

Report Comments:

Asbestos: A portion of the supplied sample was sub-sampled for asbestos according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 30-40g of sample in it's own container.

Asbestos ID was analysed by Approved Identifier: Paul Ching
Asbestos ID was authorised by Approved Signatory: Matt Mansfield

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NA: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	LCS: Laboratory Control Sample

Quality Control Definitions

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

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes and LCS: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.



EnviroLab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

CERTIFICATE OF ANALYSIS 50196-A

Client:

Douglas Partners

96 Hermitage Rd

West Ryde

NSW 2114

Attention: Gavin Boyd

Sample log in details:

Your Reference:

72138, Macquarie Village

No. of samples:

Additional Testing on 7 Soils

Date samples received:

24/12/2010

Date completed instructions received:

12/01/11

Analysis Details:

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by:

14/01/11

Date of Preliminary Report:

Not issued

Issue Date:

14/01/11

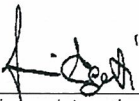
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Tests not covered by NATA are denoted with *.

Results Approved By:


Giovanni Agosti
Technical Manager


Jacinta Hurst
Laboratory Manager

EnviroLab Reference: 50196-A
Revision No: R 00



PAHs in TCLP (USEPA 1311)		
Our Reference:	UNITS	50196-A-17
Your Reference	-----	116/0.3-0.4
Date Sampled	-----	17/12/2010
Type of sample		Soil
Date extracted	-	13/01/2011
Date analysed	-	13/01/2011
Naphthalene in TCLP	mg/L	<0.001
Acenaphthylene in TCLP	mg/L	<0.001
Acenaphthene in TCLP	mg/L	<0.001
Fluorene in TCLP	mg/L	<0.001
Phenanthrene in TCLP	mg/L	<0.001
Anthracene in TCLP	mg/L	<0.001
Fluoranthene in TCLP	mg/L	<0.001
Pyrene in TCLP	mg/L	<0.001
Benzo(a)anthracene in TCLP	mg/L	<0.001
Chrysene in TCLP	mg/L	<0.001
Benzo(b+k)fluoranthene in TCLP	mg/L	<0.002
Benzo(a)pyrene in TCLP	mg/L	<0.001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.001
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	114

Client Reference: 72138, Macquarie Village

Metals in TCLP USEPA1311						
Our Reference:	UNITS	50196-A-2	50196-A-5	50196-A-6	50196-A-7	50196-A-9
Your Reference	-----	102/0.1-0.2	103/0.1-0.2	104/0.1-0.2	107/0.1-0.2	109/0.1-0.2
Date Sampled	-----	20/12/2010	20/12/2010	20/12/2010	20/12/2010	20/12/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/01/2010	13/01/2010	13/01/2010	13/01/2010	13/01/2010
Date analysed	-	13/01/2011	13/01/2011	13/01/2011	13/01/2011	13/01/2011
pH of soil for fluid# determ.	pH units	9.60	9.80	9.90	9.70	8.80
pH of soil for fluid # determ. (acid)	pH units	1.50	1.60	1.60	1.50	1.50
Extraction fluid used	-	1	1	1	1	1
pH of final Leachate	pH units	5.40	5.50	5.20	5.50	5.20
Nickel in TCLP	mg/L	0.1	0.05	0.09	0.1	0.04

Metals in TCLP USEPA1311			
Our Reference:	UNITS	50196-A-11	50196-A-17
Your Reference	-----	110/0.1-0.2	116/0.3-0.4
Date Sampled	-----	20/12/2010	17/12/2010
Type of sample		Soil	Soil
Date extracted	-	13/01/2010	13/01/2010
Date analysed	-	13/01/2011	13/01/2011
pH of soil for fluid# determ.	pH units	9.80	9.90
pH of soil for fluid # determ. (acid)	pH units	1.70	1.70
Extraction fluid used	-	1	1
pH of final Leachate	pH units	5.10	6.70
Lead in TCLP	mg/L	0.1	[NA]

Method ID	Methodology Summary
GC.12 subset	Leachates are extracted with Dichloromethane and analysed by GC-MS.
GC.12 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
GC.12	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
LAB.4	Toxicity Characteristic Leaching Procedure (TCLP).
EXTRACT.7	Toxicity Characteristic Leaching Procedure (TCLP).
LAB.1	pH - Measured using pH meter and electrode in accordance with APHA 20th ED, 4500-H+.
Metals.20 ICP-AES	Determination of various metals by ICP-AES.

