

Dear Madam or Sir

We hope this email finds you well, healthy, and fully charged with energy after pleasant summer holidays as far as possible with the current COVID-19 pandemic. We want to share with you our next Newsletter containing the August updates.

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

### Successful feasibility study completed with a Swiss environmental engineering company

**The Problem:** The feasibility study was with a Swiss company, which is active in the field of inspection, quality control, analytical and site services, etc. The target of the study was the development of a simple, rapid and cost-effective on-site process for treatment of wastewater and removal of hydrocarbons up to C<sub>40</sub> and separation of heavy metals and inorganic materials.



**The Objective:** It is therefore the intention of our potential customer to cost-effectively, efficiently and rapidly decontaminate landfill wastewater from organic materials and heavy metal with pump and treat methodology to meet the EU and Russian threshold values regulation.

**The Solution:** We have implemented a series of laboratory treating methodologies for several liters of contaminated wastewater thereby demonstrating that through a simple single process our SOA technology combined with the coagulation process could be efficiently applied for decontamination and efficient heavy metals separation of these samples.

### Results:

Sample No.	Contamination	Pollution degree (ppm   mg/kg)	After treatment (ppm   mg/kg)	Reduction of pollution in %
1	TPH, BTEX, PAH, C <sub>10</sub> -C <sub>40</sub>	1,632	130.5	92
2	TPH, BTEX, PAH, C <sub>10</sub> -C <sub>40</sub>	2,450	245	90
3	TPH, BTEX, PAH, C <sub>10</sub> -C <sub>40</sub>	2,637	131.9	95
4	TPH, BTEX, PAH, C <sub>10</sub> -C <sub>40</sub>	2,970	30	99
1	Li, Na, B, Mg, Al, K, Mn, V, Cr, Fe, Co, Ni, Mo, Cd, Sr, Ba, Pb, Se, Ag, Ti, Sn, Sb			87.6 -100
2	Li, Na, B, Mg, Al, K, Mn, V, Cr, Fe, Co, Ni, Mo, Cd, Sr, Ba, Pb, Se, Ag, Ti, Sn, Sb			14.6 -100
3	Li, Na, B, Mg, Al, K, Mn, V, Cr, Fe, Co, Ni, Mo, Cd, Sr, Ba, Pb, Se, Ag, Ti, Sn, Sb			92.1 -100
4	Li, Na, B, Mg, Al, K, Mn, V, Cr, Fe, Co, Ni, Mo, Cd, Sr, Ba, Pb, Se, Ag, Ti, Sn, Sb			73.3 -100

# Alpha Cleantec AG

## Newsletter August 2021

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

Sincerely,

**Your Alpha Cleantec Team**

### 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 a vision to provide safe, green, rapid, efficient and cost effective technologies to resolve environmental harms and hazards caused by inadequate human and industrial activities.

Alpha Cleantec AG provides two technologies, AFA and SOA, achieving decontamination ratios of up to 97% for a wide range of contaminants in just hours (such as Hydrocarbons, BTEX, Petroleum leftovers, Aromatics, PAHS, Chlorinated Solvents, PCBs, Dioxins as well as Pesticides and Herbicides) to be applied for soil, wastewater and railway ballast treatment.

### Table of contaminants treatable by our technologies

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

We plan to inform you in future whenever we accomplished projects, pilots or case studies. If you do not wish to get our company news, please let us know.

Kind regards

**ALPHA CLEANTEC AG**

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Mit freundlichen Grüßen

Andreas Danner

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