WAC TESTS FROM PINCHES 2

SEVERN TRENT
ENVIRONMENTAL LEADERSHIP

STL

Job Number 406891
Project Name LHL - General Analysis
Site Name Pinches 2

13 Feb 2008

A Morris
Enviroarm Limited
597 Walsall Road
Great Wyrley
Walsall
WS6 6AE
Fax Number: 01922 412209

STL Job Reference: L 406981/2007

Dear Mr Smyth

We confirm receipt of your samples on 14 December 2007

Samples Registered: 2
Site Name: Pinches 2
Customer Order Number:
Expected Due Date: 2 January 2008
Turnaround Time Requested: 10

Please check your registration details carefully on the other sheets in this workbook. We shall assume we have interpreted your requirements correctly unless we hear from you within 24 hours.

Please note that an order number has not been provided for this work. We shall be unable to release results until a valid order number is received.

Should you have any queries on the above samples, please contact me on 02476 584829 referring to the above STL Job reference.

Yours sincerely

Martin Heeks
Project Manager
02476 584829
Martin.Heeks@stl-ltd.com

Storage and Disposal of Samples
All samples will be stored in such a way as to avoid as far as is practically possible, deterioration of the samples during storage.

Soil samples will be retained for 30 days after dispatch of the final report. *
Water samples will be retained for 10 days after dispatch of the final report. *
* Unless other instructions are received. A charge may be made for the prolonged storage of samples.

Waste Acceptance Criteria Testing BS EN 12457
Part 3, 2 Stage Process
Issue 1

SEVERN TRENT ENVIRONMENTAL LEADERSHIP STL

Sample Details	
Sample Number	899551
Job Number	406891
Sample ID	1 No. Sample
Site	LHL - WAC Analysis: Pinches 2
Date Sampled	14/12/2007
Date Received	14/12/2007
Particle Size (<4mm)	<=95%
Method of size reduction	Jaw Crusher.
Non-crushable matter	N/A

Test Values	
Mass of Raw Test Portion (MW) kg	0.179
Mass of Dried Test Portion (MD) kg	0.175
Moisture Content Ratio (MC) %	1.89
Dry Matter Content Ratio (DR) %	98
Leachant Volume (1) (L2) Litre	0.347
Leachant Volume (2) (L8) Litre	1.400
Eluate Volume (1) (VE1) Litre	0.280
Eluate Volume (2) (VE2) Litre	1.380

Eluate Analysis	Concentration in Eluate		Amount Leached		Landfill Waste Acceptance Criteria (BS EN 12457-3 Limit Values (mg/kg) at L:S 10:1)		
Liquid : Waste Ratio	2:1	8:1	2:1	10:1			
Sample Number	899552	899553					
pH	8.24	8.19					
Temperature °C	19	20					
Conductivity uS/cm	5330	346					
	mg/l	mg/l	mg/kg	mg/kg	Inert Waste	Stable Non-Reactive hazardous waste in non-hazardous	Hazardous Waste
Arsenic as As	<0.0050	<0.0050	<0.0100	**<0.050**	0.5	2	25
Barium as Ba	0.065	0.014	0.130	**0.22**	20	100	300
Cadmium as Cd	<0.00010	<0.00010	<0.00020	**<0.0010**	0.04	1	5
Chromium as Cr	0.018	0.0037	0.036	**0.06**	0.5	10	70
Copper as Cu	<0.010	<0.010	<0.020	**<0.10**	2	50	100
Mercury as Hg	<0.00050	<0.00050	<0.00100	**<0.0050**	0.01	0.2	2
Molybdenum as Mo	0.023	<0.0020	0.046	**<0.05**	0.5	10	30
Nickel as Ni	<0.020	<0.020	<0.040	**<0.20**	0.4	10	40
Lead as Pb	<0.010	<0.010	<0.020	**<0.10**	0.5	10	50
Antimony as Sb	<0.0060	<0.0060	<0.0120	**<0.060**	0.06	0.7	5
Selenium as Se	<0.010	<0.010	<0.020	**<0.10**	0.1	0.5	7
Zinc as Zn	<0.025	<0.025	<0.050	**<0.25**	4	50	200
Chloride as Cl	35	40	800	**635**	800	15000	25000
Fluoride as F	0.65	<0.20	1.30	**<2.7**	10	150	500
Sulphate as SO_4	220	<24	440	**<554**	1000	20000	50000
Total Dissolved Solids (TDS)	900	<200	800	**<620**	4000	60000	100000
Phenol Index	<0.050	<0.050	<0.100	**<0.50**	1		
Dissolved Organic Carbon (DOC)	24	<5.0	48	**<80**	500	800	1000
Waste Analysis							
Total Organic Carbon w/w %				**2.1**	3%	5%	6%
Loss on Ignition %							10%
BTEX mg/kg				**<0.10**	6		
PCBs (7 congeners) mg/kg				**<0.10**	1		
Mineral Oil (C10 - C40) mg/kg				**44**	500		
PAHs mg/kg				**64**	100		
pH				**8.2**		>6	
Acid Neutralisation Capacity (pH4) mol/kg						To be evaluated	To be evaluated
Acid Neutralisation Capacity (pH7) mol/kg						To be evaluated	To be evaluated

Disclaimer : The Landfill Waste Acceptance Criteria limits in this report are provided for guidance only. STL does not take responsibility for any errors or omissions. Data is correct as of 01/05/2005

Additional Eluate Analysis	Concentration in Eluate		Amount Leached	
	2:1	8:1	2:1	10:1
	mg/l	mg/l	mg/kg	mg/kg

Additional Waste Analysis	Units	Result
Conductivity @ 20 C	uS/cm	270
Moisture at 105c	%	1.9

Sample Comments	
899551	Stainless steel sieve used.
899552	
899553	

Waste Acceptance Criteria Testing BS EN 12457 Part 3, 2 Stage Process Issue 1

SEVERN TRENT ENVIRONMENTAL LEADERSHIP STL

Sample Details	
Sample Number	899554
Job Number	406891
Sample ID	2 No. Sample
Site	LHL - WAC Analysis: Pinches 2
Date Sampled	14/12/2007
Date Received	14/12/2007
Particle Size (<4mm)	<=95%
Method of size reduction	Jaw Crusher.
Non-crushable matter	N/A

