leachate Wastewater.

The Problem: One of the challenges of the landfilling process is generation of leachate wastewater. This type of wastewater is starting to be a significant concern because of the high COD levels. The target of the feasibility study was wastewater decontamination and meeting regulatory limits.

The Objective: Therefore, the customer intends to rapidly and cost-effectively decontaminate the **leachate wastewater** from organic materials to meet the EU threshold value regulation for the current contaminants.

The Solution: We have implemented our SOA-AFA solution as a treatment agent based on a batch treatment approach. As shown below, our reagent is efficient for this type of wastewater, with a conversion of >79% after one single treatment.



Results:

Contamination Level (before treatment) (ppm mg/L)	After treatment (ppm mg/kg)	Conversion (%)	Target level
713	125	79	300

Maybe you face similar challenges in your business. Then please feel free to contact us.

<https://www.linkedin.com/company/alpha-cleantec-ag/>



About Alpha Cleantec AG

We believe that our eco-system requires looking after so we have a world worth living in to pass to our next generations. Decontamination of soil and water from hazardous contaminants plays a major role in this regard, in our view. This is why we established Alpha Cleantec AG as an environmental technology company in 2016 with the vision to provide safe, green, rapid, efficient and cost-effective technologies to resolve environmental harms and hazards caused by inadequate human and industrial activities.

For Decontamination of a wide range of contaminants (see table below), we provide two technologies, AFA and SOA, achieving decontamination ratios of up to 97% in just hours (such as for Hydrocarbons, BTEX, Petroleum leftovers, Aromatics, PAHS, Chlorinated Solvents, PCBs, Dioxins as well as Pesticides and Herbicides) to be applied in soil, groundwater, wastewater and railway ballast treatment.

For wastewater facilities we have developed, based on our proprietary technology, a process allowing to pretreat sludge before the digester, thereby significantly increasing biogas generation (up to 50%) and decreasing dry sludge disposal at the end of the process (up to 20%).

For Vegetation control we have developed a process based on an environmentally friendly mixture of inorganic salts that generates concentrated (non-Glyphosate) herbicide absorbing water from the plants and drying the plant including the roots, without changing the salinity of the soil.

Table of contaminants treatable by our technologies

CONTAMINANTS	IN-SITU		ON SITE	
	SOA	AFA	SOA	AFA
BTEX				
Benzene	*	*	*	*
Toluene	*	*	*	*
Ethylbenzene	*	*	*	*
Xylene	*	*	*	*
PETROLEUM HYDROCARBONS				
Gasoline Range Organics (GRO)	*	*	*	*
Diesel Range Organics (DRO)	*	*	*	*
Oil Range Organics (ORO)	*	*	*	*
AROMATICS				
Chlorobenzene	*	*	*	*
Bromobenzene	*	*	*	*
Dichlorobenzene	*	*	*	*
Nitrobenzene	*	*	*	*
Phenol	*	*	*	*
Styrene	*	*	*	*
Naphthalene	*	*	*	*
Trichlorobenzene	*	*	*	*
Trimethylbenzene	*	*	*	*
PAHS				
Phenathrene	*	*	*	*
Naphthalene	*	*	*	*
Acenaphthylene	*	*	*	*
CHLORINATED SOLVENTS				
Tetrachloroethylene	*	*	*	*
Trichloroethene	*	*	*	*
Dichloroethene	*	*	*	*
Vinyl chloride	*	*	*	*
Tetrachloroethane	*	*	*	*
Trichloroethane	*	*	*	*
Dichloroethane	*	*	*	*
Dibromochloroethane	*	*	*	*
Bromodichloromethane	*	*	*	*
Carbon tetrachloride	*	*	*	*
Chloroethane	*	*	*	*
Chloroform	*	*	*	*
Chloromethane	*	*	*	*
Chlorotoluene	*	*	*	*
Methylene chloride	*	*	*	*
PCBS				
DIOXINS				
PESTICIDES AND HERBICIDES				
Glyphosate	*	*	*	*
Goal	*	*	*	*

We plan to inform you in the future about newly accomplished projects, pilots or case studies. Please let us know if you do not wish to receive our company news.

Kind regards/ Mit freundlichem Gruß

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