

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
sTPH in water leach						Base II Duplicate II %RPD		
Date extracted	-			5/8/2010	[NT]	[NT]	LCS-W1	5/8/2010
Date analysed	-			5/8/2010	[NT]	[NT]	LCS-W1	5/8/2010
TPH C ₁₀ - C ₁₄	µg/L	50	GC.3	<50	[NT]	[NT]	LCS-W1	83%
TPH C ₁₅ - C ₂₈	µg/L	100	GC.3	<100	[NT]	[NT]	LCS-W1	117%
TPH C ₂₉ - C ₃₆	µg/L	100	GC.3	<100	[NT]	[NT]	LCS-W1	92%
Surrogate o-Terphenyl	%		GC.3	128	[NT]	[NT]	LCS-W1	117%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in water leach						Base II Duplicate II %RPD		
Date extracted	-			05/08/2010	[NT]	[NT]	LCS-W1	05/08/2010
Date analysed	-			06/08/2010	[NT]	[NT]	LCS-W1	06/08/2010
Naphthalene in ASLP	mg/L	0.001	GC.12 ASLP	<0.001	[NT]	[NT]	LCS-W1	94%
Acenaphthylene in ASLP	mg/L	0.001	GC.12 ASLP	<0.001	[NT]	[NT]	[NR]	[NR]
Acenaphthene in ASLP	mg/L	0.001	GC.12 ASLP	<0.001	[NT]	[NT]	[NR]	[NR]
Fluorene in ASLP	mg/L	0.001	GC.12 ASLP	<0.001	[NT]	[NT]	LCS-W1	109%
Phenanthrene in ASLP	mg/L	0.001	GC.12 ASLP	<0.001	[NT]	[NT]	LCS-W1	101%
Anthracene in ASLP	mg/L	0.001	GC.12 ASLP	<0.001	[NT]	[NT]	[NR]	[NR]
Fluoranthene in ASLP	mg/L	0.001	GC.12 ASLP	<0.001	[NT]	[NT]	LCS-W1	96%
Pyrene in ASLP	mg/L	0.001	GC.12 ASLP	<0.001	[NT]	[NT]	LCS-W1	106%
Benzo(a)anthracene in ASLP	mg/L	0.001	GC.12 ASLP	<0.001	[NT]	[NT]	[NR]	[NR]
Chrysene in ASLP	mg/L	0.001	GC.12 ASLP	<0.001	[NT]	[NT]	LCS-W1	104%
Benzo(b+k)fluoranthene in ASLP	mg/L	0.002	GC.12 ASLP	<0.002	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene in ASLP	mg/L	0.001	GC.12 ASLP	<0.001	[NT]	[NT]	LCS-W1	113%
Indeno(1,2,3-c,d)pyrene - ASLP	mg/L	0.001	GC.12 ASLP	<0.001	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene in ASLP	mg/L	0.001	GC.12 ASLP	<0.001	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene in ASLP	mg/L	0.001	GC.12 ASLP	<0.001	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d ₁₄	%		GC.12	116	[NT]	[NT]	LCS-W1	99%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Speciated Phenols in water						Base II Duplicate II %RPD		