Test Values	
Mass of Raw Test Portion (MW) kg	0.179
Mass of Dried Test Portion (MD) kg	0.175
Moisture Content Ratio (MC) %	1.89
Dry Matter Content Ratio (DR) %	98
Leachant Volume (1) (L2) Litre	0.347
Leachant Volume (2) (L8) Litre	1.400
Eluate Volume (1) (VE1) Litre	0.280
Eluate Volume (2) (VE2) Litre	1.380

Eluate Analysis	Concentration in Eluate		Amount Leached		Landfill Waste Acceptance Criteria (BS EN 12457-3 Limit Values (mg/kg) at L:S 10:1)		
Liquid : Waste Ratio	2:1	8:1	2:1	10:1			
Sample Number	899555	899556					
pH	8.24	8.19					
Temperature °C	19	20					
Conductivity uS/cm	5330	346					
	mg/l	mg/l	mg/kg	mg/kg	*Inert Waste*	*Stable Non-Reactive hazardous waste in non-hazardous*	*Hazardous Waste*
Arsenic as As	<0.0050	<0.0050	<0.0100	**<0.050**	*0.5*	*2*	*25*
Barium as Ba	0.17	0.020	0.34	**0.5**	*20*	*100*	*300*
Cadmium as Cd	<0.00010	<0.00010	<0.00020	**<0.0010**	*0.04*	*1*	*5*
Chromium as Cr	0.037	0.0025	0.074	**<0.08**	*0.5*	*10*	*70*
Copper as Cu	0.016	<0.010	0.032	**<0.11**	*2*	*50*	*100*
Mercury as Hg	<0.00050	<0.00050	<0.00100	**<0.0050**	*0.01*	*0.2*	*2*
Molybdenum as Mo	0.023	<0.0020	0.046	**<0.05**	*0.5*	*10*	*30*
Nickel as Ni	<0.020	<0.020	<0.040	**<0.20**	*0.4*	*10*	*40*
Lead as Pb	<0.010	<0.010	<0.020	**<0.10**	*0.5*	*10*	*50*
Antimony as Sb	<0.0060	<0.0060	<0.0120	**<0.060**	*0.06*	*0.7*	*5*
Selenium as Se	<0.010	<0.010	<0.020	**<0.10**	*0.1*	*0.5*	*7*
Zinc as Zn	<0.025	<0.025	<0.050	**<0.25**	*4*	*50*	*200*
Chloride as Cl	15	<2.0	30	**<42**	*800*	*15000*	*25000*
Fluoride as F	0.70	<0.20	1.40	**<2.8**	*10*	*150*	*500*
Sulphate as SO_4	26	<24	52	**<243**	*1000*	*20000*	*50000*
Total Dissolved Solids (TDS)	280	<200	560	**<2122**	*4000*	*60000*	*100000*
Phenol Index	<0.050	<0.050	<0.100	**<0.50**	*1*		
Dissolved Organic Carbon (DOC)	7.3	<5.0	14.6	**<54**	*500*	*800*	*1000*
Waste Analysis							
Total Organic Carbon w/w %				**0.95**	*3%*	*5%*	*6%*
Loss on Ignition %							*10%*
BTEX mg/kg				**<0.10**	*6*		
PCBs (7 congeners) mg/kg				**<0.10**	*1*		
Mineral Oil (C10 - C40) mg/kg				**69**	*500*		
PAHs mg/kg				**2.0**	*100*		
pH				**8.0**		*>6*	
Acid Neutralisation Capacity (pH4) mol/kg						*To be evaluated*	*To be evaluated*
Acid Neutralisation Capacity (pH7) mol/kg						*To be evaluated*	*To be evaluated*

Disclaimer : The Landfill Waste Acceptance Criteria limits in this report are provided for guidance only. STL does not take responsibility for any errors or omissions. Data is correct as of 01/05/2005

Additional Eluate Analysis	Concentration in Eluate		Amount Leached	
	2:1	8:1	2:1	10:1
	mg/l	mg/l	mg/kg	mg/kg

Additional Waste Analysis	Units	Result
Conductivity @ 20 C	uS/cm	270
Moisture at 105c	%	1.9

Sample Comments	
899554	Stainless steel sieve used.
899555	
899556	

WAC TESTS FROM CHADWICH LANE

27 October 2005

Mr A Morris
Enviroarm Limited
597 Walsall Road
Great Wyrley
Staffs
WS6 6AE

Test Report : EARM/C6224

Dear Mr Morris

Please find enclosed the results of the analysis carried out on the samples submitted from Chadwich Lane Quarry on 30 September 2005.

I trust you will find these satisfactory but should you have any queries please contact customer services.

Yours sincerely

D Hoque
CUSTOMER RELATIONS MANAGER

Waste Acceptance Criteria Testing BS EN 12457 Part 3, 2 Stage Process Issue 1

SEVERN TRENT ENVIRONMENTAL LEADERSHIP STL

Sample Details		Test Values	
Sample Number	733873	Mass of Raw Test Portion (MW) kg	0.219
Job Number	C6224	Mass of Dried Test Portion (MD) kg	0.175
Sample ID	Sample 1	Moisture Content Ratio (MC) %	24.67
Site	Chadwich Lane Quarry	Dry Matter Content Ratio (DR) %	80
Date Sampled	02/10/2005	Leachant Volume (1) (L2) Litre	0.307
Date Received	30/09/2005	Leachant Volume (2) (L8) Litre	1.400
Particle Size (<4mm)	>95%	Eluate Volume (1) (VE1) Litre	0.292
Method of size reduction	N/A	Eluate Volume (2) (VE2) Litre	1.450
Non-crushable matter	N/A		

