Attachment 1 – Limitations

This report has been prepared for use by the client who commissioned the works in accordance with the project brief only and has been based in part on information obtained from other parties. The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

JBS Environmental Pty Ltd accepts no liability for use or interpretation by any person or body other than the client. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by JBS Environmental Pty Ltd, and should not be relied upon by other parties, who should make their own enquires.

Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements and site history, not on sampling and analysis of all media at all locations for all potential contaminants.

Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS Environmental Pty Ltd reserves the right to review the report in the context of the additional information.

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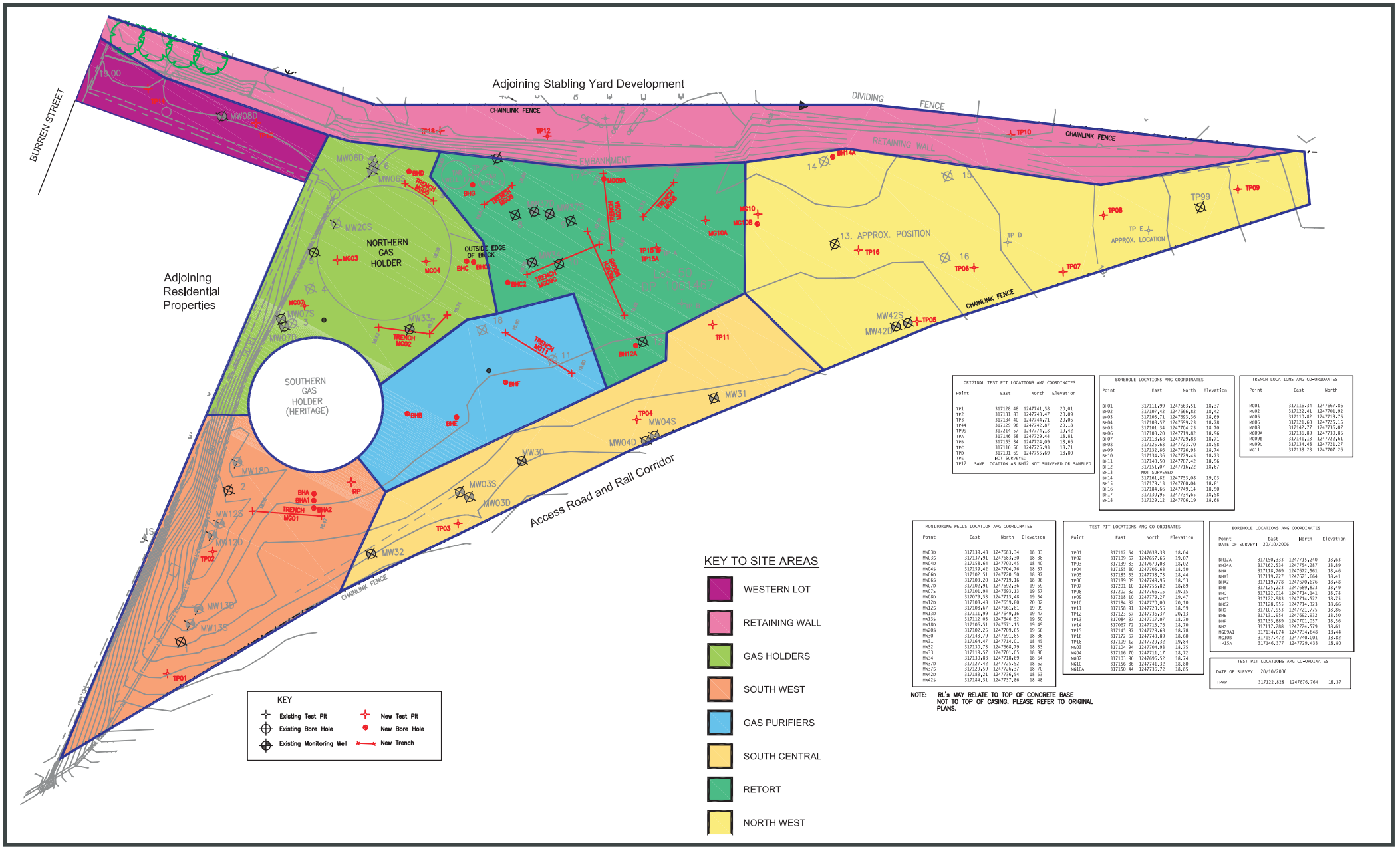
Attachment 2 – Figures