Date extracted	-			05/08/2010	[NT]	[NT]	LCS-W1	05/08/2010
Date analysed	-			05/08/2010	[NT]	[NT]	LCS-W1	05/08/2010
Phenol	µg/L	10	GC.12	<10	[NT]	[NT]	LCS-W1	34%
2-Chlorophenol	µg/L	10	GC.12	<10	[NT]	[NT]	LCS-W1	94%
2-Methylphenol	µg/L	10	GC.12	<10	[NT]	[NT]	[NR]	[NR]
3/4-Methylphenol	µg/L	20	GC.12	<20	[NT]	[NT]	[NR]	[NR]
2-Nitrophenol	µg/L	10	GC.12	<10	[NT]	[NT]	[NR]	[NR]
2,4-Dimethylphenol	µg/L	10	GC.12	<10	[NT]	[NT]	[NR]	[NR]
2,4-Dichlorophenol	µg/L	10	GC.12	<10	[NT]	[NT]	[NR]	[NR]
2,6-Dichlorophenol	µg/L	10	GC.12	<10	[NT]	[NT]	[NR]	[NR]
2,4,5-Trichlorophenol	µg/L	10	GC.12	<10	[NT]	[NT]	[NR]	[NR]
2,4,6-Trichlorophenol	µg/L	10	GC.12	<10	[NT]	[NT]	[NR]	[NR]
2,4-Dinitrophenol	µg/L	100	GC.12	<100	[NT]	[NT]	[NR]	[NR]
4-Nitrophenol	µg/L	100	GC.12	<100	[NT]	[NT]	LCS-W1	54%
2,3,4,6-Tetrachlorophenol	µg/L	10	GC.12	<10	[NT]	[NT]	[NR]	[NR]
2-methyl-4,6-dinitrophenol	µg/L	100	GC.12	<100	[NT]	[NT]	[NR]	[NR]
Pentachlorophenol	µg/L	100	GC.12	<100	[NT]	[NT]	[NR]	[NR]
Surrogate 2-fluorophenol	%		GC.12	66	[NT]	[NT]	LCS-W1	66%
Surrogate Phenol-d6	%		GC.12	32	[NT]	[NT]	LCS-W1	36%
Surrogate 2,4,6-Tribromophenol	%		GC.12	112	[NT]	[NT]	LCS-W1	116%
Surrogate p-Terphenyl-d14	%		GC.12	126	[NT]	[NT]	LCS-W1	119%
QUALITY CONTROL	UNITS	Dup. Sm#		Duplicate		Spike Sm#	Spike % Recovery	
Speciated Phenols in Soil				Base + Duplicate + %RPD				
Date extracted	-	[NT]		[NT]		44271-2	10/08/2010	
Date analysed	-	[NT]		[NT]		44271-2	11/08/2010	
Phenol	mg/kg	[NT]		[NT]		44271-2	75%	
2-Chlorophenol	mg/kg	[NT]		[NT]		44271-2	#	
2-Methylphenol	mg/kg	[NT]		[NT]		[NR]	[NR]	
3/4-Methylphenol	mg/kg	[NT]		[NT]		[NR]	[NR]	
2-Nitrophenol	mg/kg	[NT]		[NT]		[NR]	[NR]	
2,4-Dimethylphenol	mg/kg	[NT]		[NT]		[NR]	[NR]	
2,4-Dichlorophenol	mg/kg	[NT]		[NT]		[NR]	[NR]	
2,6-dichlorophenol	mg/kg	[NT]		[NT]		[NR]	[NR]	
2,4,5-trichlorophenol	mg/kg	[NT]		[NT]		[NR]	[NR]	
2,4,6-trichlorophenol	mg/kg	[NT]		[NT]		[NR]	[NR]	