Eluate Analysis	Concentration in Eluate		Amount Leached		Landfill Waste Acceptance Criteria		
Liquid : Waste Ratio	2:1	8:1	2:1	10:1	BS EN 12457-3 Limit Values (mg/kg) at L:S 10:1		
Sample Number	733879	733880					
pH	7.96	8.007					
Temperature °C	20	20					
Conductivity uS/cm	543	132.3					
	mg/l	mg/l	mg/kg	mg/kg	*Inert Waste*	*Stable Non-Reactive hazardous waste in non-hazardous*	*Hazardous Waste*
Arsenic as As	<0.05	<0.05	<0.10	**<0.5**	*0.5*	*2*	*25*
Barium as Ba	0.03	0.04	0.06	**0.4**	*20*	*100*	*300*
Cadmium as Cd	0.0025	<0.0020	0.0050	**<0.021**	*0.04*	*1*	*5*
Chromium as Cr	<0.01	<0.01	<0.02	**<0.1**	*0.5*	*10*	*70*
Copper as Cu	0.01	<0.01	0.02	**<0.1**	*2*	*50*	*100*
Mercury as Hg	<0.0010	<0.0010	<0.0020	**<0.010**	*0.01*	*0.2*	*2*
Molybdenum as Mo	0.01	0.02	0.02	**0.2**	*0.5*	*10*	*30*
Nickel as Ni	<0.02	<0.02	<0.04	**<0.2**	*0.4*	*10*	*40*
Lead as Pb	<0.05	<0.05	<0.10	**<0.5**	*0.5*	*10*	*50*
Antimony as Sb	<0.0040	<0.0040	<0.0080	**<0.040**	*0.06*	*0.7*	*5*
Selenium as Se	<0.0020	<0.0020	<0.0040	**<0.020**	*0.1*	*0.5*	*7*
Zinc as Zn	0.03	0.01	0.06	**0.1**	*4*	*50*	*200*
Chloride as Cl	6.0	<2.0	12.0	**<27**	*800*	*15000*	*25000*
Fluoride as F	0.25	0.23	0.50	**2.3**	*10*	*150*	*500*
Sulphate as SO_4	250	<24	500	**<617**	*1000*	*20000*	*50000*
Total Dissolved Solids (TDS)	530	98	1060	**1701**	*4000*	*60000*	*100000*
Phenol Index	0.50	<0.10	1.00	**<1.7**	*1*		
Dissolved Organic Carbon (DOC)	5.8	2.9	11.6	**34**	*500*	*800*	*1000*
Waste Analysis							
Total Organic Carbon w/w %				**1.5**	*3%*	*5%*	*6%*
Loss on Ignition %							*10%*
BTEX mg/kg				**<0.10**	*6*		
PCBs (7 congeners) mg/kg				**<0.10**	*1*		
Mineral Oil (C10 - C40) mg/kg				**73**	*500*		
PAHs mg/kg				**7**	*100*		
pH				**8.0**		*>6*	
Acid Neutralisation Capacity (pH4) mol/kg						*To be evaluated*	*To be evaluated*
Acid Neutralisation Capacity (pH7) mol/kg						*To be evaluated*	*To be evaluated*

Disclaimer : The Landfill Waste Acceptance Criteria limits in this report are provided for guidance only. STL does not take responsibility for any errors or omissions. Data is correct as of 01/05/2005

Additional Eluate Analysis	Concentration in Eluate		Amount Leached	
	2:1	8:1	2:1	10:1
	mg/l	mg/l	mg/kg	mg/kg

Additional Waste Analysis	Units	Result
Electrical Conductivity*	æS/cm	410

Sample Comments	
733873	
733879	
733880	

Waste Acceptance Criteria Testing BS EN 12457 Part 3, 2 Stage Process Issue 1

SEVERN TRENT ENVIRONMENTAL LEADERSHIP STL

Sample Details	
Sample Number	733874
Job Number	C6224
Sample ID	Sample 2
Site	Chadwich Lane Quarry
Date Sampled	02/10/2005
Date Received	30/09/2005
Particle Size (<4mm)	>95%
Method of size reduction	N/A
Non-crushable matter	N/A

Test Values	
Mass of Raw Test Portion (MW) kg	0.199
Mass of Dried Test Portion (MD) kg	0.175
Moisture Content Ratio (MC) %	13.10
Dry Matter Content Ratio (DR) %	88
Leachant Volume (1) (L2) Litre	0.327
Leachant Volume (2) (L8) Litre	1.400
Eluate Volume (1) (VE1) Litre	0.308
Eluate Volume (2) (VE2) Litre	1.315

