

MOBILE UNITS

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Water treatment



2014-08-05

WATER TREATMENT

- Brunsa 10, 20, 30m³
- Filter; carbon, sand, peat, bark
- Decanter
- Geotubes
- Axonfilter
- pH adjustment
- Flowmeter
- Certified sampler
- Assays, accredited labs



ON SIGHT

sludge- och oilseparation

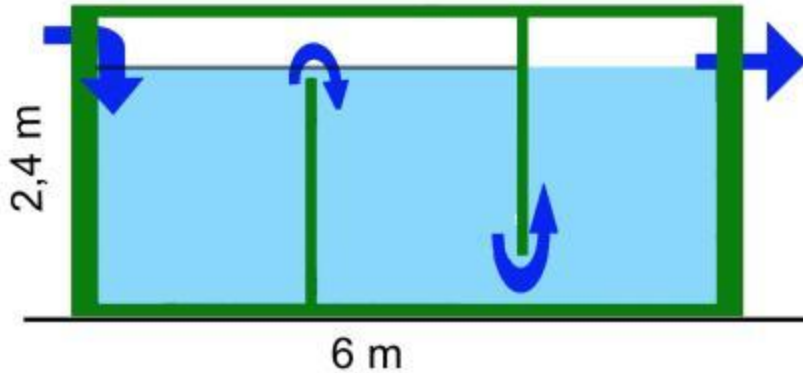
- Brunsa 10
- Brunsa 20
- Brunsa 30



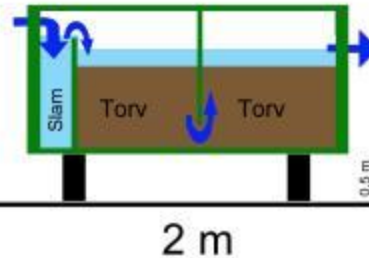
"PURIFICATION TRAIN"



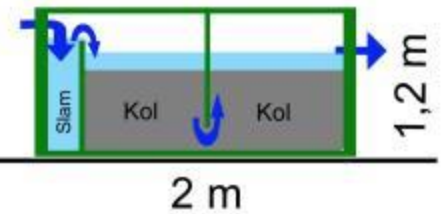
30 kbm



B
2 kbm



C
2 kbm

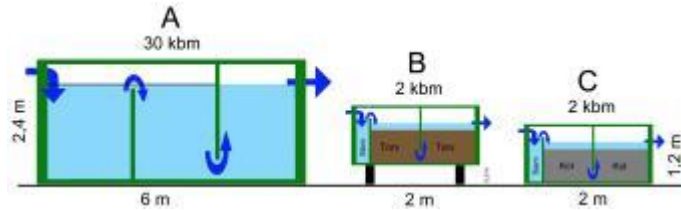


"PURIFICATION TRAIN"

■ Filter

- Carbon
- Sand
- Peat
- Bark

■ 7*7 meters



- pH adjustment
- Flowmeter

- Sampling
- Assays



FILTER MATERIALS

- Carbon
 - Organic substances; oil, PAH
- Sand
 - Bound particles; PAH, metals...
- Bark
 - Bound particles; PAH, metals...
- Peat
 - Organic substances; oil, PAH



GEOTUBES



Dewatering of sludge



GEOTUBES

” Pumping in - sweat out ”

Bind the sludge

- Sludge pumping
- Buffer
- Polymer treatment
- Cut open and dig out / deposit
- 10kkm-200kkm



ANALYSIS & SAMPLING

- Certified samplers
- Accredited labs
- Analysis plan
- Final report

Alcontrol Laboratories

Rapport nr 10013455

Kund: Ragn-Sells AB
Högtyrörp
1917 93 BRO

Asat:

Mark: Projekt: Åsa Stage
Kontroll: Projekt: Kemi och miljöanalys
Postg: Jord

Provisioninformation

Anmälan	2010-01-18
Analysdatum	2010-01-20
Provtagning	2010-01-20
Analyslaboriet	Dumla Ljunggren
Faktorviktning	2142
Provtagningstid	RE 601 K. södra
Provs nr	2010-01-18
Provtagningstid	2108
Provtagningstid	003