ORIGINAL TEST PIT LOCATIONS AMG COORDINATES

Point	East	North	Elevation
TP1	317128.48	1247741.58	20.01
TP2	317131.83	1247743.47	20.09
TP3	317134.40	1247744.71	20.06
TP44	317129.98	1247742.87	20.18
TP99	317214.57	1247774.16	19.42
TP4	317146.58	1247729.44	18.81
TP8	317153.34	1247724.09	18.66
TPC	317116.56	1247725.93	18.71
TPD	317191.69	1247755.69	18.80
TPE	NOT SURVEYED		
TP12	SAME LOCATION AS BH12 NOT SURVEYED OR SAMPLED		

BOREHOLE LOCATIONS AMG COORDINATES

Point	East	North	Elevation
BH01	317111.99	1247663.51	18.37
BH02	317107.42	1247666.82	18.42
BH03	317103.71	1247693.36	18.69
BH04	317103.57	1247699.23	18.78
BH05	317101.34	1247704.25	18.70
BH06	317103.20	1247719.82	18.96
BH07	317118.68	1247729.83	18.71
BH08	317125.68	1247723.70	18.58
BH09	317132.86	1247726.93	18.74
BH10	317134.36	1247729.45	18.73
BH11	317140.50	1247707.42	18.56
BH12	317151.07	1247716.22	18.67
BH13	NOT SURVEYED		
BH14	317161.82	1247753.08	19.03
BH15	317179.13	1247760.04	18.81
BH16	317184.66	1247749.14	18.50
BH17	317130.95	1247734.65	18.58
BH18	317129.12	1247706.19	18.68

TRENCH LOCATIONS AMG CO-ORDINATES

Point	East	North
MG01	317116.34	1247667.86
MG02	317122.41	1247701.92
MG05	317110.82	1247719.75
MG06	317121.60	1247725.15
MG08	317142.77	1247736.07
MG09A	317136.89	1247730.85
MG09B	317141.13	1247722.61
MG09C	317134.48	1247721.27
MG11	317138.23	1247707.26

MONITORING WELLS LOCATION AMG COORDINATES

Point	East	North	Elevation
MW03D	317139.48	1247683.34	18.33
MW03S	317137.91	1247683.30	18.38
MW04D	317158.64	1247703.45	18.40
MW04S	317159.42	1247704.76	18.37
MW08D	317102.51	1247720.50	18.97
MW06S	317103.20	1247719.16	18.96
MW07D	317102.91	1247692.36	19.59
MW07S	317101.94	1247693.13	19.57
MW08D	317079.53	1247715.48	19.54
MW12D	317108.48	1247659.80	20.02
MW12S	317108.67	1247661.81	19.99
MW13D	317111.99	1247649.16	19.67
MW13S	317112.03	1247646.52	19.50
MW18D	317106.51	1247671.15	19.49
MW20S	317102.25	1247709.65	19.66
MW30	317143.79	1247691.85	18.36
MW31	317164.47	1247714.01	18.45
MW32	317130.73	1247668.79	18.33
MW33	317119.57	1247701.05	18.80
MW34	317130.83	1247718.69	18.64
MW37D	317127.42	1247725.52	18.62
MW37S	317129.59	1247726.37	18.70
MW42D	317183.21	1247736.54	18.53
MW42S	317184.51	1247737.86	18.48

TEST PIT LOCATIONS AMG CO-ORDINATES

Point	East	North	Elevation
TP01	317112.54	1247638.33	18.04
TP02	317109.67	1247657.65	19.07
TP03	317139.83	1247679.08	18.02
TP04	317155.80	1247705.63	18.50
TP05	317185.53	1247738.73	18.44
TP06	317189.09	1247749.95	18.53
TP07	317201.10	1247755.82	18.89
TP08	317202.32	1247766.15	19.15
TP09	317218.10	1247779.27	19.47
TP10	317184.32	1247770.00	20.10
TP11	317158.91	1247723.56	18.59
TP12	317123.57	1247736.37	20.13
TP13	317084.37	1247717.07	18.70
TP14	317067.72	1247713.76	18.70
TP15	317145.97	1247729.63	18.78
TP16	317172.67	1247743.89	18.60
TP18	317109.12	1247729.32	19.84
MG03	317104.94	1247704.93	18.75
MG04	317116.70	1247711.17	18.72
MG07	317103.96	1247696.52	18.74
MG10	317156.86	1247741.32	18.80
MG10A	317150.44	1247736.72	18.85