Eluate Analysis	Concentration in Eluate		Amount Leached		Landfill Waste Acceptance Criteria		
					BS EN 12457-3 Limit Values (mg/kg) at L:S 10:1		
Liquid : Waste Ratio	2:1	8:1	2:1	10:1			
Sample Number	733881	733882					
pH	8.09	8.176					
Temperature °C	20	19					
Conductivity uS/cm	466	88.8					
	mg/l	mg/l	mg/kg	mg/kg	*Inert Waste*	*Stable Non-Reactive hazardous waste in non-hazardous*	*Hazardous Waste*
Arsenic as As	<0.05	<0.05	<0.10	**<0.5**	*0.5*	*2*	*25*
Barium as Ba	0.01	0.02	0.02	**0.2**	*20*	*100*	*300*
Cadmium as Cd	<0.0020	<0.0020	<0.0040	**<0.020**	*0.04*	*1*	*5*
Chromium as Cr	<0.01	<0.01	<0.02	**<0.1**	*0.5*	*10*	*70*
Copper as Cu	<0.01	<0.01	<0.02	**<0.1**	*2*	*50*	*100*
Mercury as Hg	<0.0010	<0.0010	<0.0020	**<0.010**	*0.01*	*0.2*	*2*
Molybdenum as Mo	0.01	<0.01	0.02	**<0.1**	*0.5*	*10*	*30*
Nickel as Ni	<0.02	<0.02	<0.04	**<0.2**	*0.4*	*10*	*40*
Lead as Pb	<0.05	<0.05	<0.10	**<0.5**	*0.5*	*10*	*50*
Antimony as Sb	<0.0040	<0.0040	<0.0080	**<0.040**	*0.06*	*0.7*	*5*
Selenium as Se	<0.0020	<0.0020	<0.0040	**<0.020**	*0.1*	*0.5*	*7*
Zinc as Zn	0.02	<0.01	0.04	**<0.1**	*4*	*50*	*200*
Chloride as Cl	9.8	<2.0	19.6	**<34**	*800*	*15000*	*25000*
Fluoride as F	3.0	0.47	6.0	**9**	*10*	*150*	*500*
Sulphate as SO_4	180	<24	360	**<515**	*1000*	*20000*	*50000*
Total Dissolved Solids (TDS)	480	140	960	**1998**	*4000*	*60000*	*100000*
Phenol Index	<0.10	<0.10	<0.20	**<1.0**	*1*		
Dissolved Organic Carbon (DOC)	2.2	<2.0	4.4	**<20**	*500*	*800*	*1000*
Waste Analysis							
Total Organic Carbon w/w %				**0.57**	*3%*	*5%*	*6%*
Loss on Ignition %							*10%*
BTEX mg/kg				**<0.10**	*6*		
PCBs (7 congeners) mg/kg				**<0.10**	*1*		
Mineral Oil (C10 - C40) mg/kg				**<50**	*500*		
PAHs mg/kg				**<2**	*100*		
pH				**7.9**		*>6*	
Acid Neutralisation Capacity (pH4) mol/kg						*To be evaluated*	*To be evaluated*
Acid Neutralisation Capacity (pH7) mol/kg						*To be evaluated*	*To be evaluated*

Disclaimer : The Landfill Waste Acceptance Criteria limits in this report are provided for guidance only. STL does not take responsibility for any errors or omissions. Data is correct as of 01/05/2005

Additional Eluate Analysis	Concentration in Eluate		Amount Leached	
	2:1	8:1	2:1	10:1
	mg/l	mg/l	mg/kg	mg/kg

Additional Waste Analysis	Units	Result
Electrical Conductivity*	æS/cm	340

Sample Comments	
733874	
733881	
733882	

Waste Acceptance Criteria Testing BS EN 12457 Part 3, 2 Stage Process Issue 1

SEVERN TRENT ENVIRONMENTAL LEADERSHIP STL

Sample Details		Test Values	
Sample Number	733875	Mass of Raw Test Portion (MW) kg	0.213
Job Number	C6224	Mass of Dried Test Portion (MD) kg	0.175
Sample ID	Sample 3	Moisture Content Ratio (MC) %	21.81
Site	Chadwich Lane Quarry	Dry Matter Content Ratio (DR) %	82
Date Sampled	02/10/2005	Leachant Volume (1) (L2) Litre	0.312
Date Received	30/09/2005	Leachant Volume (2) (L8) Litre	1.400
Particle Size (<4mm)	>95%	Eluate Volume (1) (VE1) Litre	0300
Method of size reduction	N/A	Eluate Volume (2) (VE2) Litre	1.376
Non-crushable matter	N/A		

Eluate Analysis	Concentration in Eluate		Amount Leached		Landfill Waste Acceptance Criteria		
Liquid : Waste Ratio	2:1	8:1	2:1	10:1	BS EN 12457-3 Limit Values (mg/kg) at L:S 10:1		
Sample Number	733883	733884					
pH	8.474	8.221					
Temperature °C	19	20					
Conductivity uS/cm	274	87.3					
	mg/l	mg/l	mg/kg	mg/kg	*Inert Waste*	*Stable Non-Reactive hazardous waste in non-hazardous*	*Hazardous Waste*
Arsenic as As	<0.05	<0.05	<0.10	**<0.5**	*0.5*	*2*	*25*
Barium as Ba	0.01	0.01	0.02	**0.1**	*20*	*100*	*300*
Cadmium as Cd	<0.0020	<0.0020	<0.0040	**<0.020**	*0.04*	*1*	*5*
Chromium as Cr	<0.01	<0.01	<0.02	**<0.1**	*0.5*	*10*	*70*
Copper as Cu	<0.01	<0.01	<0.02	**<0.1**	*2*	*50*	*100*
Mercury as Hg	<0.0010	<0.0010	<0.0020	**<0.010**	*0.01*	*0.2*	*2*
Molybdenum as Mo	0.01	0.01	0.02	**0.1**	*0.5*	*10*	*30*
Nickel as Ni	<0.02	<0.02	<0.04	**<0.2**	*0.4*	*10*	*40*
Lead as Pb	<0.05	<0.05	<0.10	**<0.5**	*0.5*	*10*	*50*
Antimony as Sb	<0.0040	<0.0040	<0.0080	**<0.040**	*0.06*	*0.7*	*5*
Selenium as Se	<0.0020	<0.0020	<0.0040	**<0.020**	*0.1*	*0.5*	*7*
Zinc as Zn	<0.01	<0.01	<0.02	**<0.1**	*4*	*50*	*200*
Chloride as Cl	<0.01	<0.01	<0.02	**<20**	*800*	*15000*	*25000*
Fluoride as F	0.36	0.30	0.72	**3.1**	*10*	*150*	*500*
Sulphate as SO_4	<24	<24	<48	**<240**	*1000*	*20000*	*50000*
Total Dissolved Solids (TDS)	78	82	156	**814**	*4000*	*60000*	*100000*
Phenol Index	<0.10	<0.10	<0.20	**<1.0**	*1*		
Dissolved Organic Carbon (DOC)	<5.0	<5.0	<10.0	**<50**	*500*	*800*	*1000*
Waste Analysis							
Total Organic Carbon w/w %				**2.8**	*3%*	*5%*	*6%*
Loss on Ignition %							*10%*
BTEX mg/kg				**<0.10**	*6*		
PCBs (7 congeners) mg/kg				**<0.10**	*1*		
Mineral Oil (C10 - C40) mg/kg				**<50**	*500*		
PAHs mg/kg				**78**	*100*		
pH				**8.0**		*>6*	
Acid Neutralisation Capacity (pH4) mol/kg						*To be evaluated*	*To be evaluated*
Acid Neutralisation Capacity (pH7) mol/kg						*To be evaluated*	*To be evaluated*