QUALITY CONTROL Speciated Phenols in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
2,4-dinitrophenol	mg/kg	[NT]	[NT]	[NR]	[NR]
4-nitrophenol	mg/kg	[NT]	[NT]	44271-2	#
2,3,4,6-tetrachlorophenol	mg/kg	[NT]	[NT]	[NR]	[NR]
2-methyl-4,6-dinitrophenol	mg/kg	[NT]	[NT]	[NR]	[NR]
pentachlorophenol	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate 2-fluorophenol	%	[NT]	[NT]	44271-2	#
Surrogate Phenol-d ₆	%	[NT]	[NT]	44271-2	64%
Surrogate 2,4,6-Tribromophenol	%	[NT]	[NT]	44271-2	#
Surrogate p-Terphenyl-d ₁₄	%	[NT]	[NT]	44271-2	108%

Report Comments:

Total Petroleum Hydrocarbons in tcip: # Percent recovery is not possible to report as the high concentration of analytes in the sample/s have caused interference.

Total Petroleum Hydrocarbons in soil: # Percent recovery is not possible to report as the high concentration of analytes in the sample/s have caused interference.

Phenol's in soil by GCMS: # Percent recovery is not possible to report due to interference from analytes (other than those being tested) in the sample/s.

Asbestos was analysed by Approved Identifier: Not applicable for this job

INS: Insufficient sample for this test

NT: Not tested

NR: Not requested

PQL: Practical Quantitation Limit

<: Less than

>: Greater than

NA: Test not required

Quality Control Definitions

LCS: Laboratory Control Sample

RPD: Relative Percent Difference

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike: A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample): This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria:

Duplicates: <5xPQL - any RPD is acceptable

>5xPQL - 0-50% RPD is acceptable.

SOIL QUALITY REPORT

Client: JBS Environmental Pty Ltd
Address: Suite 2, 595 Gardeners Road MASCOT NSW 2020

Job No. 524
Report No. 1
Test Request No. N/A
Date Issued. 40386
Sample No. 55158

Project: Material Testing

Sample Source:

Lot No. TP1

Location Chainage & o/s: N/A

Material Type: .3m - .6m

Nomin. Size:

Specification:

Sampling Method:

Date Sampled: 02/07/10

Sample Description:

ATTERBERG LIMITS & LINEAR SHRINKAGE

SAMPLE HISTORY:

Test Methods:

Liquid Limit: AS1289.3.1.1

Plasticity Index: AS1289.3.3.2

Plastic Limit: AS1289.3.2.1

Linear Shrinkage: AS1289.3.4.1

Moisture Content: AS1289.2.1.1

RESULTS

LIQUID LIMIT: %

PLASTIC LIMIT: %

PLASTICITY INDEX: %

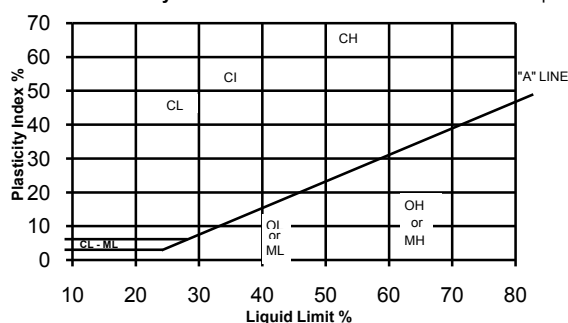
LINEAR SHRINKAGE: %

PI X 0.425mm SIEVE:

Linear Shrinkage Remarks:

Plasticity Chart - AS1726 1993

Sample Plot



PARTICLE SIZE DISTRIBUTION

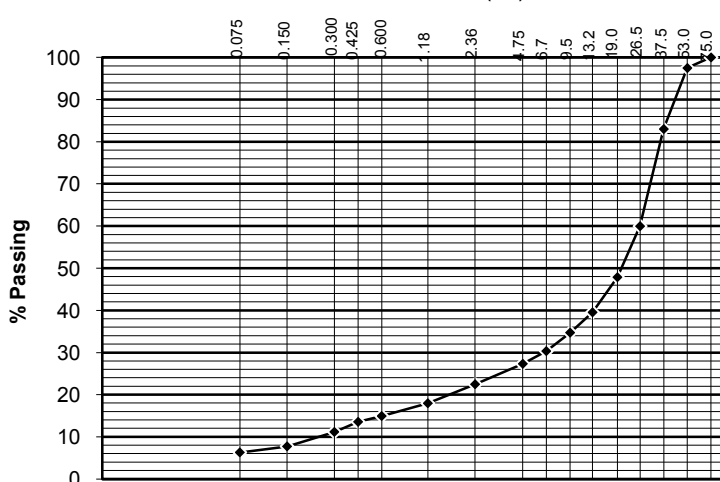
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SIEVE SIZE (mm)	Lower Limits	% PASSING (by mass)	Upper Limits
75.0		100	
53.0		97	
37.5		83	
26.5		60	
19.0		48	
13.2		40	
9.5		35	
6.7		30	
4.75		27	
2.36		22	
1.18		18	
0.600		15	
0.425		14	
0.300		11	
0.150		8	
0.075		6	

SAMPLE HISTORY:

Test Method: AS1289.3.6.1

AUSTRALIAN STANDARD SIEVE APERTURES (mm)



EMERSON CLASS NUMBER

Test Method:

EMERSON CLASS NUMBER:

TYPE OF WATER:

TEMP. OF WATER:

°C

Natural moisture content of sample (%):

Workbook No. WB24 REV 0 10/10/08

APPROVED BY: P. Bowler

NATA Approved Signatory

Remarks.