BOREHOLE LOCATIONS AMG COORDINATES

Point	East	North	Elevation
DATE OF SURVEY: 20/10/2006			
BH12A	317150.333	1247715.240	18.63
BH14A	317162.534	1247754.287	18.89
BHA	317118.769	1247672.161	18.46
BHA1	317119.227	1247671.664	18.41
BHA2	317119.778	1247670.676	18.48
BHB	317125.223	1247689.823	18.49
BHC	317122.014	1247714.141	18.78
BHC1	317122.983	1247714.522	18.75
BHC2	317128.955	1247714.323	18.66
BHD	317107.953	1247721.775	18.86
BHE	317131.954	1247692.932	18.50
BHF	317135.689	1247701.057	18.56
BHG	317117.288	1247724.579	18.61
MG09A1	317134.074	1247734.848	18.44
MG10B	317157.472	1247740.001	18.82
TP15A	317146.377	1247729.433	18.80

TEST PIT LOCATIONS AMG CO-ORDINATES

Point	East	North	Elevation
DATE OF SURVEY: 20/10/2006			
TPRP	317122.828	1247676.764	18.37

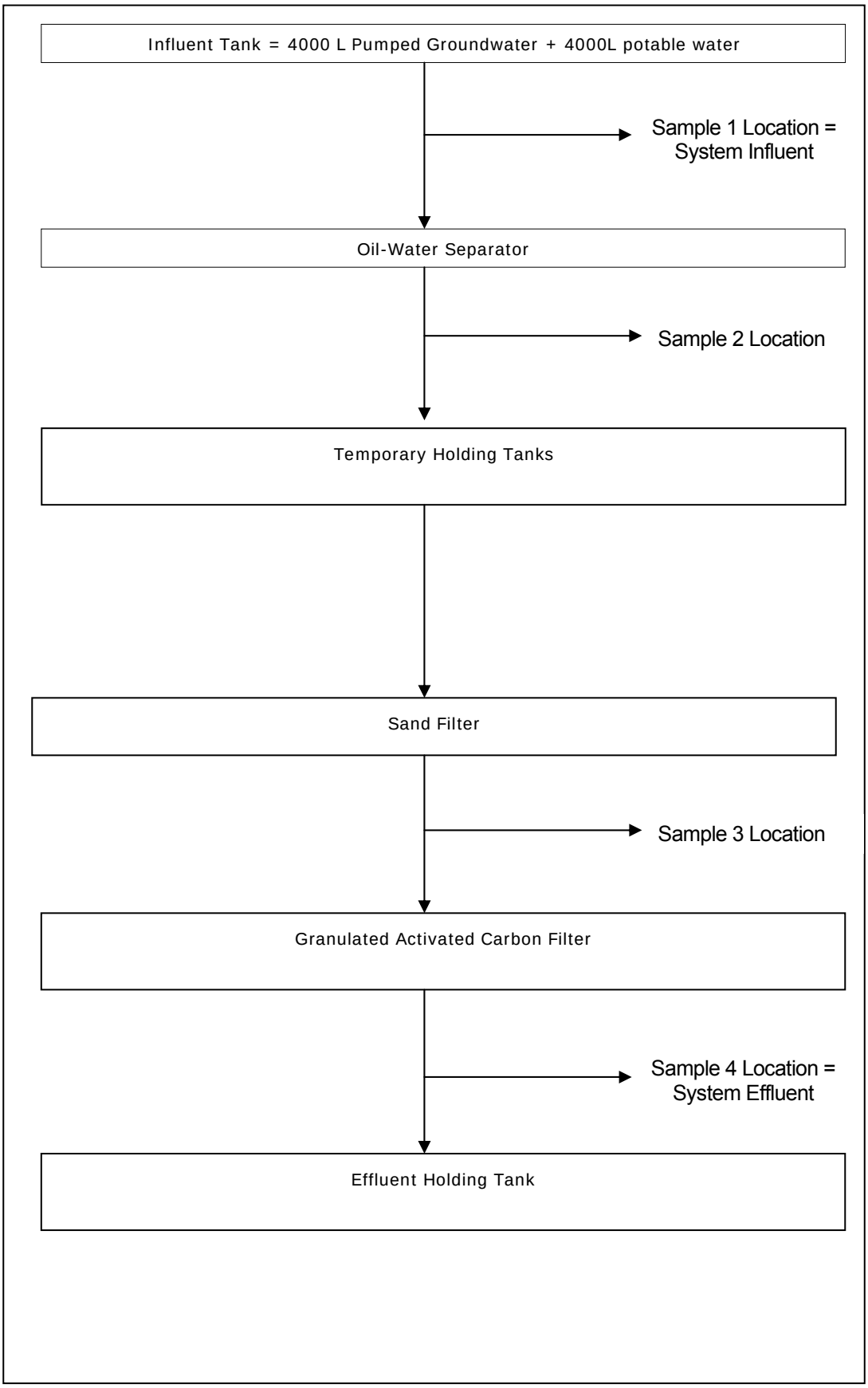
NOTE: RL's MAY RELATE TO TOP OF CONCRETE BASE NOT TO TOP OF CASING. PLEASE REFER TO ORIGINAL PLANS.