Disclaimer : The Landfill Waste Acceptance Criteria limits in this report are provided for guidance only. STL does not take responsibility for any errors or omissions. Data is correct as of 01/05/2005

Additional Eluate Analysis	Concentration in Eluate		Amount Leached	
	2:1	8:1	2:1	10:1
	mg/l	mg/l	mg/kg	mg/kg

Additional Waste Analysis	Units	Result
Electrical Conductivity*	æS/cm	330

Sample Comments	
733875	
733883	
733884	

Waste Acceptance Criteria Testing BS EN 12457 Part 3, 2 Stage Process Issue 1

SEVERN TRENT ENVIRONMENTAL LEADERSHIP STL

Sample Details	
Sample Number	733876
Job Number	C6224
Sample ID	Sample 4
Site	Chadwich Lane Quarry
Date Sampled	02/10/2005
Date Received	30/09/2005
Particle Size (<4mm)	>95%
Method of size reduction	N/A
Non-crushable matter	N/A

Test Values	
Mass of Raw Test Portion (MW) kg	0.201
Mass of Dried Test Portion (MD) kg	0.175
Moisture Content Ratio (MC) %	14.30
Dry Matter Content Ratio (DR) %	87
Leachant Volume (1) (L2) Litre	0.325
Leachant Volume (2) (L8) Litre	1.400
Eluate Volume (1) (VE1) Litre	0.310
Eluate Volume (2) (VE2) Litre	1.362

Eluate Analysis	Concentration in Eluate		Amount Leached		*Landfill Waste Acceptance Criteria*		
Liquid : Waste Ratio	2:1	8:1	2:1	10:1	*BS EN 12457-3 Limit Values (mg/kg) at L:S 10:1*		
Sample Number	733885	733886					
pH	8.44	8.389					
Temperature °C	19	20					
Conductivity uS/cm	185.8	64.9					
	mg/l	mg/l	mg/kg	mg/kg	*Inert Waste*	*Stable Non-Reactive hazardous waste in non-hazardous*	*Hazardous Waste*
Arsenic as As	<0.05	<0.05	<0.10	**<0.5**	*0.5*	*2*	*25*
Barium as Ba	<0.01	<0.01	<0.02	**<0.1**	*20*	*100*	*300*
Cadmium as Cd	<0.0020	<0.0020	<0.0040	**<0.020**	*0.04*	*1*	*5*
Chromium as Cr	<0.01	<0.01	<0.02	**<0.1**	*0.5*	*10*	*70*
Copper as Cu	<0.01	<0.01	<0.02	**<0.1**	*2*	*50*	*100*
Mercury as Hg	<0.0010	<0.0010	<0.0020	**<0.010**	*0.01*	*0.2*	*2*
Molybdenum as Mo	0.03	<0.01	0.06	**<0.1**	*0.5*	*10*	*30*
Nickel as Ni	<0.02	<0.02	<0.04	**<0.2**	*0.4*	*10*	*40*
Lead as Pb	<0.05	<0.05	<0.10	**<0.5**	*0.5*	*10*	*50*
Antimony as Sb	<0.0040	<0.0040	<0.0080	**<0.040**	*0.06*	*0.7*	*5*
Selenium as Se	<0.0020	<0.0020	<0.0040	**<0.020**	*0.1*	*0.5*	*7*
Zinc as Zn	0.02	<0.01	0.04	**<0.1**	*4*	*50*	*200*
Chloride as Cl	4.3	<2.0	8.6	**<24**	*800*	*15000*	*25000*
Fluoride as F	0.32	0.29	0.64	**3.0**	*10*	*150*	*500*
Sulphate as SO_4	35	<24	70	**<259**	*1000*	*20000*	*50000*
Total Dissolved Solids (TDS)	88	38	176	**469**	*4000*	*60000*	*100000*
Phenol Index	<0.10	<0.10	<0.20	**<1.0**	*1*		
Dissolved Organic Carbon (DOC)	3.7	<2.0	7.4	**<23**	*500*	*800*	*1000*
Waste Analysis							
Total Organic Carbon w/w %				**1.0**	*3%*	*5%*	*6%*
Loss on Ignition %							*10%*
BTEX mg/kg				**<0.10**	*6*		
PCBs (7 congeners) mg/kg				**<0.10**	*1*		
Mineral Oil (C10 - C40) mg/kg				**<50**	*500*		
PAHs mg/kg				**<2**	*100*		
pH				**7.8**		*>6*	
Acid Neutralisation Capacity (pH4) mol/kg						*To be evaluated*	*To be evaluated*
Acid Neutralisation Capacity (pH7) mol/kg						*To be evaluated*	*To be evaluated*

Disclaimer : The Landfill Waste Acceptance Criteria limits in this report are provided for guidance only. STL does not take responsibility for any errors or omissions. Data is correct as of 01/05/2005

Additional Eluate Analysis	Concentration in Eluate		Amount Leached	
	2:1	8:1	2:1	10:1
	mg/l	mg/l	mg/kg	mg/kg

Additional Waste Analysis	Units	Result
Electrical Conductivity*	æS/cm	820

Sample Comments	
733876	
733885	
733886	

Waste Acceptance Criteria Testing BS EN 12457 Part 3, 2 Stage Process Issue 1

SEVERN TRENT ENVIRONMENTAL LEADERSHIP STL

Sample Details	
Sample Number	733877
Job Number	C6224
Sample ID	Sample 5
Site	Chadwich Lane Quarry
Date Sampled	02/10/2005
Date Received	30/09/2005
Particle Size (<4mm)	>95%
Method of size reduction	N/A
Non-crushable matter	N/A

