

APPENDIX H

Summary Analytical Results

Table 2: Summary Soil Results

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VOCs																						
Field ID	Sample Depth	Sample Date	cis-1,2-dichloroethene	cis-1,3-dichloropropene	cyclohexane	dibromomethane	dichlorodifluoromethane	hexachlorobutadiene	isopropylbenzene	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	styrene	trichloroethene	tert-butylbenzene	tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	trichlorofluoromethane	vinyl chloride	
ECIL			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
NSW EPA 1994a Surface Guidelines			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NSW EPA 1994b Groundwater Guidelines																						
NEPM (1999) Residential Health Investigation Levels (RHL 'D')																						
NEPM (1999) Commercial/Industrial Health Investigation Levels (RHL 'F')																						
Field ID			Sample Depth																			
BH10			28/01/2011																			
BH2			0.6																			
BH3			0.5																			
BH4			27/01/2011																			
BH5			1.2																			
BH6			0.3																			
BH7			28/01/2011																			
BH8			0.3																			
BH9			0.5																			
Dcp1			27/01/2011																			
Statistical Summary																						
Number of Results			11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	
Maximum Concentration			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Minimum Concentration			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Minimum Detect			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Maximum Concentration			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Minimum Concentration			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Median Concentration			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Standard Deviation			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Number of Guideline Exceedances			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Number of Guideline Exceedances (Data Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Table 3: Summary Water Results

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Table 4: RPD Soil Result Summary

Field Duplicates (soil) Filter: ALL			SDG Field_ID Sampled Date-Time	51151 BH4 27/01/2011	51151 Dup1 27/01/2011	RPD	51151 BH4 27/01/2011	Interlab_D TRP1 27/01/2011	RPD
Method_Type	ChemName	Units	EQL						
Heavy Metals	Arsenic	mg/kg	4 (Primary); 2 (Interlab)	7.0	9.0	25	7.0	7.0	0
	Cadmium	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Chromium (III+VI)	mg/kg	1 (Primary); 5 (Interlab)	19.0	21.0	10	19.0	9.3	69
	Copper	mg/kg	1 (Primary); 5 (Interlab)	500.0	130.0	117	500.0	70.0	151
	Lead	mg/kg	1 (Primary); 5 (Interlab)	240.0	41.0	142	240.0	23.0	165
	Mercury	mg/kg	0.1	0.6	<0.1	143	0.6	<0.1	143
	Nickel	mg/kg	1 (Primary); 5 (Interlab)	16.0	9.0	56	16.0	5.3	100
	Zinc	mg/kg	1 (Primary); 5 (Interlab)	420.0	79.0	137	420.0	62.0	149
Moisture	Moisture	%	0.1	20.0	19.0	5	20.0		
PAHs	Acenaphthene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
	Acenaphthylene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
	Anthracene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
	Benz(a)anthracene	mg/kg	0.1	0.5	<0.1	133	0.5	<0.1	133
	Benzo(a)pyrene	mg/kg	0.05 (Primary); 0.1 (Interlab)	0.8	<0.05	169	0.8	<0.1	143
	Benzo(b)fluoranthene	mg/kg	0.2	0.9	<0.2	127	0.9	<0.1	0
	Benzo(g,h,i)perylene	mg/kg	0.1	0.3	<0.1	100	0.3	<0.1	100
	Chrysene	mg/kg	0.1	0.5	<0.1	133	0.5	<0.1	133
	Dibenz(a,h)anthracene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
	Fluoranthene	mg/kg	0.1	0.9	<0.1	160	0.9	<0.1	160
	Fluorene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	0.3	<0.1	100	0.3	<0.1	100
	Naphthalene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
	Phenanthrene	mg/kg	0.1	0.4	<0.1	120	0.4	<0.1	120
	Pyrene	mg/kg	0.1	0.3	<0.1	160	0.3	<0.1	160
TPH (C10-C36)	TPH C10 - C14	mg/kg	50	<50.0	<50.0	0	<50.0	<50.0	0
	TPH C15 - C28	mg/kg	100	<100.0	<100.0	0	<100.0	<100.0	0
	TPH C29-C36	mg/kg	100	<100.0	<100.0	0	<100.0	<100.0	0
VOCs	1,1,1,2-tetrachloroethane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	1,1,1-trichloroethane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	1,1,2,2-tetrachloroethane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	1,1,2-trichloroethane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	1,1-dichloroethane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	1,1-dichloroethane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	1,1-dichloropropene	mg/kg	1	<1.0	<1.0	0	<1.0	<0.05	0
	1,2,3-trichlorobenzene	mg/kg	1	<1.0	<1.0	0	<1.0	<0.05	0
	1,2,3-trichloropropane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	1,2,4-trichlorobenzene	mg/kg	1	<1.0	<1.0	0	<1.0	<0.05	0
	1,2,4-trimethylbenzene	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	1,2-dibromo-3-chloropropane	mg/kg	1	<1.0	<1.0	0	<1.0	<0.05	0
	1,2-dibromoethane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	1,2-dichlorobenzene	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	1,2-dichloroethane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	1,2-dichloropropane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	1,3,5-trimethylbenzene	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	1,3-dichlorobenzene	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	1,3-dichloropropane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	1,4-dichlorobenzene	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	2,2-dichloropropane	mg/kg	1	<1.0	<1.0	0	<1.0	<0.05	0
	2-chlorotoluene	mg/kg	1	<1.0	<1.0	0	<1.0	<0.05	0
	4-chlorotoluene	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Benzene	mg/kg	0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.05	0
	Bromobenzene	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Bromochloromethane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Bromodichloromethane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Bromofluoromethane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Bromomethane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Carbon tetrachloride	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Chlorobenzene	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Chlorodibromomethane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Chloroethane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Chloroform	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Chloromethane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	cis-1,2-dichloroethene	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	cis-1,3-dichloropropene	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Cyclohexane	mg/kg	1	<1.0	<1.0	0	<1.0	<0.05	0
	Dibromomethane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Dichlorodifluoromethane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Ethylbenzene	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Hexachlorobutadiene	mg/kg	1	<1.0	<1.0	0	<1.0	<0.05	0
	Isopropylbenzene	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	n-butylbenzene	mg/kg	1	<1.0	<1.0	0	<1.0	<0.05	0
	n-propylbenzene	mg/kg	1	<1.0	<1.0	0	<1.0	<0.05	0
	p-isopropyltoluene	mg/kg	1	<1.0	<1.0	0	<1.0	<0.05	0
	sec-butylbenzene	mg/kg	1	<1.0	<1.0	0	<1.0	<0.05	0
	Styrene	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Trichloroethane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	tert-butylbenzene	mg/kg	1	<1.0	<1.0	0	<1.0	<0.05	0
	Tetrachloroethene	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Toluene	mg/kg	0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.05	0
	trans-1,2-dichloroethene	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	trans-1,3-dichloropropane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Trichlorofluoromethane	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Vinyl chloride	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Xylene (m & p)	mg/kg	2 (Primary); 0.1 (Interlab)	<2.0	<2.0	0	<2.0	<0.1	0
	Xylene (o)	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
VTRH & BTEX in Soil	Benzene	mg/kg	0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.05	0
	Ethylbenzene	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0
	Toluene	mg/kg	0.5 (Primary); 0.05 (Interlab)	<0.5	<0.5	0	<0.5	<0.05	0
	TPH C8 - C9	mg/kg	25 (Primary); 20 (Interlab)	<25.0	<25.0	0	<25.0	<20.0	0
	Xylene (m & p)	mg/kg	2 (Primary); 0.1 (Interlab)	<2.0	<2.0	0	<2.0	<0.1	0
	Xylene (o)	mg/kg	1 (Primary); 0.05 (Interlab)	<1.0	<1.0	0	<1.0	<0.05	0

*RPDs have only been considered where a concentration is greater than 0 times the EQL.

**High RPDs are in bold (Acceptable RPDs for each EQL: multiplier range are: 100 (0.5 x EQL); 75 (5-10 x EQL); 30 (> 10 x EQL))

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Table 5: RPD Water Result Summary