JBS ENVIRONMENTAL

Figure 1 **Site Plan showing existing monitoring well network**

CH2M Hill (2007)
Note- All locations shown are approximate only

Figure 2: Water Treatment Trial - Sampling Strategy



Attachment 3 - Laboratory Results

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 43277

Client:
JBS Environmental
P.O. Box 940
MASCOT
NSW 1460

Attention: Tim Davis / Sumi Dorairaj

Sample log in details:

Your Reference:	**40913, Macdonaldtown**
No. of samples:	15 Waters
Date samples received:	09/07/10
Date completed instructions received:	09/07/10

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:	20/07/10
Date of Preliminary Report:	Not issued
Issue Date:	23/07/10

NATA accreditation number 2901. This document shall not be reproduced except in full.
This document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025.
Tests not covered by NATA are denoted with *.

Results Approved By:

Sandra Taylor
Senior Organic Chemist

Rhian Morgan
Metals Supervisor

Jacinta Hurst
Laboratory Manager

Nick Sarlamis
Inorganics Supervisor

ACCREDITED FOR TECHNICAL COMPETENCE

VOCs in water Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	43277-1 Sample 1 - Run 1 9/07/2010 Water	43277-2 Sample 2 - Run 1 9/07/2010 Water	43277-3 Sample 3 - Run 1 9/07/2010 Water	43277-4 Sample 4 - Run 1 9/07/2010 Water	43277-5 Sample 1 - Run 2 9/07/2010 Water
Date extracted	-	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Date analysed	-	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Dichlorodifluoromethane	µg/L	<10	<10	<10	<10	<10
Chloromethane	µg/L	<10	<10	<10	<10	<10
Vinyl Chloride	µg/L	<10	<10	<10	<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	<1.0	<1.0	<1.0
Bromochloromethane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroform	µg/L	14	9.8	12	<1.0	12
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	<1.0	<1.0	<1.0
Bromodichloromethane	µg/L	8.9	5.8	7.6	<1.0	7.1
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	2.7	1.7	2.2	<1.0	2.1
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

VOCs in water Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	43277-1 Sample 1 - Run 1 9/07/2010 Water	43277-2 Sample 2 - Run 1 9/07/2010 Water	43277-3 Sample 3 - Run 1 9/07/2010 Water	43277-4 Sample 4 - Run 1 9/07/2010 Water	43277-5 Sample 1 - Run 2 9/07/2010 Water
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
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	%	96	104	99	108	104
Surrogate toluene-d8	%	108	109	115	110	108
Surrogate 4-BFB	%	105	103	106	105	106

VOCs in water Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	43277-6 Sample 2 - Run 2 9/07/2010 Water	43277-7 Sample 3 - Run 2 9/07/2010 Water	43277-8 Sample 4 - Run 2 9/07/2010 Water	43277-9 Sample 1 - Run 3 9/07/2010 Water	43277-10 Sample 2 - Run 3 9/07/2010 Water
Date extracted	-	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Date analysed	-	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Dichlorodifluoromethane	µg/L	<10	<10	<10	<10	<10
Chloromethane	µg/L	<10	<10	<10	<10	<10
Vinyl Chloride	µg/L	<10	<10	<10	<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	<1.0	<1.0	<1.0
Bromochloromethane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroform	µg/L	11	9.7	<1.0	9.6	10
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	<1.0	<1.0	<1.0
Bromodichloromethane	µg/L	6.6	6.3	<1.0	5.9	5.5
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	2.0	2.0	<1.0	1.8	1.7
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