Test Values	
Mass of Raw Test Portion (MW) kg	0.192
Mass of Dried Test Portion (MD) kg	0.175
Moisture Content Ratio (MC) %	10.45
Dry Matter Content Ratio (DR) %	91
Leachant Volume (1) (L2) Litre	0.332
Leachant Volume (2) (L8) Litre	1.400
Eluate Volume (1) (VE1) Litre	0.311
Eluate Volume (2) (VE2) Litre	1.348

Eluate Analysis	Concentration in Eluate		Amount Leached		Landfill Waste Acceptance Criteria		
					BS EN 12457-3 Limit Values (mg/kg) at L:S 10:1		
Liquid : Waste Ratio	2:1	8:1	2:1	10:1			
Sample Number	733887	733888					
pH	8.17	8.109					
Temperature °C	20	20					
Conductivity uS/cm	568	117.5					
	mg/l	mg/l	mg/kg	mg/kg	*Inert Waste*	*Stable Non-Reactive hazardous waste in non-hazardous*	*Hazardous Waste*
Arsenic as As	<0.05	<0.05	<0.10	**<0.5**	*0.5*	*2*	*25*
Barium as Ba	0.03	0.04	0.06	**0.4**	*20*	*100*	*300*
Cadmium as Cd	0.0020	<0.0020	0.0040	**<0.020**	*0.04*	*1*	*5*
Chromium as Cr	<0.01	<0.01	<0.02	**<0.1**	*0.5*	*10*	*70*
Copper as Cu	<0.01	<0.01	<0.02	**<0.1**	*2*	*50*	*100*
Mercury as Hg	<0.0010	<0.0010	<0.0020	**<0.010**	*0.01*	*0.2*	*2*
Molybdenum as Mo	<0.01	<0.01	<0.02	**<0.1**	*0.5*	*10*	*30*
Nickel as Ni	<0.02	<0.02	<0.04	**<0.2**	*0.4*	*10*	*40*
Lead as Pb	<0.05	<0.05	<0.10	**<0.5**	*0.5*	*10*	*50*
Antimony as Sb	<0.0040	<0.0040	<0.0080	**<0.040**	*0.06*	*0.7*	*5*
Selenium as Se	<0.0020	<0.0020	<0.0040	**<0.020**	*0.1*	*0.5*	*7*
Zinc as Zn	0.03	0.02	0.06	**0.2**	*4*	*50*	*200*
Chloride as Cl	7.8	<2.0	15.6	**<30**	*800*	*15000*	*25000*
Fluoride as F	0.30	0.24	0.60	**2.5**	*10*	*150*	*500*
Sulphate as SO_4	260	<24	520	**<660**	*1000*	*20000*	*50000*
Total Dissolved Solids (TDS)	470	90	940	**1576**	*4000*	*60000*	*100000*
Phenol Index	<0.10	<0.10	<0.20	**<1.0**	*1*		
Dissolved Organic Carbon (DOC)	3.3	<2.0	6.6	**<22**	*500*	*800*	*1000*
Waste Analysis							
Total Organic Carbon w/w %				**1.5**	*3%*	*5%*	*6%*
Loss on Ignition %							*10%*
BTEX mg/kg				**<0.10**	*6*		
PCBs (7 congeners) mg/kg				**<0.10**	*1*		
Mineral Oil (C10 - C40) mg/kg				**<50**	*500*		
PAHs mg/kg				**2**	*100*		
pH				**8.0**		*>6*	
Acid Neutralisation Capacity (pH4) mol/kg						*To be evaluated*	*To be evaluated*
Acid Neutralisation Capacity (pH7) mol/kg						*To be evaluated*	*To be evaluated*

Disclaimer : The Landfill Waste Acceptance Criteria limits in this report are provided for guidance only. STL does not take responsibility for any errors or omissions. Data is correct as of 01/05/2005

Additional Eluate Analysis	Concentration in Eluate		Amount Leached	
	2:1	8:1	2:1	10:1
	mg/l	mg/l	mg/kg	mg/kg

Additional Waste Analysis	Units	Result
Electrical Conductivity*	æS/cm	870

Sample Comments	
733877	
733887	
733888	

Waste Acceptance Criteria Testing BS EN 12457 Part 3, 2 Stage Process Issue 1

SEVERN TRENT ENVIRONMENTAL LEADERSHIP STL

Sample Details	
Sample Number	733878
Job Number	C6224
Sample ID	Sample 6
Site	Chadwich Lane Quarry
Date Sampled	02/10/2005
Date Received	30/09/2005
Particle Size (<4mm)	>95%
Method of size reduction	N/A
Non-crushable matter	N/A

Test Values	
Mass of Raw Test Portion (MW) kg	0.201
Mass of Dried Test Portion (MD) kg	0.175
Moisture Content Ratio (MC) %	14.93
Dry Matter Content Ratio (DR) %	87
Leachant Volume (1) (L2) Litre	0.324
Leachant Volume (2) (L8) Litre	1.400
Eluate Volume (1) (VE1) Litre	0.312
Eluate Volume (2) (VE2) Litre	1.378

