Analysis of Pulverized Fuel
- German Laboratory-

Date: 10.10.2012
Revision: 01

STW University Lab for Allentown Mix

(All samples provided by the City of Allentown) — **Dimensions shown are metric units.**

A:

Parameter		Method Used	Dimension	Result	
Moisture (at delivery)			Weight %	15.41	
pH-value (at 70°F)				ND	
Dry residue (220°F)		**drying 24 hours at temperature**	Weight %	88.10	dry
Organic matter (ignition loss of dry residue at 1020°F)			Weight %	76.70	dry
Ash (at 1560°F)			Weight %	11.90	dry
Low heating value (LHV) (water free)		**LHV (water free)**		**9038 BTU/lb**	**21.022 MJ/Kg;** dry
Elemental Analysis			**water free**		
Carbon	C		Weight %	51.60	
Oxygen	O		Weight %	27.57	
Hydrogen	H		Weight %	7.48	
Nitrogen	N		Weight %	1.29	
Sulphur	S		Weight %	0.246	
Chlorine (organic and inorganic)	Cl		Weight %	0.180	
Ash slumping temperature		**Range =**	1150 to 1200 °C		

Analysis; specified parameter in accordance to the list

Parameter			Dimension	Result (mg/kg)	
Nitrogen organic	N organic		g/kg, dry	12000.00	
Sodium	Na		g/kg, dry	800.00	
Ferreous	Fe		g/kg, dry	2300.00	
Aluminium	Al		g/kg, dry	1890.00	

B:

Manganese	Mn		g/kg, dry	83.90	
Arsenic	As		g/kg, dry	0.700	
Molybdenum	Mb		g/kg, dry	<1	
Selenium	Se		g/kg, dry	<1	
Chemical Analysis:					
Parameter			**Dimension**	**Result (mg/kg)**	
Alkaline active components	CaO		Weight %, dry	26.30	
Nitrogen sum	N (sum)		Weight %, dry	N/A	
Potassium oxid	K_2O		Weight %, dry	1.08	
Calcium oxid	CaO		Weight %, dry	26.30	
Magnesium oxid	MgO		Weight %, dry	3.74	
Phosphorus pentoxide	P_2O_5		Weight %, dry	11.00	
Ammonium-Nitrogen	NH_4*N		Weight %, dry	N/A	
Absorbable organic halogens (AOX)	Cl^-		mg/kg, dry	N/A	
Aqua regia dissolution				**Result**	
Lead	Pb		mg/kg, dry	15.50	
Cadmium	Cd		mg/kg, dry	<0,5	
Chrome sum	Cr		mg/kg, dry	15.30	
Copper	Cu		mg/kg, dry	268.00	
Nickel	Ni		mg/kg, dry	8.92	
Mercuric	Hg		mg/kg, dry	0.20	
Zinc	Zn		mg/kg, dry	304.00	