Field Duplicates (water)			SDG	51457	51457	
Filter: SDG in(51457)			Field_ID	GW2	Dup1	RPD
			Sampled_1	4/02/2011	4/02/2011	
Method_Type	ChemName	Units	EQL			
Heavy Metals	Arsenic (Filtered)	µg/L	1	<1.0	<1.0	0
	Cadmium (Filtered)	µg/L	0.1	<0.1	<0.1	0
	Chromium (III+VI) (Filtered)	µg/L	1	<1.0	<1.0	0
	Copper (Filtered)	µg/L	1	<1.0	<1.0	0
	Lead (Filtered)	mg/l	0.001	<0.001	0.001	0
	Mercury (Filtered)	µg/L	0.4	<0.4	<0.4	0
	Nickel (Filtered)	µg/L	1	<1.0	<1.0	0
	Zinc (Filtered)	µg/L	1	2.0	2.0	0
TPH	TPH C10 - C14	µg/L	50	<50.0	<50.0	0
	TPH C15 - C28	µg/L	100	<100.0	<100.0	0
	TPH C29-C36	µg/L	100	<100.0	<100.0	0
VOCs	1,1,1,2-tetrachloroethane	µg/L	1	<1.0	<1.0	0
	1,1,1-trichloroethane	µg/L	1	<1.0	<1.0	0
	1,1,2,2-tetrachloroethane	µg/L	1	<1.0	<1.0	0
	1,1,2-trichloroethane	µg/L	1	<1.0	<1.0	0
	1,1-dichloroethane	µg/L	1	<1.0	<1.0	0
	1,1-dichloroethene	µg/L	1	<1.0	<1.0	0
	1,1-dichloropropene	µg/L	1	<1.0	<1.0	0
	1,2,3-trichlorobenzene	µg/L	1	<1.0	<1.0	0
	1,2,3-trichloropropane	µg/L	1	<1.0	<1.0	0
	1,2,4-trichlorobenzene	µg/L	1	<1.0	<1.0	0
	1,2,4-trimethylbenzene	µg/L	1	<1.0	<1.0	0
	1,2-dibromo-3-chloropropane	µg/L	1	<1.0	<1.0	0
	1,2-dibromoethane	µg/L	1	<1.0	<1.0	0
	1,2-dichlorobenzene	µg/L	1	<1.0	<1.0	0
	1,2-dichloroethane	µg/L	1	<1.0	<1.0	0
	1,2-dichloropropane	µg/L	1	<1.0	<1.0	0
	1,3,5-trimethylbenzene	µg/L	1	<1.0	<1.0	0
	1,3-dichlorobenzene	µg/L	1	<1.0	<1.0	0
	1,3-dichloropropane	µg/L	1	<1.0	<1.0	0
	1,4-dichlorobenzene	µg/L	1	<1.0	<1.0	0
	2,2-dichloropropane	µg/L	1	<1.0	<1.0	0
	2-chlorotoluene	µg/L	1	<1.0	<1.0	0
	4-chlorotoluene	µg/L	1	<1.0	<1.0	0
	Benzene	µg/L	1	<1.0	<1.0	0
	Bromobenzene	µg/L	1	<1.0	<1.0	0
	Bromochloromethane	µg/L	1	<1.0	<1.0	0
	Bromodichloromethane	µg/L	1	<1.0	<1.0	0
	Bromoform	µg/L	1	<1.0	<1.0	0
	Bromomethane	µg/L	10	<10.0	<10.0	0
	Carbon tetrachloride	µg/L	1	<1.0	<1.0	0
	Chlorobenzene	µg/L	1	<1.0	<1.0	0
	Chlorodibromomethane	µg/L	1	<1.0	<1.0	0
	Chloroethane	µg/L	10	<10.0	<10.0	0
	Chloroform	µg/L	1	<1.0	<1.0	0
	Chloromethane	µg/L	10	<10.0	<10.0	0
	cis-1,2-dichloroethene	µg/L	1	<1.0	<1.0	0
	cis-1,3-dichloropropene	µg/L	1	<1.0	<1.0	0
	Cyclohexane	mg/l	0.001	<0.001	<0.001	0
	Dibromomethane	µg/L	1	<1.0	<1.0	0
	Dichlorodifluoromethane	µg/L	10	<10.0	<10.0	0
	Ethylbenzene	µg/L	1	<1.0	<1.0	0
	Hexachlorobutadiene	µg/L	1	<1.0	<1.0	0
	Isopropylbenzene	µg/L	1	<1.0	<1.0	0
	n-butylbenzene	µg/L	1	<1.0	<1.0	0
	n-propylbenzene	µg/L	1	<1.0	<1.0	0
	p-Isopropyltoluene	µg/L	1	<1.0	<1.0	0
	sec-butylbenzene	µg/L	1	<1.0	<1.0	0
	Styrene	µg/L	1	<1.0	<1.0	0
	Trichloroethene	µg/L	1	<1.0	<1.0	0
	tert-butylbenzene	µg/L	1	<1.0	<1.0	0
	Tetrachloroethene	µg/L	1	<1.0	<1.0	0
	Toluene	µg/L	1	<1.0	<1.0	0
	trans-1,2-dichloroethene	µg/L	1	<1.0	<1.0	0
	trans-1,3-dichloropropene	µg/L	1	<1.0	<1.0	0
	Trichlorofluoromethane	µg/L	10	<10.0	<10.0	0
	Vinyl chloride	µg/L	10	<10.0	<10.0	0
	Xylene (m & p)	µg/L	2	<2.0	<2.0	0
	Xylene (o)	µg/L	1	<1.0	<1.0	0
TPH (C6-C9)	TPH C6 - C9	µg/L	10	<10.0	<10.0	0

*RPDs have only been considered where a concentration is greater than 0 times the EQL.

**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 100 (0-5 x EQL); 75 (5-10 x EQL); 30 (> 10 x EQL))

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

APPENDIX I Chain of Custody and Laboratory Analytical Certificates

CHAIN OF CUSTODY - Client



ENVIROLAB SERVICES

Client: WSP Environmental Pty Ltd	Client Project Name and Number: 15742	EnviroLab Services
Project Mgr: Stephen Barnett	Columbia Precinct Homebush	12 Ashley St, Chatswood, NSW, 2067
Sampler: Aaron Young	PO No.: 15742-01	Phone: 02 9910 6200
Address: Lev 1, 41 McLaren St North Sydney	EnviroLab Services Quote No.:	Fax: 02 9910 6201
Email: aaron.young@wspgroup.com	Date results required:	E-mail: ahie@envirolabservices.com.au
Phone: 048977990	Or choose: <u>Standard</u>	Contact: Aileen Hie
Fax: 89256700	Note: Inform lab in advance if urgent turnaround is required - surcharge applies	

Sample Information			Tests Required								Comments
EnviroLab Sample ID	Client Sample ID	Date sampled	Type of sample	Metal 8	TPH	PAH	VOCs	HOLD	BTEX		
1	BH1 0.0	27/11/11	SOIL								
2	BH1 0.5										
3	BH1 1.2										
4	BH1 2.0										
5	BH1 3.0										
6	BH1 4.0										
7	BH1 5.0										
8	BH2 0.0	27/11/11									
9	BH2 0.5										
10	BH2 1.0										
11	BH2 2.0										
12	BH2 3.0										
13	BH2 4.0										
14	BH3 0.1	27/11/11									
15	BH3 0.5										

Relinquished by (company): WSP	Samples Received: Cool or Ambient (circle one)
Print Name: AARON YOUNG	Temperature Received at: (if applicable)
Date & Time: 31/11/11 11:30am	Transported by: Hand delivered / courier
Signature: <i>[Signature]</i>	Page No: 1 of 4

CHAIN OF CUSTODY - Client



ENVIROLAB SERVICES

Client: WSP Environmental Pty Ltd	EnviroLab Services 12 Ashley St, Chatswood, NSW, 2067
Project Mgr: Stephen Barnett	
Sampler: Aaron Young	
Address: Lev 1, 41 McLaren St North Sydney	
Email:	
Phone: 89256700	Phone: 02 9910 6200
Fax: 89256799	Fax: 02 9910 6201
	E-mail: ahie@envirolabservices.com.au
	Contact: Aileen Hie

Sample Information			Tests Required								Comments
EnviroLab Sample ID	Client Sample ID	Date sampled	Type of sample	Metals 8	TPH	PAH	VOCs	HOLD	BTEX		
16 BH3	1.0		SOIL								
17 BH3	2.0										
18 BH3	3.0										
19 BH4	0.3	27/11/11									
20 BH4	0.6										
21 BH4	1.2										
22 BH4	2.0										
23 BH4	3.0										
24 BH4	4.0										
25 BH4	5.0										
26 BH5	0.3	27/11/11									
27 BH5	0.6										
28 BH5	1.0										
29 BH5	2.0										
30 BH5	4.0										

Relinquished by (company): WSP	Received by (company):
Print Name: Aaron Young	Print Name:
Date & Time: 31/01/11 4.30am	Date & Time:
Signature: <i>Aaron Young</i>	Signature:

CHAIN OF CUSTODY - Client

ENVIROLAB SERVICES



Client: WSP Environmental Pty Ltd	Client Project Name and Number: 15742 Columbia Precinct Handwash	EnviroLab Services 12 Ashley St, Chatswood, NSW, 2067
Project Mgr: Stephen Barnett	PO No.: 15742.01	Phone: 02 9910 6200
Sampler: Aaron Young	EnviroLab Services Quote No.:	Fax: 02 9910 6201
Address: Lev 1, 41 McLaren St North Sydney	Date results required:	E-mail: ahie@envirolabservices.com.au
Email:	Or choose: <u>standard</u>	Contact: Aileen Hie
Phone: 89256700 Fax: 89256799		

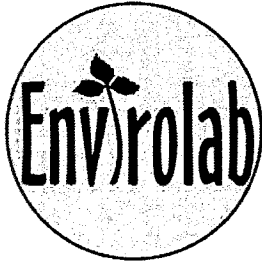
Sample information				Tests Required								Comments
EnviroLab Sample ID	Client Sample ID	Date sampled	Type of sample	Metals	TPH	PAH	VOCs	HOLD	BTEX			
31	BH6 0.3	28/1/11	SOIL					X				
32	BH6 0.7							X				
33	BH6 1.0			X	X	X	X		X			
34	BH6 1.5											
35	BH6 3.0							X				
36	BH7 1.0	28/1/11		X	X	X	X		X			
37	BH7 1.5							X				
38	BH7 3.0							X				
39	BH8 0.3	28/1/11		X	X	X	X		X			
40	BH8 0.7											
41	BH8 1.2							X				
42	BH8 2.0							X				
43	BH9 0.3	28/1/11						X				
44	BH9 0.5			X	X	X	X		X			
45	BH9 1.0							X				

Relinquished by (company): WSP	Received by (company):
Print Name: AARON YOUNG	Print Name:
Date & Time: 31/1/11	Date & Time:
Signature: <i>[Signature]</i>	Signature:

Client:	WSP Environmental Pty Ltd	Client Project Name and Number:	15742 Columbia Precinct Remedial.	Envirolab Services 12 Ashley St, Chatswood, NSW, 2067 Phone: 02 9910 6200 Fax: 02 9910 6201 E-mail: ahie@envirolabservices.com.au Contact: Aileen Hie
Project Mgr:	Stephen Barnett	PO No.:	15742-01	
Sampler:	Aaron Young	Envirolab Services Quote No.:		
Address:	Lev 1, 41 McLaren St North Sydney	Date results required:		
Email:		Or choose: <u>Standard</u>		
Phone:	89256700	Note: Inform lab in advance if urgent turnaround is required - surcharge applies		
Fax:	89256799			

[illegible]

Relinquished by (company):	WSP	Received by (company):		Samples Received: Cool or Ambient (circle one)
Print Name: ARON YOUNG		Print Name:		Temperature Received at: (if applicable)
Date & Time: 3/1/11		Date & Time:		Transported by: Hand delivered / courier
Signature: <i>Arion</i>		Signature:		Page No: 4 of 4



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 51151

Client:

WSP Environment Energy

Level 1, 41 McLaren St

North Sydney

NSW 2060

Attention: Aaron Young

Sample log in details:

Your Reference:

15742, Columbia Precinct Homebush

No. of samples:

55 Soils

Date samples received:

01/02/11

Date completed instructions received:

01/02/11

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:

7/02/11

Date of Preliminary Report:

Not issued

Issue Date:

7/02/11

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Tests not covered by NATA are denoted with *.