Eluate Analysis	Concentration in Eluate		Amount Leached		Landfill Waste Acceptance Criteria		
					BS EN 12457-3 Limit Values (mg/kg) at L:S 10:1		
Liquid : Waste Ratio	2:1	8:1	2:1	10:1			
Sample Number	733889	733890					
pH	8.10	8.129					
Temperature °C	20	20					
Conductivity uS/cm	540	117.8					
	mg/l	mg/l	mg/kg	mg/kg	*Inert Waste*	*Stable Non-Reactive hazardous waste in non-hazardous*	*Hazardous Waste*
Arsenic as As	<0.05	<0.05	<0.10	**<0.5**	*0.5*	*2*	*25*
Barium as Ba	0.02	<0.01	0.04	**<0.1**	*20*	*100*	*300*
Cadmium as Cd	<0.0020	<0.0020	<0.0040	**<0.020**	*0.04*	*1*	*5*
Chromium as Cr	<0.01	<0.01	<0.02	**<0.1**	*0.5*	*10*	*70*
Copper as Cu	<0.01	<0.01	<0.02	**<0.1**	*2*	*50*	*100*
Mercury as Hg	<0.0010	<0.0010	<0.0020	**<0.010**	*0.01*	*0.2*	*2*
Molybdenum as Mo	<0.01	<0.01	<0.02	**<0.1**	*0.5*	*10*	*30*
Nickel as Ni	<0.02	<0.02	<0.04	**<0.2**	*0.4*	*10*	*40*
Lead as Pb	<0.05	<0.05	<0.10	**<0.5**	*0.5*	*10*	*50*
Antimony as Sb	<0.0040	<0.0040	<0.0080	**<0.040**	*0.06*	*0.7*	*5*
Selenium as Se	<0.0020	<0.0020	<0.0040	**<0.020**	*0.1*	*0.5*	*7*
Zinc as Zn	0.03	0.01	0.06	**0.1**	*4*	*50*	*200*
Chloride as Cl	7.6	<2.0	15.2	**<30**	*800*	*15000*	*25000*
Fluoride as F	0.21	<0.20	0.42	**<2.0**	*10*	*150*	*500*
Sulphate as SO_4	230	<24	460	**<607**	*1000*	*20000*	*50000*
Total Dissolved Solids (TDS)	410	<25	820	**<935**	*4000*	*60000*	*100000*
Phenol Index	<0.10	<0.10	<0.20	**<1.0**	*1*		
Dissolved Organic Carbon (DOC)	6.3	3.7	12.6	**42**	*500*	*800*	*1000*
Waste Analysis							
Total Organic Carbon w/w %				**3.6**	*3%*	*5%*	*6%*
Loss on Ignition %							*10%*
BTEX mg/kg				**<0.10**	*6*		
PCBs (7 congeners) mg/kg				**<0.10**	*1*		
Mineral Oil (C10 - C40) mg/kg				**92**	*500*		
PAHs mg/kg				**2**	*100*		
pH				**9.3**		*>6*	
Acid Neutralisation Capacity (pH4) mol/kg						*To be evaluated*	*To be evaluated*
Acid Neutralisation Capacity (pH7) mol/kg						*To be evaluated*	*To be evaluated*

Disclaimer : The Landfill Waste Acceptance Criteria limits in this report are provided for guidance only. STL does not take responsibility for any errors or omissions. Data is correct as of 01/05/2005

Additional Eluate Analysis	Concentration in Eluate		Amount Leached	
	2:1	8:1	2:1	10:1
	mg/l	mg/l	mg/kg	mg/kg

Additional Waste Analysis	Units	Result
Electrical Conductivity*	æS/cm	450

Sample Comments	
733878	
733889	
733890	

Waste Acceptance Criteria Testing BS EN 12457 Part 3, 2 Stage Process Issue 1

Sample Details		Test Values	
Sample Number	810127	Mass of Raw Test Portion (MW) kg	0.180
Job Number	361241	Mass of Dried Test Portion (MD) kg	0.175
Sample ID	WIF 1	Moisture Content Ratio (MC) %	2.95
Site	CHADWICH LANE	Dry Matter Content Ratio (DR) %	97
Date Sampled	23/11/2007	Leachant Volume (1) (L2) Litre	0.345
Date Received	04/12/2007	Leachant Volume (2) (L8) Litre	1.400
Particle Size (<4mm)	<=95%	Eluate Volume (1) (VE1) Litre	0.282
Method of size reduction	Jaw Crusher.	Eluate Volume (2) (VE2) Litre	1.351
Non-crushable matter	N/A		

Eluate Analysis	Concentration in Eluate		Amount Leached		Landfill Waste Acceptance Criteria		
Liquid : Waste Ratio	2:1	8:1	2:1	10:1	BS EN 12457-3 Limit Values (mg/kg) at L:S 10:1		
Sample Number	510128	510129					
pH	8.19	7.53					
Temperature °C	25	25					
Conductivity uS/cm	291	54.1					
	mg/l	mg/l	mg/kg	mg/kg	*Inert Waste*	*Stable Non-Reactive hazardous waste in non-hazardous*	*Hazardous Waste*
Arsenic as As	<0.010	<0.010	<0.020	**<0.10**	*0.5*	*2*	*25*
Barium as Ba	<0.010	0.038	<0.020	**<0.33**	*20*	*100*	*300*
Cadmium as Cd	<0.0020	<0.0020	<0.0040	**<0.020**	*0.04*	*1*	*5*
Chromium as Cr	<0.010	<0.010	<0.020	**<0.10**	*0.5*	*10*	*70*
Copper as Cu	<0.010	<0.010	<0.020	**<0.10**	*2*	*50*	*100*
Mercury as Hg	<0.0010	<0.0010	<0.0020	**<0.010**	*0.01*	*0.2*	*2*
Molybdenum as Mo	<0.010	0.021	<0.020	**<0.19**	*0.5*	*10*	*30*
Nickel as Ni	<0.020	<0.020	<0.040	**<0.20**	*0.4*	*10*	*40*
Lead as Pb	<0.050	<0.050	<0.100	**<0.50**	*0.5*	*10*	*50*
Antimony as Sb	<0.0040	<0.0040	<0.0080	**<0.040**	*0.06*	*0.7*	*5*
Selenium as Se	<0.0020	<0.0020	<0.0040	**<0.020**	*0.1*	*0.5*	*7*
Zinc as Zn	<0.010	<0.010	<0.020	**<0.10**	*4*	*50*	*200*
Chloride as Cl	16	5.3	32	**70**	*800*	*15000*	*25000*
Fluoride as F	0.92	0.26	1.84	**3.7**	*10*	*150*	*500*
Sulphate as SO_4	68	<24	136	**<311**	*1000*	*20000*	*50000*
Total Dissolved Solids (TDS)	240	<200	480	**<2064**	*4000*	*60000*	*100000*
Phenol Index	<0.050	<0.050	<0.100	**<0.50**	*1*		
Dissolved Organic Carbon (DOC)	<5.0	<5.0	<10.0	**<50**	*500*	*800*	*1000*
Waste Analysis							
Total Organic Carbon w/w %				**<0.10**	*3%*	*5%*	*6%*
Loss on Ignition %				**6.4**			*10%*
BTEX mg/kg				**<0.10**	*6*		
PCBs (7 congeners) mg/kg				**<0.10**	*1*		
Mineral Oil (C10 - C40) mg/kg				**<50**	*500*		
PAHs mg/kg				**<2.0**	*100*		
pH				**8.5**		*>6*	
Acid Neutralisation Capacity (pH4) mol/kg				**0.017**		*To be evaluated*	*To be evaluated*
Acid Neutralisation Capacity (pH7) mol/kg				**0.0020**		*To be evaluated*	*To be evaluated*