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Accredited for compliance with
ISO/IEC 17025

Laboratory No. 10830

SOIL QUALITY REPORT

Client: JBS Environmental Pty Ltd
Address: Suite 2, 595 Gardeners Road MASCOT NSW 2020

Job No. 524
Report No. 2
Test Request No. N/A
Date Issued. 27/07/2010
Sample No. 55159

Project: Material Testing

Sample Source:

Lot No. TP3

Location Chainage & o/s: N/A

Material Type: 1.3m - 2m

Nomin. Size:

Specification:

Sampling Method:

Date Sampled: 02/07/10

Sample Description:

ATTERBERG LIMITS & LINEAR SHRINKAGE

SAMPLE HISTORY:

Test Methods:

Liquid Limit: AS1289.3.1.1

Plasticity Index: AS1289.3.3.2

Plastic Limit: AS1289.3.2.1

Linear Shrinkage: AS1289.3.4.1

Moisture Content: AS1289.2.1.1

RESULTS

LIQUID LIMIT: %

PLASTIC LIMIT: %

PLASTICITY INDEX: %

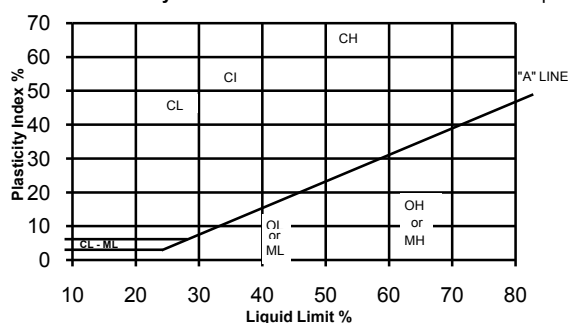
LINEAR SHRINKAGE: %

PI X 0.425mm SIEVE:

Linear Shrinkage Remarks:

Plasticity Chart - AS1726 1993

Sample Plot



PARTICLE SIZE DISTRIBUTION

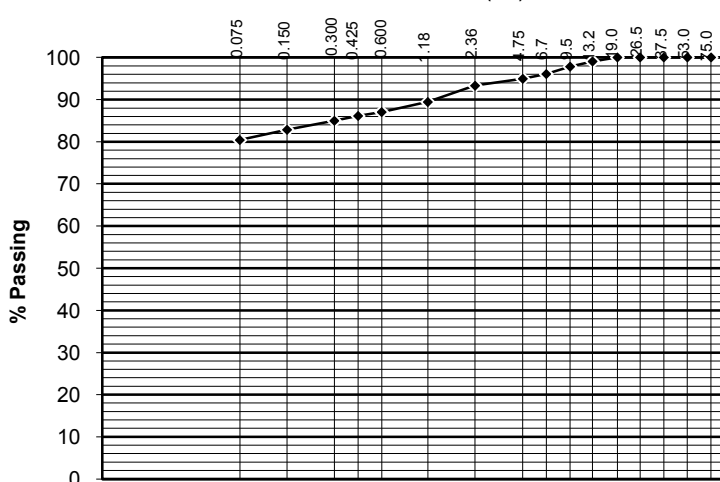
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SIEVE SIZE (mm)	Lower Limits	% PASSING (by mass)	Upper Limits
75.0		100	
53.0		100	
37.5		100	
26.5		100	
19.0		100	
13.2		99	
9.5		98	
6.7		96	
4.75		95	
2.36		93	
1.18		89	
0.600		87	
0.425		86	
0.300		85	
0.150		83	
0.075		80	

SAMPLE HISTORY:

Test Method: AS1289.3.6.1

AUSTRALIAN STANDARD SIEVE APERTURES (mm)



SOIL QUALITY REPORT

Client: JBS Environmental Pty Ltd
Address: Suite 2, 595 Gardeners Road MASCOT NSW 2020

Job No. 524
Report No. 3
Test Request No. N/A
Date Issued. 27/07/2010
Sample No. 55160