Results Approved By:

Tania Notaras
Manager

Rhian Morgan
Reporting Supervisor

Nancy Zhang
Chemist

Envirolab Reference: 51151

Revision No: R 00

Page 1 of 25

VOCs in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	51151-6 BH1 4.0 27/01/2011 Soil	51151-9 BH2 0.5 27/01/2011 Soil	51151-15 BH3 0.5 27/01/2011 Soil	51151-21 BH4 1.2 27/01/2011 Soil	51151-26 BH5 0.3 27/01/2011 Soil
Date extracted	-	02/02/2011	02/02/2011	02/02/2011	02/02/2011	02/02/2011
Date analysed	-	03/02/2011	03/02/2011	03/02/2011	03/02/2011	03/02/2011
Dichlorodifluoromethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-dichloroethene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-dichloroethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-dichloroethene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
bromochloromethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
chloroform	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
2,2-dichloropropane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichloroethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-trichloroethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-dichloropropene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Cyclohexane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
carbon tetrachloride	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Benzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
dibromomethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichloropropane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
trichloroethene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
bromodichloromethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,3-dichloropropene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-dichloropropene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-trichloroethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-dichloropropane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
dibromochloromethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dibromoethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
tetrachloroethene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1,2-tetrachloroethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
chlorobenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
bromoform	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
styrene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-tetrachloroethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0

VOCs in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	51151-6 BH1 4.0 27/01/2011 Soil	51151-9 BH2 0.5 27/01/2011 Soil	51151-15 BH3 0.5 27/01/2011 Soil	51151-21 BH4 1.2 27/01/2011 Soil	51151-26 BH5 0.3 27/01/2011 Soil
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-trichloropropane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
isopropylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
bromobenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
n-propyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
2-chlorotoluene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
4-chlorotoluene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,3,5-trimethyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
tert-butyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-trimethyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-dichlorobenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
sec-butyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-dichlorobenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
4-isopropyl toluene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichlorobenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
n-butyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dibromo-3-chloropropane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-trichlorobenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
hexachlorobutadiene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-trichlorobenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate Dibromofluorometha	%	99	98	100	99	98
Surrogate aaa-Trifluorotoluene	%	113	121	120	113	120
Surrogate Toluene-d8	%	100	101	101	101	101
Surrogate 4-Bromofluorobenzene	%	105	103	103	104	105

VOCs in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	51151-33 BH6 1.0 28/01/2011 Soil	51151-36 BH7 1.0 28/01/2011 Soil	51151-39 BH8 0.3 28/01/2011 Soil	51151-44 BH9 0.5 28/01/2011 Soil	51151-46 BH10 0.6 28/01/2011 Soil
Date extracted	-	02/02/2011	02/02/2011	02/02/2011	02/02/2011	02/02/2011
Date analysed	-	03/02/2011	03/02/2011	03/02/2011	03/02/2011	03/02/2011
Dichlorodifluoromethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-dichloroethene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-dichloroethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-dichloroethene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
bromochloromethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
chloroform	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
2,2-dichloropropane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichloroethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-trichloroethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-dichloropropene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Cyclohexane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
carbon tetrachloride	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Benzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
dibromomethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichloropropane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
trichloroethene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
bromodichloromethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,3-dichloropropene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-dichloropropene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-trichloroethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-dichloropropane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
dibromochloromethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dibromoethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
tetrachloroethene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1,2-tetrachloroethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
chlorobenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
bromoform	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
styrene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-tetrachloroethane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0

VOCs in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	51151-33 BH6 1.0 28/01/2011 Soil	51151-36 BH7 1.0 28/01/2011 Soil	51151-39 BH8 0.3 28/01/2011 Soil	51151-44 BH9 0.5 28/01/2011 Soil	51151-46 BH10 0.6 28/01/2011 Soil
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-trichloropropane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
isopropylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
bromobenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
n-propyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
2-chlorotoluene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
4-chlorotoluene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,3,5-trimethyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
tert-butyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-trimethyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-dichlorobenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
sec-butyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-dichlorobenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
4-isopropyl toluene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichlorobenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
n-butyl benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dibromo-3-chloropropane	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-trichlorobenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
hexachlorobutadiene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-trichlorobenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate Dibromofluorometha	%	99	98	99	105	102
Surrogate aaa-Trifluorotoluene	%	121	120	116	113	121
Surrogate Toluene-d8	%	102	101	101	103	105
Surrogate 4-Bromofluorobenzene	%	103	104	102	106	107

VOCs in soil		
Our Reference:	UNITS	51151-50
Your Reference	-----	Dup1
Depth	-----	-
Date Sampled		27/01/2011
Type of sample		Soil
Date extracted	-	02/02/2011
Date analysed	-	03/02/2011
Dichlorodifluoromethane	mg/kg	<1.0
Chloromethane	mg/kg	<1.0
Vinyl Chloride	mg/kg	<1.0
Bromomethane	mg/kg	<1.0
Chloroethane	mg/kg	<1.0
Trichlorofluoromethane	mg/kg	<1.0
1,1-Dichloroethene	mg/kg	<1.0
trans-1,2-dichloroethene	mg/kg	<1.0
1,1-dichloroethane	mg/kg	<1.0
cis-1,2-dichloroethene	mg/kg	<1.0
bromochloromethane	mg/kg	<1.0
chloroform	mg/kg	<1.0
2,2-dichloropropane	mg/kg	<1.0
1,2-dichloroethane	mg/kg	<1.0
1,1,1-trichloroethane	mg/kg	<1.0
1,1-dichloropropene	mg/kg	<1.0
Cyclohexane	mg/kg	<1.0
carbon tetrachloride	mg/kg	<1.0
Benzene	mg/kg	<0.5
dibromomethane	mg/kg	<1.0
1,2-dichloropropane	mg/kg	<1.0
trichloroethene	mg/kg	<1.0
bromodichloromethane	mg/kg	<1.0
trans-1,3-dichloropropene	mg/kg	<1.0
cis-1,3-dichloropropene	mg/kg	<1.0
1,1,2-trichloroethane	mg/kg	<1.0
Toluene	mg/kg	<0.5
1,3-dichloropropane	mg/kg	<1.0
dibromochloromethane	mg/kg	<1.0
1,2-dibromoethane	mg/kg	<1.0
tetrachloroethene	mg/kg	<1.0
1,1,1,2-tetrachloroethane	mg/kg	<1.0
chlorobenzene	mg/kg	<1.0
Ethylbenzene	mg/kg	<1.0
bromoform	mg/kg	<1.0
m+p-xylene	mg/kg	<2.0
styrene	mg/kg	<1.0
1,1,2,2-tetrachloroethane	mg/kg	<1.0

VOCs in soil		
Our Reference:	UNITS	51151-50
Your Reference	-----	Dup1
Depth	-----	-
Date Sampled		27/01/2011
Type of sample		Soil
o-Xylene	mg/kg	<1.0
1,2,3-trichloropropane	mg/kg	<1.0
isopropylbenzene	mg/kg	<1.0
bromobenzene	mg/kg	<1.0
n-propyl benzene	mg/kg	<1.0
2-chlorotoluene	mg/kg	<1.0
4-chlorotoluene	mg/kg	<1.0
1,3,5-trimethyl benzene	mg/kg	<1.0
tert-butyl benzene	mg/kg	<1.0
1,2,4-trimethyl benzene	mg/kg	<1.0
1,3-dichlorobenzene	mg/kg	<1.0
sec-butyl benzene	mg/kg	<1.0
1,4-dichlorobenzene	mg/kg	<1.0
4-isopropyl toluene	mg/kg	<1.0
1,2-dichlorobenzene	mg/kg	<1.0
n-butyl benzene	mg/kg	<1.0
1,2-dibromo-3-chloropropane	mg/kg	<1.0
1,2,4-trichlorobenzene	mg/kg	<1.0
hexachlorobutadiene	mg/kg	<1.0
1,2,3-trichlorobenzene	mg/kg	<1.0
Surrogate Dibromofluorometha	%	101
Surrogate aaa-Trifluorotoluene	%	115
Surrogate Toluene-d8	%	104
Surrogate 4-Bromofluorobenzene	%	105