Disclaimer : The Landfill Waste Acceptance Criteria limits in this report are provided for guidance only. STL does not take responsibility for any errors or omissions. Data is correct as of 01/05/2005

Additional Eluate Analysis	Concentration in Eluate		Amount Leached	
	2:1	8:1	2:1	10:1
	mg/l	mg/l	mg/kg	**mg/kg**

Additional Waste Analysis	Units	Result
Conductivity @ 20 C	uS/cm	**230**
Moisture at 105c	%	**2.9**

Sample Comments	
510127	Stainless steel sieve used.
510128	
510129	

Waste Acceptance Criteria Testing BS EN 12457 Part 3, 2 Stage Process Issue 1

Sample Details		Test Values	
Sample Number	991268	Mass of Raw Test Portion (MW) kg	0.181
Job Number	407942	Mass of Dried Test Portion (MD) kg	0.176
Sample ID	WIF 6	Moisture Content Ratio (MC) %	1.91
Site	LHL - WAC Analysis: gm sprigg	Dry Matter Content Ratio (DR) %	97.4
Date Sampled	13/05/2008	Leachant Volume (1) (L2) Litre	0.347
Date Received	13/05/2008	Leachant Volume (2) (L8) Litre	1.389
Particle Size (<4mm)	<=95%	Eluate Volume (1) (VE1) Litre	0.279
Method of size reduction	Jaw Crusher.	Eluate Volume (2) (VE2) Litre	1.420
Non-crushable matter	N/A		

Eluate Analysis	Concentration in Eluate		Amount Leached		*Landfill Waste Acceptance Criteria*		
Liquid : Waste Ratio	2:1	8:1	2:1	10:1	*BS EN 12457-3 Limit Values (mg/kg) at L:S 10:1*		
Sample Number	991269	991270					
pH	8.24	8.19					
Temperature °C	19	20					
Conductivity uS/cm	4789	245					
	mg/l	mg/l	mg/kg	mg/kg	*Inert Waste*	*Stable Non-Reactive hazardous waste in non-hazardous*	*Hazardous Waste*
Arsenic as As	<0.0050	<0.0050	<0.0100	**<0.050**	*0.5*	*2*	*25*
Barium as Ba	0.005	0.010	0.100	**0.20**	*20*	*100*	*300*
Cadmium as Cd	<0.00010	<0.00010	<0.00020	**<0.0010**	*0.04*	*1*	*5*
Chromium as Cr	0.016	0.0032	0.030	**0.06**	*0.5*	*10*	*70*
Copper as Cu	<0.010	<0.010	<0.020	**<0.10**	*2*	*50*	*100*
Mercury as Hg	<0.00050	<0.00050	<0.00100	**<0.0050**	*0.01*	*0.2*	*2*
Molybdenum as Mo	0.023	<0.0020	0.046	**<0.05**	*0.5*	*10*	*30*
Nickel as Ni	<0.020	<0.020	<0.040	**<0.20**	*0.4*	*10*	*40*
Lead as Pb	<0.010	<0.010	<0.020	**<0.10**	*0.5*	*10*	*50*
Antimony as Sb	<0.0060	<0.0060	<0.0120	**<0.060**	*0.06*	*0.7*	*5*
Selenium as Se	<0.010	<0.010	<0.020	**<0.10**	*0.1*	*0.5*	*7*
Zinc as Zn	<0.025	<0.025	<0.050	**<0.25**	*4*	*50*	*200*
Chloride as Cl	10	20	84	**120**	*800*	*15000*	*25000*
Fluoride as F	0.65	<0.20	1.30	**<2.7**	*10*	*150*	*500*
Sulphate as SO_4	64	<24	128	**216**	*1000*	*20000*	*50000*
Total Dissolved Solids (TDS)	50	<100	250	**<500**	*4000*	*60000*	*100000*
Phenol Index	<0.050	<0.050	<0.100	**<0.50**	*1*		
Dissolved Organic Carbon (DOC)	20	<5.0	40	**<80**	*500*	*800*	*1000*
Waste Analysis							
Total Organic Carbon w/w %				**1.2**	*3%*	*5%*	*6%*
Loss on Ignition %							*10%*
BTEX mg/kg				**<0.10**	*6*		
PCBs (7 congeners) mg/kg				**<0.10**	*1*		
Mineral Oil (C10 - C40) mg/kg				**37**	*500*		
PAHs mg/kg				**15**	*100*		
pH				**7.9**		*>6*	
Acid Neutralisation Capacity (pH4) mol/kg						*To be evaluated*	*To be evaluated*
Acid Neutralisation Capacity (pH7) mol/kg						*To be evaluated*	*To be evaluated*

Disclaimer : The Landfill Waste Acceptance Criteria limits in this report are provided for guidance only. STL does not take responsibility for any errors or omissions. Data is correct as of 01/05/2005

Additional Eluate Analysis	Concentration in Eluate		Amount Leached	
	2:1	8:1	2:1	10:1
	mg/l	mg/l	mg/kg	**mg/kg**

Additional Waste Analysis	Units	Result
Conductivity @ 20 C	uS/cm	**270**
Moisture at 105c	%	**1.9**

Sample Comments	
899551	Stainless steel sieve used.
899552	
899553	