Project: Material Testing

Sample Source:

Lot No. TP3

Location Chainage & o/s: N/A

Material Type: 4m - 4.2m

Nomin. Size:

Specification:

Sampling Method:

Date Sampled: 02/07/10

Sample Description:

ATTERBERG LIMITS & LINEAR SHRINKAGE

SAMPLE HISTORY:

Test Methods:

Liquid Limit: AS1289.3.1.1

Plasticity Index: AS1289.3.3.2

Plastic Limit: AS1289.3.2.1

Linear Shrinkage: AS1289.3.4.1

Moisture Content: AS1289.2.1.1

RESULTS

LIQUID LIMIT: %

PLASTIC LIMIT: %

PLASTICITY INDEX: %

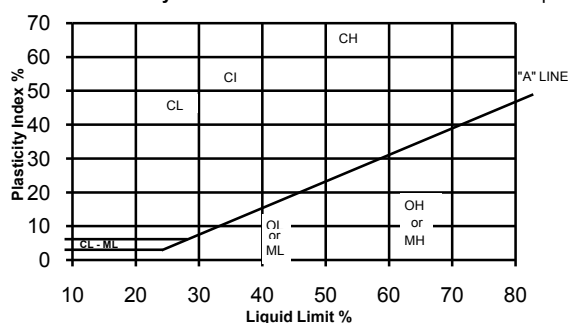
LINEAR SHRINKAGE: %

PI X 0.425mm SIEVE:

Linear Shrinkage Remarks:

Plasticity Chart - AS1726 1993

Sample Plot



PARTICLE SIZE DISTRIBUTION

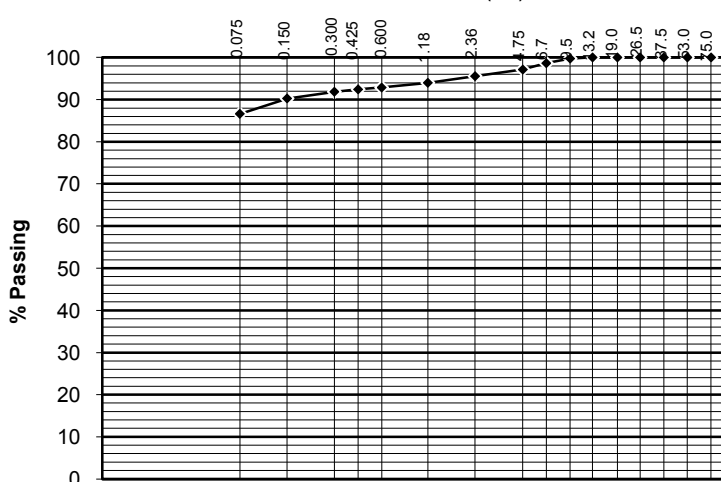
Grading Envelope

SIEVE SIZE (mm)	Lower Limits	% PASSING (by mass)	Upper Limits
75.0		100	
53.0		100	
37.5		100	
26.5		100	
19.0		100	
13.2		100	
9.5		100	
6.7		99	
4.75		97	
2.36		96	
1.18		94	
0.600		93	
0.425		92	
0.300		92	
0.150		90	
0.075		87	

SAMPLE HISTORY:

Test Method: AS1289.3.6.1

AUSTRALIAN STANDARD SIEVE APERTURES (mm)



EMERSON CLASS NUMBER

Test Method:

EMERSON CLASS NUMBER:

TYPE OF WATER:

TEMP. OF WATER:

°C

Natural moisture content of sample (%):

Workbook No. WB24 REV 0 10/10/08

APPROVED BY: P. Bowler

NATA Approved Signatory

Remarks.



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Laboratory No. 10830

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Document Status

Rev No.	Author	Reviewer	Approved for Issue		
		Name	Name	Signature	Date
6	Sumi Dorairaj	Matthew Bennett	Matthew Bennett		24/06/11
7	Sumi Dorairaj	Matthew Bennett	Matthew Bennett		16/07/11
8	Sumi Dorairaj	Matthew Bennett	Matthew Bennett		16/07/11



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