Client Reference: 15742, Columbia Precinct Homebush

vTRH & BTEX in Soil						
Our Reference:	UNITS	51151-6	51151-9	51151-15	51151-21	51151-26
Your Reference	-----	BH1	BH2	BH3	BH4	BH5
Depth	-----	4.0	0.5	0.5	1.2	0.3
Date Sampled		27/01/2011	27/01/2011	27/01/2011	27/01/2011	27/01/2011
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/02/2011	02/02/2011	02/02/2011	02/02/2011	02/02/2011
Date analysed	-	03/02/2011	03/02/2011	03/02/2011	03/02/2011	03/02/2011
vTRH C6 - C9	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate aaa-Trifluorotoluene	%	113	121	120	113	120

vTRH & BTEX in Soil						
Our Reference:	UNITS	51151-33	51151-36	51151-39	51151-44	51151-46
Your Reference	-----	BH6	BH7	BH8	BH9	BH10
Depth	-----	1.0	1.0	0.3	0.5	0.6
Date Sampled		28/01/2011	28/01/2011	28/01/2011	28/01/2011	28/01/2011
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/02/2011	02/02/2011	02/02/2011	02/02/2011	02/02/2011
Date analysed	-	03/02/2011	03/02/2011	03/02/2011	03/02/2011	03/02/2011
vTRH C6 - C9	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate aaa-Trifluorotoluene	%	121	120	116	113	121

vTRH & BTEX in Soil		
Our Reference:	UNITS	51151-50
Your Reference	-----	Dup1
Depth	-----	-
Date Sampled		27/01/2011
Type of sample		Soil
Date extracted	-	02/02/2011
Date analysed	-	03/02/2011
vTRH C6 - C9	mg/kg	<25
Benzene	mg/kg	<0.5
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1.0
m+p-xylene	mg/kg	<2.0
o-Xylene	mg/kg	<1.0
Surrogate aaa-Trifluorotoluene	%	115

Client Reference: 15742, Columbia Precinct Homebush

sTRH in Soil (C10-C36)						
Our Reference:	UNITS	51151-6	51151-9	51151-15	51151-21	51151-26
Your Reference	-----	BH1	BH2	BH3	BH4	BH5
Depth	-----	4.0	0.5	0.5	1.2	0.3
Date Sampled		27/01/2011	27/01/2011	27/01/2011	27/01/2011	27/01/2011
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/02/2011	02/02/2011	02/02/2011	02/02/2011	02/02/2011
Date analysed	-	03/02/2011	03/02/2011	03/02/2011	03/02/2011	03/02/2011
TRH C10 - C14	mg/kg	<50	<50	<50	<50	<50
TRH C15 - C28	mg/kg	<100	<100	<100	<100	<100
TRH C29 - C36	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	103	106	104	105	106

sTRH in Soil (C10-C36)						
Our Reference:	UNITS	51151-33	51151-36	51151-39	51151-44	51151-46
Your Reference	-----	BH6	BH7	BH8	BH9	BH10
Depth	-----	1.0	1.0	0.3	0.5	0.6
Date Sampled		28/01/2011	28/01/2011	28/01/2011	28/01/2011	28/01/2011
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/02/2011	02/02/2011	02/02/2011	02/02/2011	02/02/2011
Date analysed	-	03/02/2011	03/02/2011	03/02/2011	03/02/2011	03/02/2011
TRH C10 - C14	mg/kg	<50	<50	<50	69	<50
TRH C15 - C28	mg/kg	370	<100	<100	450	<100
TRH C29 - C36	mg/kg	680	<100	<100	180	<100
Surrogate o-Terphenyl	%	108	105	105	133	106

sTRH in Soil (C10-C36)		
Our Reference:	UNITS	51151-50
Your Reference	-----	Dup1
Depth	-----	-
Date Sampled		27/01/2011
Type of sample		Soil
Date extracted	-	02/02/2011
Date analysed	-	03/02/2011
TRH C10 - C14	mg/kg	<50
TRH C15 - C28	mg/kg	<100
TRH C29 - C36	mg/kg	<100
Surrogate o-Terphenyl	%	105

Client Reference: 15742, Columbia Precinct Homebush

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	51151-6 BH1 4.0 27/01/2011 Soil	51151-9 BH2 0.5 27/01/2011 Soil	51151-15 BH3 0.5 27/01/2011 Soil	51151-21 BH4 1.2 27/01/2011 Soil	51151-26 BH5 0.3 27/01/2011 Soil
Date extracted	-	02/02/2011	02/02/2011	02/02/2011	02/02/2011	02/02/2011
Date analysed	-	03/02/2011	03/02/2011	03/02/2011	03/02/2011	03/02/2011
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.5	<0.1	0.1	0.4	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.7	<0.1	0.3	0.9	<0.1
Pyrene	mg/kg	0.7	<0.1	0.3	0.9	<0.1
Benzo(a)anthracene	mg/kg	0.3	<0.1	0.2	0.5	<0.1
Chrysene	mg/kg	0.4	<0.1	0.2	0.5	<0.1
Benzo(b+k)fluoranthene	mg/kg	0.6	<0.2	0.3	0.9	<0.2
Benzo(a)pyrene	mg/kg	0.4	<0.05	0.2	0.6	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.2	<0.1	0.1	0.3	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.2	<0.1	0.1	0.3	<0.1
Surrogate p-Terphenyl-d14	%	109	99	101	107	100

Client Reference: 15742, Columbia Precinct Homebush

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	51151-33 BH6 1.0 28/01/2011 Soil	51151-36 BH7 1.0 28/01/2011 Soil	51151-39 BH8 0.3 28/01/2011 Soil	51151-44 BH9 0.5 28/01/2011 Soil	51151-46 BH10 0.6 28/01/2011 Soil
Date extracted	-	02/02/2011	02/02/2011	02/02/2011	02/02/2011	02/02/2011
Date analysed	-	03/02/2011	03/02/2011	03/02/2011	03/02/2011	03/02/2011
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	0.4	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.4	0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Fluoranthene	mg/kg	0.2	0.2	<0.1	1.2	0.2
Pyrene	mg/kg	0.2	0.2	<0.1	1.4	0.2
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	0.4	0.2
Chrysene	mg/kg	0.2	0.1	<0.1	0.5	0.2
Benzo(b+k)fluoranthene	mg/kg	0.3	<0.2	<0.2	1	0.4
Benzo(a)pyrene	mg/kg	0.2	0.1	<0.05	0.7	0.3
Indeno(1,2,3-c,d)pyrene	mg/kg	0.2	<0.1	<0.1	0.4	0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.2	<0.1	<0.1	0.4	0.1
Surrogate p-Terphenyl-d ₁₄	%	101	105	107	103	105

PAHs in Soil		
Our Reference:	UNITS	51151-50
Your Reference	-----	Dup1
Depth	-----	-
Date Sampled		27/01/2011
Type of sample		Soil
Date extracted	-	02/02/2011
Date analysed	-	03/02/2011
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Surrogate p-Terphenyl-d ¹⁴	%	103

Client Reference: 15742, Columbia Precinct Homebush

Acid Extractable metals in soil						
Our Reference:	UNITS	51151-6	51151-9	51151-15	51151-21	51151-26
Your Reference	-----	BH1	BH2	BH3	BH4	BH5
Depth	-----	4.0	0.5	0.5	1.2	0.3
Date Sampled		27/01/2011	27/01/2011	27/01/2011	27/01/2011	27/01/2011
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	03/02/2011	03/02/2011	03/02/2011	03/02/2011	03/02/2011
Date analysed	-	03/02/2011	03/02/2011	03/02/2011	03/02/2011	03/02/2011
Arsenic	mg/kg	5	<4	7	7	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	10	13	26	19	7
Copper	mg/kg	11	12	28	500	4
Lead	mg/kg	17	15	190	240	10
Mercury	mg/kg	<0.1	<0.1	<0.1	0.6	<0.1
Nickel	mg/kg	3	4	8	16	2
Zinc	mg/kg	15	6	26	420	3

Acid Extractable metals in soil						
Our Reference:	UNITS	51151-33	51151-36	51151-39	51151-44	51151-46
Your Reference	-----	BH6	BH7	BH8	BH9	BH10
Depth	-----	1.0	1.0	0.3	0.5	0.6
Date Sampled		28/01/2011	28/01/2011	28/01/2011	28/01/2011	28/01/2011
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	03/02/2011	03/02/2011	03/02/2011	03/02/2011	03/02/2011
Date analysed	-	03/02/2011	03/02/2011	03/02/2011	03/02/2011	03/02/2011
Arsenic	mg/kg	<4	<4	7	19	11
Cadmium	mg/kg	<0.5	<0.5	<0.5	0.5	<0.5
Chromium	mg/kg	21	14	21	11	15
Copper	mg/kg	33	9	29	35	25
Lead	mg/kg	26	12	52	28	29
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	44	4	9	12	8
Zinc	mg/kg	120	6	36	77	37

Client Reference: 15742, Columbia Precinct Homebush

Acid Extractable metals in soil		
Our Reference:	UNITS	51151-50
Your Reference	-----	Dup1
Depth	-----	-
Date Sampled		27/01/2011
Type of sample		Soil
Date digested	-	03/02/2011
Date analysed	-	03/02/2011
Arsenic	mg/kg	9
Cadmium	mg/kg	<0.5
Chromium	mg/kg	21
Copper	mg/kg	130
Lead	mg/kg	41
Mercury	mg/kg	<0.1
Nickel	mg/kg	9
Zinc	mg/kg	79

Client Reference: 15742, Columbia Precinct Homebush

Moisture						
Our Reference:	UNITS	51151-6	51151-9	51151-15	51151-21	51151-26
Your Reference	-----	BH1	BH2	BH3	BH4	BH5
Depth	-----	4.0	0.5	0.5	1.2	0.3
Date Sampled		27/01/2011	27/01/2011	27/01/2011	27/01/2011	27/01/2011
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	2/02/2011	2/02/2011	2/02/2011	2/02/2011	2/02/2011
Date analysed	-	3/02/2011	3/02/2011	3/02/2011	3/02/2011	3/02/2011
Moisture	%	19	18	22	20	17

Moisture						
Our Reference:	UNITS	51151-33	51151-36	51151-39	51151-44	51151-46
Your Reference	-----	BH6	BH7	BH8	BH9	BH10
Depth	-----	1.0	1.0	0.3	0.5	0.6
Date Sampled		28/01/2011	28/01/2011	28/01/2011	28/01/2011	28/01/2011
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	2/02/2011	2/02/2011	2/02/2011	2/02/2011	2/02/2011
Date analysed	-	3/02/2011	3/02/2011	3/02/2011	3/02/2011	3/02/2011
Moisture	%	18	21	26	20	27

Moisture		
Our Reference:	UNITS	51151-50
Your Reference	-----	Dup1
Depth	-----	-
Date Sampled		27/01/2011
Type of sample		Soil
Date prepared	-	2/02/2011
Date analysed	-	3/02/2011
Moisture	%	19

Method ID	Methodology Summary
GC.14	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
GC.16	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS.
GC.3	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
GC.12 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Metals.20 ICP-AES	Determination of various metals by ICP-AES.
Metals.21 CV-AAS	Determination of Mercury by Cold Vapour AAS.
LAB.8	Moisture content determined by heating at 105 deg C for a minimum of 4 hours.

