Analytical Report

National Laboratory Service

Final Report

Report ID - 265189

Printed on: 14/07/2015

Client:	Midlands	Project:	Derbys Notts and Leics
Spt Code:	WAS59800	Spt Name:	1 OFF SAMPLE OF WASTE - TRENT 59
Folder No:	003103809	Sampled on:	3-Mar-15 @ 01:00
PRN	90169127	Purpose Code:	WI
Comments:	EASTHORPE SILT ANALYSIS		
Incident No:			

Analyte			MRV	Accreditation	LabCode
Acid Neutralisation Capacity (pH 4) : Dry Wt	<10	mol/kg	5		NoneLE
Acid Neutralisation Capacity (pH 7) : Dry Wt	<10	mol/kg	5		NoneLE
Cyanide : Free : Dry Wt as CN	<3	mg/kg	1		NoneLE
Cyanide : Total : Dry Wt as CN	<3	mg/kg	1		NoneLE
pH : Solid sample	7.080	pH Units	0.2		NoneLE
Phenols : Monohydric : Dry Wt	<5	mg/kg	2		NoneLE
Sulphide : Dry Wt	132.0	mg/kg	10		NoneLE
Carbon, Organic : Dry Wt as C	5.500	%	0.3		NoneSC
Arsenic : Dry Wt	10.000	mg/kg	0.5		NoneLE
Barium : Dry Wt	48.600	mg/kg	0.5		NoneLE
Cadmium : Dry Wt	<0.2	mg/kg	0.2		NoneLE
Chromium : Dry Wt	19.000	mg/kg	0.5		NoneLE
Copper : Dry Wt	12.90	mg/kg	1		NoneLE
Lead : Dry Wt	15.60	mg/kg	1		NoneLE
Mercury : Dry Wt	<1	mg/kg	1		NoneLE
Nickel : Dry Wt	14.200	mg/kg	0.6		NoneLE
Zinc : Dry Wt	73.90	mg/kg	2		NoneLE
Total Benzene Toluene Ethylbenzene and Xylene : Dry Wt	<0.0471	mg/kg			NoneNLS
PAH : Total : Dry Wt :- {Polynuclear Aromatic Hydrocarbons}	<2.13	mg/kg			NoneNLS
PCB : Total (28, 52, 101, 118, 138, 153, 180)	<0.0100	ug/kg			NoneNLS
Hydrocarbons >C10 - C40 : Dry Wt	1570.0	mg/kg	50		NoneLE
Acenaphthene : Dry Wt	11.80	ug/kg	4		NoneLE
Acenaphthylene : Dry Wt	8.00	ug/kg	5		NoneLE
Anthracene : Dry Wt	31.1	ug/kg	20		NoneLE
Benzo(a)anthracene : Dry Wt	152.0	ug/kg	20		NoneLE
Benzo(a)pyrene : Dry Wt	178.0	ug/kg	20		NoneLE
Benzo(b)fluoranthene : Dry Wt	245.0	ug/kg	20		NoneLE
Benzo(ghi)perylene : Dry Wt	<200	ug/kg	20		NoneLE
Benzo(k)fluoranthene : Dry Wt	84.7	ug/kg	20		NoneLE
Chrysene : Dry Wt	165.0	ug/kg	30		NoneLE

Coronene : Dry Wt	28.1	ug/kg	*10*	NoneLE
Dibenzo(ah)anthracene : Dry Wt	34.60	ug/kg	*3*	NoneLE
Fluoranthene : Dry Wt	336.0	ug/kg	*20*	NoneLE
Fluorene : Dry Wt	14.0	ug/kg	*10*	NoneLE
Indeno(1,2,3-cd)pyrene : Dry Wt	153.0	ug/kg	*30*	NoneLE
Naphthalene : Dry Wt	44.7	ug/kg	*10*	NoneLE
Phenanthrene : Dry Wt	128.0	ug/kg	*20*	NoneLE
Pyrene : Dry Wt	313.0	ug/kg	*20*	NoneLE
PCB - 028 : Dry Wt	<2	ug/kg	*2*	NoneLE
PCB - 052 : Dry Wt	<1	ug/kg	*1*	NoneLE
PCB - 101 : Dry Wt	<2	ug/kg	*2*	NoneLE
PCB - 118 : Dry Wt	<2	ug/kg	*2*	NoneLE
PCB - 138 : Dry Wt	<1	ug/kg	*1*	NoneLE
PCB - 153 : Dry Wt	<1	ug/kg	*1*	NoneLE
PCB - 180 : Dry Wt	<1	ug/kg	*1*	NoneLE
Hydrocarbons >C5 - C10 : Dry Wt	<10	mg/kg	*4*	NoneLE
1,2-Dimethylbenzene : Dry Wt :- {o-Xylene}	<3	ug/kg	*1*	NoneLE
Benzene : Dry Wt	<3	ug/kg	*1*	NoneLE
Dimethylbenzene : Sum of (1,3- 1,4-) : Dry Wt	<5	ug/kg	*2*	NoneLE
Ethylbenzene : Dry Wt	<1	ug/kg	*0.5*	NoneLE
Toluene : Dry Wt :- {Methylbenzene}	35.10	ug/kg	*3*	NoneLE
Sample Analysis : Text Report	1.00	Text	*0*	NoneLE

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The sample may have breached thresholds from the hazardous waste regulations for the following parameters that were determined.

The concentration of hydrocarbons (dry weight) in the carbon chain length range C10 to C40 was 0.16%. Analysis of the PAH ratios in the sample indicated that the hydrocarbons were from a coal derived source.