VOCs in water Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	43277-6 Sample 2 - Run 2 9/07/2010 Water	43277-7 Sample 3 - Run 2 9/07/2010 Water	43277-8 Sample 4 - Run 2 9/07/2010 Water	43277-9 Sample 1 - Run 3 9/07/2010 Water	43277-10 Sample 2 - Run 3 9/07/2010 Water
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
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	%	98	97	102	100	101
Surrogate toluene-d8	%	108	112	109	108	92
Surrogate 4-BFB	%	106	105	106	106	105

VOCs in water Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	43277-11 Sample 3 - Run 3 9/07/2010 Water	43277-12 Sample 4 - Run 3 9/07/2010 Water	43277-13 MW04s 9/07/2010 Water
Date extracted	-	13/07/2010	13/07/2010	13/07/2010
Date analysed	-	13/07/2010	13/07/2010	13/07/2010
Dichlorodifluoromethane	µg/L	<10	<10	<10
Chloromethane	µg/L	<10	<10	<10
Vinyl Chloride	µg/L	<10	<10	<10
Bromomethane	µg/L	<10	<10	<10
Chloroethane	µg/L	<10	<10	<10
Trichlorofluoromethane	µg/L	<10	<10	<10
1,1-Dichloroethene	µg/L	<1.0	<1.0	<1.0
Trans-1,2-dichloroethene	µg/L	<1.0	<1.0	<1.0
1,1-dichloroethane	µg/L	<1.0	<1.0	<1.0
Cis-1,2-dichloroethene	µg/L	<1.0	<1.0	<1.0
Bromochloromethane	µg/L	<1.0	<1.0	<1.0
Chloroform	µg/L	11	<1.0	21
2,2-dichloropropane	µg/L	<1.0	<1.0	<1.0
1,2-dichloroethane	µg/L	<1.0	<1.0	<1.0
1,1,1-trichloroethane	µg/L	<1.0	<1.0	<1.0
1,1-dichloropropene	µg/L	<1.0	<1.0	<1.0
Cyclohexane	µg/L	<1.0	<1.0	<1.0
Carbon tetrachloride	µg/L	<1.0	<1.0	<1.0
Benzene	µg/L	<1.0	<1.0	<1.0
Dibromomethane	µg/L	<1.0	<1.0	<1.0
1,2-dichloropropane	µg/L	<1.0	<1.0	<1.0
Trichloroethene	µg/L	<1.0	<1.0	<1.0
Bromodichloromethane	µg/L	5.2	<1.0	25
trans-1,3-dichloropropene	µg/L	<1.0	<1.0	<1.0
cis-1,3-dichloropropene	µg/L	<1.0	<1.0	<1.0
1,1,2-trichloroethane	µg/L	<1.0	<1.0	<1.0
Toluene	µg/L	<1.0	<1.0	<1.0
1,3-dichloropropane	µg/L	<1.0	<1.0	<1.0
Dibromochloromethane	µg/L	1.6	<1.0	18
1,2-dibromoethane	µg/L	<1.0	<1.0	<1.0
Tetrachloroethene	µg/L	<1.0	<1.0	<1.0
1,1,1,2-tetrachloroethane	µg/L	<1.0	<1.0	<1.0
Chlorobenzene	µg/L	<1.0	<1.0	<1.0
Ethylbenzene	µg/L	<1.0	<1.0	<1.0
Bromoform	µg/L	<1.0	<1.0	<1.0
m+p-xylene	µg/L	<2.0	<2.0	<2.0
Styrene	µg/L	<1.0	<1.0	<1.0
1,1,2,2-tetrachloroethane	µg/L	<1.0	<1.0	<1.0