Client Reference: 15742, Columbia Precinct Homebush

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
VOCs in soil						Base II Duplicate II %RPD		
Date extracted	-			02/02/2011	51151-6	02/02/2011 02/02/2011	LCS-1	02/02/2011
Date analysed	-			03/02/2011	51151-6	03/02/2011 03/02/2011	LCS-1	03/02/2011
Dichlorodifluoromethane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
Chloromethane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
Vinyl Chloride	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
Bromomethane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
Chloroethane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
Trichlorofluoromethane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
1,1-Dichloroethene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
trans-1,2-dichloroethene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
1,1-dichloroethane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	LCS-1	75%
cis-1,2-dichloroethene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
bromochloromethane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
chloroform	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	LCS-1	94%
2,2-dichloropropane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
1,2-dichloroethane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	LCS-1	95%
1,1,1-trichloroethane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	LCS-1	67%
1,1-dichloropropene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
Cyclohexane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
carbon tetrachloride	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
Benzene	mg/kg	0.5	GC.14	<0.5	51151-6	<0.5 <0.5	[NR]	[NR]
dibromomethane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
1,2-dichloropropane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
trichloroethene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	LCS-1	69%
bromodichloromethane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	LCS-1	86%
trans-1,3-dichloropropene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
cis-1,3-dichloropropene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
1,1,2-trichloroethane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
Toluene	mg/kg	0.5	GC.14	<0.5	51151-6	<0.5 <0.5	[NR]	[NR]
1,3-dichloropropane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
dibromochloromethane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	LCS-1	88%
1,2-dibromoethane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
tetrachloroethene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	LCS-1	78%
1,1,1,2-tetrachloroethane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
chlorobenzene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
Ethylbenzene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
bromoform	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
m+p-xylene	mg/kg	2	GC.14	<2.0	51151-6	<2.0 <2.0	[NR]	[NR]
styrene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
1,1,2,2-tetrachloroethane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]

Client Reference: 15742, Columbia Precinct Homebush

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
VOCs in soil						Base II Duplicate II %RPD		
o-Xylene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
1,2,3-trichloropropane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
isopropylbenzene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
bromobenzene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
n-propyl benzene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
2-chlorotoluene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
4-chlorotoluene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
1,3,5-trimethyl benzene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
tert-butyl benzene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
1,2,4-trimethyl benzene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
1,3-dichlorobenzene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
sec-butyl benzene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
1,4-dichlorobenzene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
4-isopropyl toluene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
1,2-dichlorobenzene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
n-butyl benzene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
1,2-dibromo-3-chloropropane	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
1,2,4-trichlorobenzene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
hexachlorobutadiene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
1,2,3-trichlorobenzene	mg/kg	1	GC.14	<1.0	51151-6	<1.0 <1.0	[NR]	[NR]
Surrogate Dibromofluorometha	%		GC.14	100	51151-6	99 99 RPD: 0	LCS-1	96%
Surrogate aaa-Trifluorotoluene	%		GC.14	117	51151-6	113 130 RPD: 14	LCS-1	126%
Surrogate Toluene-d8	%		GC.14	100	51151-6	100 101 RPD: 1	LCS-1	105%
Surrogate 4-Bromofluorobenzene	%		GC.14	105	51151-6	105 104 RPD: 1	LCS-1	108%

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QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTRH & BTEX in Soil						Base II Duplicate II %RPD		
Date extracted	-			02/02/2011	51151-6	02/02/2011 02/02/2011	LCS-1	02/02/2011
Date analysed	-			03/02/2011	51151-6	03/02/2011 03/02/2011	LCS-1	03/02/2011
vTRH C6 - C9	mg/kg	25	GC.16	<25	51151-6	<25 <25	LCS-1	109%
Benzene	mg/kg	0.5	GC.16	<0.5	51151-6	<0.5 <0.5	LCS-1	108%
Toluene	mg/kg	0.5	GC.16	<0.5	51151-6	<0.5 <0.5	LCS-1	106%
Ethylbenzene	mg/kg	1	GC.16	<1.0	51151-6	<1.0 <1.0	LCS-1	109%
m+p-xylene	mg/kg	2	GC.16	<2.0	51151-6	<2.0 <2.0	LCS-1	110%
o-Xylene	mg/kg	1	GC.16	<1.0	51151-6	<1.0 <1.0	LCS-1	116%
Surrogate aaa-Trifluorotoluene	%		GC.16	117	51151-6	113 130 RPD: 14	LCS-1	127%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
sTRH in Soil (C10-C36)						Base II Duplicate II %RPD		
Date extracted	-			02/02/2011	51151-6	02/02/2011 02/02/2011	LCS-1	02/02/2011
Date analysed	-			02/02/2011	51151-6	03/02/2011 03/02/2011	LCS-1	02/02/2011
TRH C10 - C14	mg/kg	50	GC.3	<50	51151-6	<50 <50	LCS-1	94%
TRH C15 - C28	mg/kg	100	GC.3	<100	51151-6	<100 <100	LCS-1	104%
TRH C29 - C36	mg/kg	100	GC.3	<100	51151-6	<100 <100	LCS-1	95%
Surrogate o-Terphenyl	%		GC.3	102	51151-6	103 103 RPD: 0	LCS-1	102%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Date extracted	-			02/02/2011	51151-6	02/02/2011 02/02/2011	LCS-7	02/02/2011
Date analysed	-			03/02/2011	51151-6	03/02/2011 03/02/2011	LCS-7	03/02/2011
Naphthalene	mg/kg	0.1	GC.12 subset	<0.1	51151-6	<0.1 <0.1	LCS-7	98%
Acenaphthylene	mg/kg	0.1	GC.12 subset	<0.1	51151-6	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	GC.12 subset	<0.1	51151-6	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	GC.12 subset	<0.1	51151-6	<0.1 <0.1	LCS-7	96%
Phenanthrene	mg/kg	0.1	GC.12 subset	<0.1	51151-6	0.5 0.3 RPD: 50	LCS-7	103%
Anthracene	mg/kg	0.1	GC.12 subset	<0.1	51151-6	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	GC.12 subset	<0.1	51151-6	0.7 0.6 RPD: 15	LCS-7	100%
Pyrene	mg/kg	0.1	GC.12 subset	<0.1	51151-6	0.7 0.6 RPD: 15	LCS-7	105%
Benzo(a)anthracene	mg/kg	0.1	GC.12 subset	<0.1	51151-6	0.3 0.3 RPD: 0	[NR]	[NR]

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QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Chrysene	mg/kg	0.1	GC.12 subset	<0.1	51151-6	0.4 0.4 RPD: 0	LCS-7	113%
Benzo(b+k)fluoranthene	mg/kg	0.2	GC.12 subset	<0.2	51151-6	0.6 0.6 RPD: 0	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	GC.12 subset	<0.05	51151-6	0.4 0.4 RPD: 0	LCS-7	94%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	GC.12 subset	<0.1	51151-6	0.2 0.2 RPD: 0	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	GC.12 subset	<0.1	51151-6	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	GC.12 subset	<0.1	51151-6	0.2 0.2 RPD: 0	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		GC.12 subset	99	51151-6	109 103 RPD: 6	LCS-7	106%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Date digested	-			03/02/2011	51151-6	03/02/2011 03/02/2011	LCS-1	03/02/2011
Date analysed	-			03/02/2011	51151-6	03/02/2011 03/02/2011	LCS-1	03/02/2011
Arsenic	mg/kg	4	Metals.20 ICP-AES	<4	51151-6	5 4 RPD: 22	LCS-1	108%
Cadmium	mg/kg	0.5	Metals.20 ICP-AES	<0.5	51151-6	<0.5 <0.5	LCS-1	110%
Chromium	mg/kg	1	Metals.20 ICP-AES	<1	51151-6	10 11 RPD: 10	LCS-1	109%
Copper	mg/kg	1	Metals.20 ICP-AES	<1	51151-6	11 10 RPD: 10	LCS-1	111%
Lead	mg/kg	1	Metals.20 ICP-AES	<1	51151-6	17 16 RPD: 6	LCS-1	108%
Mercury	mg/kg	0.1	Metals.21 CV-AAS	<0.1	51151-6	<0.1 <0.1	LCS-1	102%
Nickel	mg/kg	1	Metals.20 ICP-AES	<1	51151-6	3 3 RPD: 0	LCS-1	110%
Zinc	mg/kg	1	Metals.20 ICP-AES	<1	51151-6	15 16 RPD: 6	LCS-1	110%