Resultat

Metod	Parameter	Resultat	Enhet
GC/MS	Toluol	36.7	mg/kg TO
GC/MS	ATSE +CB-C8	+3	mg/kg TO
GC/MS	ATSE +CB-C10	+6	mg/kg TO
GC/MS	ATSE +CB-C12	+6	mg/kg TO
GC/MS	ATSE +CB-C14	+10	mg/kg TO
GC/MS	ATSE +CB-C16	+10	mg/kg TO
GC/MS	ATSE +CB-C18	36	mg/kg TO
GC/MS	ATSE +CB-C20	+2.1	mg/kg TO
GC/MS	ATSE +CB-C22	+2	mg/kg TO
GC/MS	ATSE +CB-C24	+0.255	mg/kg TO
GC/MS	ATSE +CB-C26	+0.1	mg/kg TO
GC/MS	ATSE +CB-C28	+0.1	mg/kg TO
GC/MS	ATSE +CB-C30	+0.16	mg/kg TO
GC/MS	ATSE +CB-C32	+0.03	mg/kg TO
GC/MS	ATSE +CB-C34	+0.03	mg/kg TO
GC/MS	ATSE +CB-C36	+0.03	mg/kg TO
GC/MS	ATSE +CB-C38	+0.03	mg/kg TO
GC/MS	ATSE +CB-C40	+0.03	mg/kg TO
GC/MS	ATSE +CB-C42	+0.03	mg/kg TO
GC/MS	ATSE +CB-C44	+0.03	mg/kg TO
GC/MS	ATSE +CB-C46	+0.03	mg/kg TO
GC/MS	ATSE +CB-C48	+0.03	mg/kg TO
GC/MS	ATSE +CB-C50	+0.03	mg/kg TO
GC/MS	ATSE +CB-C52	+0.03	mg/kg TO
GC/MS	ATSE +CB-C54	+0.03	mg/kg TO
GC/MS	ATSE +CB-C56	+0.03	mg/kg TO
GC/MS	ATSE +CB-C58	+0.03	mg/kg TO
GC/MS	ATSE +CB-C60	+0.03	mg/kg TO
GC/MS	ATSE +CB-C62	+0.03	mg/kg TO
GC/MS	ATSE +CB-C64	+0.03	mg/kg TO
GC/MS	ATSE +CB-C66	+0.03	mg/kg TO
GC/MS	ATSE +CB-C68	+0.03	mg/kg TO
GC/MS	ATSE +CB-C70	+0.03	mg/kg TO
GC/MS	ATSE +CB-C72	+0.03	mg/kg TO
GC/MS	ATSE +CB-C74	+0.03	mg/kg TO
GC/MS	ATSE +CB-C76	+0.03	mg/kg TO
GC/MS	ATSE +CB-C78	+0.03	mg/kg TO
GC/MS	ATSE +CB-C80	+0.03	mg/kg TO
GC/MS	ATSE +CB-C82	+0.03	mg/kg TO
GC/MS	ATSE +CB-C84	+0.03	mg/kg TO
GC/MS	ATSE +CB-C86	+0.03	mg/kg TO
GC/MS	ATSE +CB-C88	+0.03	mg/kg TO
GC/MS	ATSE +CB-C90	+0.03	mg/kg TO
GC/MS	ATSE +CB-C92	+0.03	mg/kg TO
GC/MS	ATSE +CB-C94	+0.03	mg/kg TO
GC/MS	ATSE +CB-C96	+0.03	mg/kg TO
GC/MS	ATSE +CB-C98	+0.03	mg/kg TO
GC/MS	ATSE +CB-C100	+0.03	mg/kg TO

PERSONNEL ON SIGHT

- Trained on the equipment
- Knows the process
- Problem solver

REFERENCES



REFERENSER

- Hamar, Norge
- Strömstad
- Stena Göteborg
- Nynäshamn, Raffinaderiet
- Strabag, Norra Djurgårdsstaden
- Skanska forskning solna Ki
- NCC Råsunda stadium
- Karlstad hamn
- NCC, Göteborg PEAB
- JVAB