Tar materials and materials that contain tar are hazardous if the sample contains more than 0.005% (50mg/kg) Benzo(a)pyrene. This is stated in Note M of the CLP REgulations 2008 Annex VI.The sample had a concentration of 0.000018% of benzo(a)pyrene.

The sample breached Waste Acceptance Criteria thresholds from the Environment Agency 'Waste Sampling and Testing for Disposal to Landfill', March 2013 for the following parameters that were determined:

HAZARDOUS WASTE LANDFILL criteria:
Loss On Ignition (dry weight)

STABLE NON-REACTIVE HAZARDOUS WASTE in NON-HAZARDOUS LANDFILL criteria:
Total Organic Carbon (dry weight)

INERT WASTE LANDFILL criteria:
Mineral Oil (dry weight)
Sulphate (leachable)
Total Dissolved Solids (leachable)
Total Organic Carbon (dry weight)

A leachability test was performed on the sample, and the eluate was found not to breach any thresholds as stated in The River Basins Typology, Standards and Groundwater threshold values (Water Framework Directive) (England and Wales) Directions 2010 for any parameters that were determined.

Sulphate, Leachable : Dry Wt as SO4	1620.0	mg/kg	*50*	NoneLE
Conductivity at 20C, Leachable	462.	uS/cm	*100*	NoneLE
Carbon, Organic, Dissolved, Leachable : Dry Wt as C	417.00	mg/kg	*2*	NoneLE
Dry Solids @ 30°C	37.800	%	*0.5*	NoneLE
Dry Solids @ 105°C	32.600	%	*0.5*	NoneLE
Loss on Ignition @ 500°C	18.700	%	*0.5*	NoneLE
Antimony, Leachable : Dry Wt	<0.0112	mg/kg	*0.01*	NoneLE
Arsenic, Leachable :Dry Wt	0.40700	mg/kg	*0.008*	NoneLE
Barium, Leachable : Dry Wt	<0.151	mg/kg	*0.1*	NoneLE
Cadmium, Leachable : Dry Wt	<0.00112	mg/kg	*0.001*	NoneLE
Chromium, Leachable : Dry Wt	<0.00561	mg/kg	*0.005*	NoneLE
Copper, Leachable : Dry Wt	0.0389	mg/kg	*0.01*	NoneLE
Lead, Leachable : Dry Wt	<0.0224	mg/kg	*0.02*	NoneLE
Molybdenum, Leachable : Dry Wt	0.1690	mg/kg	*0.02*	NoneLE

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Nickel, Leachable : Dry Wt	0.0788	mg/kg	*0.01*	NoneLE
Selenium, Leachable : Dry Wt	<0.0112	mg/kg	*0.01*	NoneLE
Zinc, Leachable : Dry Wt	0.0709	mg/kg	*0.03*	NoneLE
BS EN 12457-3 two stage leach test mgkg	1.00	Coded	*0*	NoneLE
Dry weight @ 105	100.000	%	*0.5*	NoneLE
Leaching BatchNo	20076636.000	Unitless		NoneLE
Leaching Method	4.00	Coded	*0*	NoneLE
Soil Proportion Used	1.10	Unitless	*0*	NoneLE
Stage 1 Leachate Dilution	2.00	Unitless	*0*	NoneLE
Stage 1 Leachate FolderNo	3200192.000	N/A		NoneLE
Stage 2 Leachate FolderNo	3200193.000	N/A		NoneLE
Volume of Stage 1 eluate	233.00	ml	*0*	NoneLE
Wet sample weight	193.00	g	*0*	NoneLE
Mercury Leachable : Dry Wt	<0.000164	mg/kg	*0.0001*	NoneLE
Chloride, Leachable : Dry Wt	<147	mg/kg	*100*	NoneLE
Fluoride, Leachable : Dry Wt	2.100	mg/kg	*0.5*	NoneLE
pH, Leachable	8.160	pH Units	*0.5*	NoneLE
Phenols, Monohydric Leachable : Dry Wt	<0.448	mg/kg	*0.4*	NoneLE
Accreditation Assessment	2.00	No.	*1*	NoneLE
Additional Material Present	NoResult	Text	*0*	NoneLE
Drying Method	NoResult	Text	*0*	NoneLE
Rejected Matter	NoResult	%	*0*	NoneLE
Sample Colour	NoResult	Text	*0*	NoneLE
Sample Matrix	NoResult	Text	*0*	NoneLE
Sample Preparation	1.000	Text		NoneLE

The sample appeared to be dark brown clay sediment + plant material + stones

The sample was crushed using a jaw crusher.
The sample was then sieved until it passed through a 2mm sieve.
The sample was received unpreserved.

All parameters are determined on the air-dried (<30degC) portion except those requiring a wet sample fraction where as received (wet) sample was used.

Dry Weight (DW) results are reported as determined at <30degC.

Total Dissolved Solids Leachable : Dry Wt	5900.00	mg/kg	*1*	NoneLE

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Key to Accreditation: UKAS = Methodology accredited to ISO/IEC 17025:2005, MCertS = Methodology accredited to MCertS Performance Standard for testing of soils, none = Methodology not accredited

Key to Lab Code: Le = Leeds, No = Nottingham, Sx = Starcross, SC = Sub-Contracted outside NLS

This report contains validated results at the time of printing which have been exported to the Environment Agency data system. If this report is subsequently to be used to determine actions, an update should be requested from the NLS Helpdesk or the data checked with the exported data to ensure any amendments are included.