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QUALITY CONTROL	UNITS	PQL	METHOD	Blank		
Moisture						
Date prepared	-			02/02/2011		
Date analysed	-			03/02/2011		
Moisture	%	0.1	LAB.8	<0.10		
QUALITY CONTROL	UNITS	Dup. Sm#	Duplicate	Spike Sm#	Spike % Recovery	
VOCs in soil			Base + Duplicate + %RPD			
Date extracted	-	51151-50	02/02/2011 02/02/2011	51151-9	02/02/2011	
Date analysed	-	51151-50	03/02/2011 03/02/2011	51151-9	03/02/2011	
Dichlorodifluoromethane	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
Chloromethane	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
Vinyl Chloride	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
Bromomethane	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
Chloroethane	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
Trichlorofluoromethane	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
1,1-Dichloroethene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
trans-1,2-dichloroethene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
1,1-dichloroethane	mg/kg	51151-50	<1.0 <1.0	51151-9	73%	
cis-1,2-dichloroethene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
bromochloromethane	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
chloroform	mg/kg	51151-50	<1.0 <1.0	51151-9	91%	
2,2-dichloropropane	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
1,2-dichloroethane	mg/kg	51151-50	<1.0 <1.0	51151-9	92%	
1,1,1-trichloroethane	mg/kg	51151-50	<1.0 <1.0	51151-9	66%	
1,1-dichloropropene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
Cyclohexane	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
carbon tetrachloride	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
Benzene	mg/kg	51151-50	<0.5 <0.5	[NR]	[NR]	
dibromomethane	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
1,2-dichloropropane	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
trichloroethene	mg/kg	51151-50	<1.0 <1.0	51151-9	67%	
bromodichloromethane	mg/kg	51151-50	<1.0 <1.0	51151-9	80%	
trans-1,3-dichloropropene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
cis-1,3-dichloropropene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
1,1,2-trichloroethane	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
Toluene	mg/kg	51151-50	<0.5 <0.5	[NR]	[NR]	
1,3-dichloropropane	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
dibromochloromethane	mg/kg	51151-50	<1.0 <1.0	51151-9	81%	
1,2-dibromoethane	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	
tetrachloroethene	mg/kg	51151-50	<1.0 <1.0	51151-9	76%	
1,1,1,2-tetrachloroethane	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]	

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QUALITY CONTROL VOCs in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
chlorobenzene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
Ethylbenzene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
bromoform	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
m+p-xylene	mg/kg	51151-50	<2.0 <2.0	[NR]	[NR]
styrene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
1,1,2,2-tetrachloroethane	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
o-Xylene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
1,2,3-trichloropropane	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
isopropylbenzene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
bromobenzene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
n-propyl benzene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
2-chlorotoluene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
4-chlorotoluene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
1,3,5-trimethyl benzene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
tert-butyl benzene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
1,2,4-trimethyl benzene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
1,3-dichlorobenzene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
sec-butyl benzene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
1,4-dichlorobenzene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
4-isopropyl toluene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
1,2-dichlorobenzene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
n-butyl benzene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
1,2-dibromo-3-chloropropane	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
1,2,4-trichlorobenzene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
hexachlorobutadiene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
1,2,3-trichlorobenzene	mg/kg	51151-50	<1.0 <1.0	[NR]	[NR]
Surrogate Dibromofluorometha	%	51151-50	101 100 RPD: 1	51151-9	97%
Surrogate aaa-Trifluorotoluene	%	51151-50	115 122 RPD: 6	51151-9	123%
Surrogate Toluene-d8	%	51151-50	104 104 RPD: 0	51151-9	105%
Surrogate 4-Bromofluorobenzene	%	51151-50	105 105 RPD: 0	51151-9	106%

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QUALITY CONTROL vTRH & BTEX in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	51151-50	02/02/2011 02/02/2011	51151-10	02/02/2011
Date analysed	-	51151-50	03/02/2011 03/02/2011	51151-10	03/03/2011
vTRH C ₆ - C ₉	mg/kg	51151-50	<25 <25	51151-10	109%
Benzene	mg/kg	51151-50	<0.5 <0.5	51151-10	107%
Toluene	mg/kg	51151-50	<0.5 <0.5	51151-10	105%
Ethylbenzene	mg/kg	51151-50	<1.0 <1.0	51151-10	109%
m+p-xylene	mg/kg	51151-50	<2.0 <2.0	51151-10	111%
o-Xylene	mg/kg	51151-50	<1.0 <1.0	51151-10	112%
Surrogate aaa-Trifluorotoluene	%	51151-50	115 122 RPD: 6	51151-10	124%
QUALITY CONTROL sTRH in Soil (C10-C36)	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	51151-50	02/02/2011 02/02/2011	51151-9	02/02/2011
Date analysed	-	51151-50	03/02/2011 03/02/2011	51151-9	03/02/2011
TRH C ₁₀ - C ₁₄	mg/kg	51151-50	<50 <50	51151-9	97%
TRH C ₁₅ - C ₂₈	mg/kg	51151-50	<100 <100	51151-9	107%
TRH C ₂₉ - C ₃₆	mg/kg	51151-50	<100 <100	51151-9	100%
Surrogate o-Terphenyl	%	51151-50	105 104 RPD: 1	51151-9	103%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	51151-50	02/02/2011 02/02/2011	51151-9	02/02/2011
Date analysed	-	51151-50	03/02/2011 03/02/2011	51151-9	03/02/2011
Naphthalene	mg/kg	51151-50	<0.1 <0.1	51151-9	95%
Acenaphthylene	mg/kg	51151-50	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	51151-50	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	51151-50	<0.1 <0.1	51151-9	92%
Phenanthrene	mg/kg	51151-50	<0.1 <0.1	51151-9	104%
Anthracene	mg/kg	51151-50	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	51151-50	<0.1 <0.1	51151-9	96%
Pyrene	mg/kg	51151-50	<0.1 <0.1	51151-9	102%
Benzo(a)anthracene	mg/kg	51151-50	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	51151-50	<0.1 <0.1	51151-9	112%
Benzo(b+k)fluoranthene	mg/kg	51151-50	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	51151-50	<0.05 <0.05	51151-9	89%
Indeno(1,2,3-c,d)pyrene	mg/kg	51151-50	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	51151-50	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	51151-50	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d ₁₄	%	51151-50	103 107 RPD: 4	51151-9	104%

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QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	51151-50	03/02/2011 03/02/2011	51151-9	03/02/2011
Date analysed	-	51151-50	03/02/2011 03/02/2011	51151-9	03/02/2011
Arsenic	mg/kg	51151-50	9 12 RPD: 29	51151-9	96%
Cadmium	mg/kg	51151-50	<0.5 <0.5	51151-9	99%
Chromium	mg/kg	51151-50	21 15 RPD: 33	51151-9	99%
Copper	mg/kg	51151-50	130 150 RPD: 14	51151-9	103%
Lead	mg/kg	51151-50	41 38 RPD: 8	51151-9	97%
Mercury	mg/kg	51151-50	<0.1 <0.1	51151-9	105%
Nickel	mg/kg	51151-50	9 9 RPD: 0	51151-9	98%
Zinc	mg/kg	51151-50	79 130 RPD: 49	51151-9	99%

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

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.

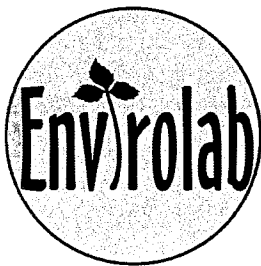
Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

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.



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CERTIFICATE OF ANALYSIS

51151-A

Client:

WSP Environment Energy
Level 1, 41 McLaren St
North Sydney
NSW 2060

Attention: Aaron Young / Stephen Barnett / Josie Milner

Sample log in details:

Your Reference:

15742, Columbia Precinct Homebush

No. of samples:

Additional Testing on 10 Soils

Date samples received / completed instructions received

01/02/11 / 21/02/11

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: / Issue Date:

28/02/11 / 24/02/11

Date of Preliminary Report:

Not issued

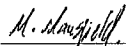
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Results Approved By:


Matt Mansfield
Approved Signatory



EnviroLab Reference: 51151-A
Revision No: R 00

Asbestos ID - soils		51151-A-6	51151-A-9	51151-A-15	51151-A-21	51151-A-26
Our Reference:	UNITS	BH1	BH2	BH3	BH4	BH5
Your Reference	-----					
Depth	-----	4.0	0.5	0.5	1.2	0.3
Date Sampled		27/01/2011	27/01/2011	27/01/2011	27/01/2011	27/01/2011
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	24/02/2011	24/02/2011	24/02/2011	24/02/2011	24/02/2011
Sample Description	-	Approx 45g Clay Soil	Approx 45g Clay Soil	Approx 45g Clay Soil	Approx 45g Clay Soil	Approx 45g Clay Soil
Asbestos ID in soil	-	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg
Trace Analysis	-	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected

Asbestos ID - soils		51151-A-33	51151-A-36	51151-A-39	51151-A-44	51151-A-46
Our Reference:	UNITS	BH6	BH7	BH8	BH9	BH10
Your Reference	-----					
Depth	-----	1.0	1.0	0.3	0.5	0.6
Date Sampled		28/01/2011	28/01/2011	28/01/2011	28/01/2011	28/01/2011
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	24/02/2011	24/02/2011	24/02/2011	24/02/2011	24/02/2011
Sample Description	-	Approx 45g Clay Soil	Approx 45g Clay Soil	Approx 45g Clay Soil	Approx 45g Clay Soil	Approx 45g Clay Soil
Asbestos ID in soil	-	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg
Trace Analysis	-	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected

Method ID	Methodology Summary
ASB.1	Asbestos ID - Qualitative identification of asbestos type fibres in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques.