Client Reference: 72138, Macquarie Village

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in TCLP (USEPA 1311)						Base II Duplicate II %RPD		
Date extracted	-			13/01/2011	[NT]	[NT]	LCS-W1	13/01/2011
Date analysed	-			13/01/2011	[NT]	[NT]	LCS-W1	13/01/2011
Naphthalene in TCLP	mg/L	0.001	GC.12 subset	<0.001	[NT]	[NT]	LCS-W1	78%
Acenaphthylene in TCLP	mg/L	0.001	GC.12 subset	<0.001	[NT]	[NT]	[NR]	[NR]
Acenaphthene in TCLP	mg/L	0.001	GC.12 subset	<0.001	[NT]	[NT]	[NR]	[NR]
Fluorene in TCLP	mg/L	0.001	GC.12 subset	<0.001	[NT]	[NT]	LCS-W1	93%
Phenanthrene in TCLP	mg/L	0.001	GC.12 subset	<0.001	[NT]	[NT]	LCS-W1	95%
Anthracene in TCLP	mg/L	0.001	GC.12 subset	<0.001	[NT]	[NT]	[NR]	[NR]
Fluoranthene in TCLP	mg/L	0.001	GC.12 subset	<0.001	[NT]	[NT]	LCS-W1	94%
Pyrene in TCLP	mg/L	0.001	GC.12 subset	<0.001	[NT]	[NT]	LCS-W1	99%
Benzo(a)anthracene in TCLP	mg/L	0.001	GC.12 subset	<0.001	[NT]	[NT]	[NR]	[NR]
Chrysene in TCLP	mg/L	0.001	GC.12 subset	<0.001	[NT]	[NT]	LCS-W1	98%
Benzo(b+k)fluoranthene in TCLP	mg/L	0.002	GC.12 subset	<0.002	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene in TCLP	mg/L	0.001	GC.12 subset	<0.001	[NT]	[NT]	LCS-W1	95%
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.001	GC.12 subset	<0.001	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.001	GC.12 subset	<0.001	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene in TCLP	mg/L	0.001	GC.12 subset	<0.001	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		GC.12	89	[NT]	[NT]	LCS-W1	117%

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QUALITY CONTROL Metals in TCLP USEPA1311	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base Duplicate %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			13/01/2010	50196-A-2	13/01/2010 13/01/2010	LCS-W1	13/01/2011
Date analysed	-			13/01/2011	50196-A-2	13/01/2011 13/01/2011	LCS-W1	13/01/2011
Lead in TCLP	mg/L	0.03	Metals.20 ICP-AES	<0.03	[NT]	[NT]	LCS-W1	103%
Nickel in TCLP	mg/L	0.02	Metals.20 ICP-AES	<0.02	50196-A-2	0.1 0.1 RPD: 0	LCS-W1	105%
QUALITY CONTROL Metals in TCLP USEPA1311	UNITS	Dup. Sm#		Duplicate Base + Duplicate + %RPD		Spike Sm#	Spike % Recovery	
Date extracted	-	[NT]		[NT]		50196-A-5	13/01/2011	
Date analysed	-	[NT]		[NT]		50196-A-5	13/01/2011	
Lead in TCLP	mg/L	[NT]		[NT]		[NR]	[NR]	
Nickel in TCLP	mg/L	[NT]		[NT]		50196-A-5	101%	

Report Comments:

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

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