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.

Client: WSP

Project Mgr: Stephen Barnett

Sampler: Josel Miller

Address: Level 1/41 McLaren St.

North Sydney NSW 2060

Email: josie.milnev@wspgroup.com

Phone: (02) 89256721
Fax: (02) 89256799

Client Project Name and Number:

Columbia Precinct 15742

PO No.:

Envirolab Services Quote No.:

Date results required:

Or choose: standard 1 day / 2 day / 3 day

Note: Inform lab in advance if urgent turnaround is required. surcharge applies

Envirolab Services

12 Ashley St, Chatswood, NSW, 2067

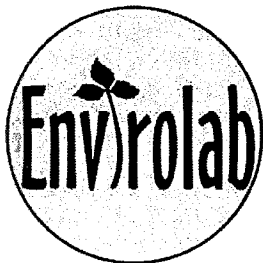
Phone: 02 9910 6200

Fax: 02 9910 6201

E-mail: ahie@envirolabservices.com.au

Contact: Aileen Hie

Sample Information				Tests Required												Comments		
Envirolab Sample ID	Client Sample ID	Date sampled	Type of sample	Metals(8)	TPH	VOCs												Provide as much information about the sample as you can
1	GW1	4-2-11	water	✓	✓	✓												
2	GW2	↓	↓	✓	✓	✓												
3	GW3			✓	✓	✓												
4	Dup1			✓	✓	✓												
5	Rin'sale	↓	↓	✓	✓	✓												
6	Trip Blank																	



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

51457

Client:

WSP Environment Energy
Level 1, 41 McLaren St
North Sydney
NSW 2060

Attention: Josie Milner

Sample log in details:

Your Reference:	<u>15742, Columbia Precinct</u>
No. of samples:	6 Waters
Date samples received / completed instructions received	07/02/11 / 07/02/11

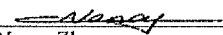
Analysis Details:

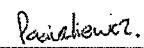
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date: 14/02/11 / 11/02/11
Date of Preliminary Report: Not issued
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Results Approved By:


Nancy Zhang
Chemist


Kasjan Paciuszkiewicz
Chemist



VOCs in water Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	51457-1 GW1 4/02/2011 Water	51457-2 GW2 4/02/2011 Water	51457-3 GW3 4/02/2011 Water	51457-4 Dup1 4/02/2011 Water	51457-5 Rinsate 4/02/2011 Water
Date extracted	-	11/02/2011	11/02/2011	11/02/2011	11/02/2011	11/02/2011
Date analysed	-	11/02/2011	11/02/2011	11/02/2011	11/02/2011	11/02/2011
Dichlorodifluoromethane	µg/L	<10	<10	<10	<10	<10
Chloromethane	µg/L	<10	<10	<10	<10	<10
Vinyl Chloride	µg/L	<10	<10	16	<10	<10
Bromomethane	µg/L	<10	<10	<10	<10	<10
Chloroethane	µg/L	<10	<10	<10	<10	<10
Trichlorofluoromethane	µg/L	<10	<10	<10	<10	<10
1,1-Dichloroethene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Trans-1,2-dichloroethene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-dichloroethane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Cis-1,2-dichloroethene	µg/L	<1.0	<1.0	34	<1.0	<1.0
Bromochloromethane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroform	µg/L	<1.0	<1.0	<1.0	<1.0	1.5
2,2-dichloropropane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichloroethane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-trichloroethane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-dichloropropene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Cyclohexane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon tetrachloride	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Benzene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Dibromomethane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichloropropane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	µg/L	<1.0	<1.0	1.9	<1.0	<1.0
Bromodichloromethane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,3-dichloropropene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-dichloropropene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-trichloroethane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-dichloropropane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Dibromochloromethane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dibromoethane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1,2-tetrachloroethane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
m+p-xylene	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-tetrachloroethane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
o-xylene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-trichloropropane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Isopropylbenzene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0

Client Reference: 15742, Columbia Precinct

VOCs in water Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	51457-1 GW1 4/02/2011 Water	51457-2 GW2 4/02/2011 Water	51457-3 GW3 4/02/2011 Water	51457-4 Dup1 4/02/2011 Water	51457-5 Rinsate 4/02/2011 Water
Bromobenzene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
n-propyl benzene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
2-chlorotoluene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
4-chlorotoluene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,3,5-trimethyl benzene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Tert-butyl benzene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-trimethyl benzene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-dichlorobenzene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Sec-butyl benzene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-dichlorobenzene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
4-isopropyl toluene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichlorobenzene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
n-butyl benzene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dibromo-3-chloropropane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-trichlorobenzene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Hexachlorobutadiene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-trichlorobenzene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate Dibromofluoromethane	%	105	107	102	109	110
Surrogate toluene-d8	%	103	103	105	104	105
Surrogate 4-BFB	%	106	105	105	103	104

VOCs in water Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	51457-6 Trip Blank 4/02/2011 Water
Date extracted	-	11/02/2011
Date analysed	-	11/02/2011
Dichlorodifluoromethane	µg/L	<10
Chloromethane	µg/L	<10
Vinyl Chloride	µg/L	<10
Bromomethane	µg/L	<10
Chloroethane	µg/L	<10
Trichlorofluoromethane	µg/L	<10
1,1-Dichloroethene	µg/L	<1.0
Trans-1,2-dichloroethene	µg/L	<1.0
1,1-dichloroethane	µg/L	<1.0
Cis-1,2-dichloroethene	µg/L	<1.0
Bromochloromethane	µg/L	<1.0
Chloroform	µg/L	<1.0
2,2-dichloropropane	µg/L	<1.0
1,2-dichloroethane	µg/L	<1.0
1,1,1-trichloroethane	µg/L	<1.0
1,1-dichloropropene	µg/L	<1.0
Cyclohexane	µg/L	<1.0
Carbon tetrachloride	µg/L	<1.0
Benzene	µg/L	<1.0
Dibromomethane	µg/L	<1.0
1,2-dichloropropane	µg/L	<1.0
Trichloroethene	µg/L	<1.0
Bromodichloromethane	µg/L	<1.0
trans-1,3-dichloropropene	µg/L	<1.0
cis-1,3-dichloropropene	µg/L	<1.0
1,1,2-trichloroethane	µg/L	<1.0
Toluene	µg/L	<1.0
1,3-dichloropropane	µg/L	<1.0
Dibromochloromethane	µg/L	<1.0
1,2-dibromoethane	µg/L	<1.0
Tetrachloroethene	µg/L	<1.0
1,1,1,2-tetrachloroethane	µg/L	<1.0
Chlorobenzene	µg/L	<1.0
Ethylbenzene	µg/L	<1.0
Bromoform	µg/L	<1.0
m+p-xylene	µg/L	<2.0
Styrene	µg/L	<1.0
1,1,2,2-tetrachloroethane	µg/L	<1.0
o-xylene	µg/L	<1.0
1,2,3-trichloropropane	µg/L	<1.0
Isopropylbenzene	µg/L	<1.0
Bromobenzene	µg/L	<1.0

VOCs in water	UNITS	51457-6
Our Reference:	-----	Trip Blank
Your Reference	-----	4/02/2011
Date Sampled		Water
Type of sample		
n-propyl benzene	µg/L	<1.0
2-chlorotoluene	µg/L	<1.0
4-chlorotoluene	µg/L	<1.0
1,3,5-trimethyl benzene	µg/L	<1.0
Tert-butyl benzene	µg/L	<1.0
1,2,4-trimethyl benzene	µg/L	<1.0
1,3-dichlorobenzene	µg/L	<1.0
Sec-butyl benzene	µg/L	<1.0
1,4-dichlorobenzene	µg/L	<1.0
4-isopropyl toluene	µg/L	<1.0
1,2-dichlorobenzene	µg/L	<1.0
n-butyl benzene	µg/L	<1.0
1,2-dibromo-3-chloropropane	µg/L	<1.0
1,2,4-trichlorobenzene	µg/L	<1.0
Hexachlorobutadiene	µg/L	<1.0
1,2,3-trichlorobenzene	µg/L	<1.0
Surrogate Dibromofluoromethane	%	112
Surrogate toluene-d8	%	105
Surrogate 4-BFB	%	103

Client Reference: 15742, Columbia Precinct

vTRH in Water (C6-C9)						
Our Reference:	UNITS	51457-1	51457-2	51457-3	51457-4	51457-5
Your Reference	-----	GW1	GW2	GW3	Dup1	Rinsate
Date Sampled	-----	4/02/2011	4/02/2011	4/02/2011	4/02/2011	4/02/2011
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	11/02/2011	11/02/2011	11/02/2011	11/02/2011	11/02/2011
Date analysed	-	11/02/2011	11/02/2011	11/02/2011	11/02/2011	11/02/2011
TRH C6 - C9	µg/L	<10	<10	15	<10	<10
Surrogate Dibromofluoromethane	%	105	107	102	109	110
Surrogate toluene-d8	%	103	103	105	104	105
Surrogate 4-BFB	%	106	105	105	103	104

vTRH in Water (C6-C9)		
Our Reference:	UNITS	51457-6
Your Reference	-----	Trip Blank
Date Sampled	-----	4/02/2011
Type of sample		Water
Date extracted	-	11/02/2011
Date analysed	-	11/02/2011
TRH C6 - C9	µg/L	<10
Surrogate Dibromofluoromethane	%	112
Surrogate toluene-d8	%	105
Surrogate 4-BFB	%	103

Client Reference: 15742, Columbia Precinct

sTRH in Water (C10-C36)	UNITS	51457-1	51457-2	51457-3	51457-4	51457-5
Our Reference:	-----	GW1	GW2	GW3	Dup1	Rinsate
Your Reference	-----	4/02/2011	4/02/2011	4/02/2011	4/02/2011	4/02/2011
Date Sampled		Water	Water	Water	Water	Water
Type of sample						
Date extracted	-	09/02/2011	09/02/2011	09/02/2011	09/02/2011	09/02/2011
Date analysed	-	09/02/2011	09/02/2011	09/02/2011	09/02/2011	09/02/2011
TRH C10 - C14	µg/L	<50	<50	<50	<50	<50
TRH C15 - C28	µg/L	<100	<100	<100	<100	<100
TRH C29 - C36	µg/L	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	112	98	114	97	87

Client Reference: 15742, Columbia Precinct

HM in water - dissolved						
Our Reference:	UNITS	51457-1	51457-2	51457-3	51457-4	51457-5
Your Reference	-----	GW1	GW2	GW3	Dup1	Rinsate
Date Sampled	-----	4/02/2011	4/02/2011	4/02/2011	4/02/2011	4/02/2011
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	08/02/2011	08/02/2011	08/02/2011	08/02/2011	08/02/2011
Date analysed	-	08/02/2011	08/02/2011	08/02/2011	08/02/2011	08/02/2011
Arsenic-Dissolved	µg/L	<1	<1	14	<1	<1
Cadmium-Dissolved	µg/L	<0.1	<0.1	1.3	<0.1	<0.1
Chromium-Dissolved	µg/L	<1	<1	3	<1	<1
Copper-Dissolved	µg/L	<1	<1	<1	<1	<1
Lead-Dissolved	µg/L	<1	<1	7	1	<1
Mercury-Dissolved	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4
Nickel-Dissolved	µg/L	<1	<1	41	<1	<1
Zinc-Dissolved	µg/L	<1	2	47	2	1

Method ID	Methodology Summary
GC.13	Water samples are analysed directly by purge and trap GC-MS.
GC.16	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS.
GC.3	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
Metals.22 ICP-MS	Determination of various metals by ICP-MS.
Metals.21 CV-AAS	Determination of Mercury by Cold Vapour AAS.

Client Reference: 15742, Columbia Precinct

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
VOCs in water						Base II Duplicate II %RPD		
Date extracted	-			11/02/2011	51457-5	11/02/2011 11/02/2011	LCS-W1	11/02/2011
Date analysed	-			11/02/2011	51457-5	11/02/2011 11/02/2011	LCS-W1	11/02/2011
Dichlorodifluoromethane	µg/L	10	GC.13	<10	51457-5	<10 <10	[NR]	[NR]
Chloromethane	µg/L	10	GC.13	<10	51457-5	<10 <10	[NR]	[NR]
Vinyl Chloride	µg/L	10	GC.13	<10	51457-5	<10 <10	[NR]	[NR]
Bromomethane	µg/L	10	GC.13	<10	51457-5	<10 <10	[NR]	[NR]
Chloroethane	µg/L	10	GC.13	<10	51457-5	<10 <10	[NR]	[NR]
Trichlorofluoromethane	µg/L	10	GC.13	<10	51457-5	<10 <10	[NR]	[NR]
1,1-Dichloroethene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
Trans-1,2-dichloroethene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
1,1-dichloroethane	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	LCS-W1	99%
Cis-1,2-dichloroethene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
Bromochloromethane	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
Chloroform	µg/L	1	GC.13	<1.0	51457-5	1.5 1.1 RPD: 31	LCS-W1	102%
2,2-dichloropropane	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
1,2-dichloroethane	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	LCS-W1	102%
1,1,1-trichloroethane	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	LCS-W1	98%
1,1-dichloropropene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
Cyclohexane	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
Carbon tetrachloride	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
Benzene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
Dibromomethane	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
1,2-dichloropropane	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
Trichloroethene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	LCS-W1	118%
Bromodichloromethane	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	LCS-W1	97%
trans-1,3-dichloropropene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
cis-1,3-dichloropropene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
1,1,2-trichloroethane	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
Toluene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
1,3-dichloropropane	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
Dibromochloromethane	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	LCS-W1	95%
1,2-dibromoethane	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
Tetrachloroethene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	LCS-W1	102%
1,1,1,2-tetrachloroethane	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
Chlorobenzene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
Ethylbenzene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
Bromoform	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
m+p-xylene	µg/L	2	GC.13	<2.0	51457-5	<2.0 <2.0	[NR]	[NR]
Styrene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
1,1,2,2-tetrachloroethane	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
o-xylene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
1,2,3-trichloropropane	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]

Client Reference: 15742, Columbia Precinct

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
VOCs in water						Base II Duplicate II %RPD		
Isopropylbenzene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
Bromobenzene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
n-propyl benzene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
2-chlorotoluene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
4-chlorotoluene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
1,3,5-trimethyl benzene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
Tert-butyl benzene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
1,2,4-trimethyl benzene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
1,3-dichlorobenzene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
Sec-butyl benzene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
1,4-dichlorobenzene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
4-isopropyl toluene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
1,2-dichlorobenzene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
n-butyl benzene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
1,2-dibromo-3-chloropropane	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
1,2,4-trichlorobenzene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
Hexachlorobutadiene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
1,2,3-trichlorobenzene	µg/L	1	GC.13	<1.0	51457-5	<1.0 <1.0	[NR]	[NR]
Surrogate	%		GC.13	92	51457-5	110 96 RPD: 14	LCS-W1	96%
Dibromofluoromethane								
Surrogate toluene-d8	%		GC.13	97	51457-5	105 106 RPD: 1	LCS-W1	103%
Surrogate 4-BFB	%		GC.13	105	51457-5	104 112 RPD: 7	LCS-W1	97%

Client Reference: 15742, Columbia Precinct

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTRH in Water (C6-C9)						Base II Duplicate II %RPD		
Date extracted	-			11/02/2011	[NT]	[NT]	LCS-W1	11/02/2011
Date analysed	-			11/02/2011	[NT]	[NT]	LCS-W1	11/02/2011
TRH C6 - C9	µg/L	10	GC.16	<10	[NT]	[NT]	LCS-W1	111%
Surrogate Dibromofluoromethane	%		GC.13	92	[NT]	[NT]	LCS-W1	100%
Surrogate toluene-d8	%		GC.13	97	[NT]	[NT]	LCS-W1	106%
Surrogate 4-BFB	%		GC.13	105	[NT]	[NT]	LCS-W1	106%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
sTRH in Water (C10-C36)						Base II Duplicate II %RPD		
Date extracted	-			09/02/2011	[NT]	[NT]	LCS-W2	09/02/2011
Date analysed	-			09/02/2011	[NT]	[NT]	LCS-W2	09/02/2011
TRH C10 - C14	µg/L	50	GC.3	<50	[NT]	[NT]	LCS-W2	77%
TRH C15 - C28	µg/L	100	GC.3	<100	[NT]	[NT]	LCS-W2	108%
TRH C29 - C36	µg/L	100	GC.3	<100	[NT]	[NT]	LCS-W2	79%
Surrogate o-Terphenyl	%		GC.3	102	[NT]	[NT]	LCS-W2	116%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
HM in water - dissolved						Base II Duplicate II %RPD		
Date prepared	-			08/02/2011	51457-1	08/02/2011 08/02/2011	LCS-W1	08/02/2011
Date analysed	-			08/02/2011	51457-1	08/02/2011 08/02/2011	LCS-W1	08/02/2011
Arsenic-Dissolved	µg/L	1	Metals.22 ICP-MS	<1	51457-1	<1 <1	LCS-W1	94%
Cadmium-Dissolved	µg/L	0.1	Metals.22 ICP-MS	<0.1	51457-1	<0.1 <0.1	LCS-W1	94%
Chromium-Dissolved	µg/L	1	Metals.22 ICP-MS	<1	51457-1	<1 <1	LCS-W1	100%
Copper-Dissolved	µg/L	1	Metals.22 ICP-MS	<1	51457-1	<1 <1	LCS-W1	94%
Lead-Dissolved	µg/L	1	Metals.22 ICP-MS	<1	51457-1	<1 <1	LCS-W1	99%
Mercury-Dissolved	µg/L	0.4	Metals.21 CV-AAS	<0.4	51457-1	<0.4 <0.4	LCS-W1	104%
Nickel-Dissolved	µg/L	1	Metals.22 ICP-MS	<1	51457-1	<1 <1	LCS-W1	96%
Zinc-Dissolved	µg/L	1	Metals.22 ICP-MS	<1	51457-1	<1 <1	LCS-W1	91%

Client Reference: 15742, Columbia Precinct

QUALITY CONTROL HM in water - dissolved	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	[NT]	[NT]	51457-2	08/02/2011
Date analysed	-	[NT]	[NT]	51457-2	08/02/2011
Arsenic-Dissolved	µg/L	[NT]	[NT]	51457-2	108%
Cadmium-Dissolved	µg/L	[NT]	[NT]	51457-2	90%
Chromium-Dissolved	µg/L	[NT]	[NT]	51457-2	100%
Copper-Dissolved	µg/L	[NT]	[NT]	51457-2	87%
Lead-Dissolved	µg/L	[NT]	[NT]	51457-2	88%
Mercury-Dissolved	µg/L	[NT]	[NT]	51457-2	104%
Nickel-Dissolved	µg/L	[NT]	[NT]	51457-2	90%
Zinc-Dissolved	µg/L	[NT]	[NT]	51457-2	82%

Report Comments:

Asbestos ID was analysed by Approved Identifier:
Asbestos ID was authorised by Approved Signatory:

Not applicable for this job
Not applicable for this job

INS: Insufficient sample for this test
NA: Test not required
<: Less than

PQL: Practical Quantitation Limit
RPD: Relative Percent Difference
>: Greater than

NT: Not tested
NA: Test not required
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.