VOCs in water Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	43277-11 Sample 3 - Run 3 9/07/2010 Water	43277-12 Sample 4 - Run 3 9/07/2010 Water	43277-13 MW04s 9/07/2010 Water
o-xylene	µg/L	<1.0	<1.0	<1.0
1,2,3-trichloropropane	µg/L	<1.0	<1.0	<1.0
Isopropylbenzene	µg/L	<1.0	<1.0	<1.0
Bromobenzene	µg/L	<1.0	<1.0	<1.0
n-propyl benzene	µg/L	<1.0	<1.0	<1.0
2-chlorotoluene	µg/L	<1.0	<1.0	<1.0
4-chlorotoluene	µg/L	<1.0	<1.0	<1.0
1,3,5-trimethyl benzene	µg/L	<1.0	<1.0	<1.0
Tert-butyl benzene	µg/L	<1.0	<1.0	<1.0
1,2,4-trimethyl benzene	µg/L	<1.0	<1.0	<1.0
1,3-dichlorobenzene	µg/L	<1.0	<1.0	<1.0
Sec-butyl benzene	µg/L	<1.0	<1.0	<1.0
1,4-dichlorobenzene	µg/L	<1.0	<1.0	<1.0
4-isopropyl toluene	µg/L	<1.0	<1.0	<1.0
1,2-dichlorobenzene	µg/L	<1.0	<1.0	<1.0
n-butyl benzene	µg/L	<1.0	<1.0	<1.0
1,2-dibromo-3-chloropropane	µg/L	<1.0	<1.0	<1.0
1,2,4-trichlorobenzene	µg/L	<1.0	<1.0	<1.0
Hexachlorobutadiene	µg/L	<1.0	<1.0	<1.0
1,2,3-trichlorobenzene	µg/L	<1.0	<1.0	<1.0
Surrogate Dibromofluoromethane	%	95	100	101
Surrogate toluene-d8	%	77	76	108
Surrogate 4-BFB	%	105	105	104

vTPH & BTEX in Water						
Our Reference:	UNITS	43277-1	43277-2	43277-3	43277-4	43277-5
Your Reference	----------	Sample 1 - Run 1	Sample 2 - Run 1	Sample 3 - Run 1	Sample 4 - Run 1	Sample 1 - Run 2
Date Sampled	----------	9/07/2010	9/07/2010	9/07/2010	9/07/2010	9/07/2010
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Date analysed	-	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
TPH C_6 - C_9	µg/L	<10	<10	<10	<10	<10
Surrogate Dibromofluoromethane	%	96	104	99	108	104
Surrogate toluene-d8	%	108	109	115	110	108
Surrogate 4-BFB	%	105	103	106	105	106

vTPH & BTEX in Water						
Our Reference:	UNITS	43277-6	43277-7	43277-8	43277-9	43277-10
Your Reference	----------	Sample 2 - Run 2	Sample 3 - Run 2	Sample 4 - Run 2	Sample 1 - Run 3	Sample 2 - Run 3
Date Sampled	----------	9/07/2010	9/07/2010	9/07/2010	9/07/2010	9/07/2010
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Date analysed	-	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
TPH C_6 - C_9	µg/L	<10	<10	<10	<10	<10
Surrogate Dibromofluoromethane	%	98	97	102	100	101
Surrogate toluene-d8	%	108	112	109	108	92
Surrogate 4-BFB	%	106	105	106	106	105

vTPH & BTEX in Water						
Our Reference:	UNITS	43277-11	43277-12	43277-13	43277-14	43277-15
Your Reference	----------	Sample 3 - Run 3	Sample 4 - Run 3	MW04s	Trip Blank	Trip Spike
Date Sampled	----------	9/07/2010	9/07/2010	9/07/2010	9/07/2010	9/07/2010
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Date analysed	-	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
TPH C_6 - C_9	µg/L	<10	<10	<10	[NA]	[NA]
Benzene	µg/L	[NA]	[NA]	[NA]	<1.0	108%
Toluene	µg/L	[NA]	[NA]	[NA]	<1.0	129%
Ethylbenzene	µg/L	[NA]	[NA]	[NA]	<1.0	97%
m+p-xylene	µg/L	[NA]	[NA]	[NA]	<2.0	95%
o-xylene	µg/L	[NA]	[NA]	[NA]	<1.0	96%
Surrogate Dibromofluoromethane	%	95	100	100	96	91
Surrogate toluene-d8	%	77	76	107	109	124
Surrogate 4-BFB	%	105	105	104	105	103

sTPH in Water (C10-C36)						
Our Reference:	UNITS	43277-1	43277-2	43277-3	43277-4	43277-5
Your Reference	----------	Sample 1 - Run 1	Sample 2 - Run 1	Sample 3 - Run 1	Sample 4 - Run 1	Sample 1 - Run 2
Date Sampled	----------	9/07/2010	9/07/2010	9/07/2010	9/07/2010	9/07/2010
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Date analysed	-	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
TPH C_{10} - C_{14}	µg/L	<50	<50	<50	<50	<50
TPH C_{15} - C_{28}	µg/L	1.10	170	810	<100	2,100
TPH C_{29} - C_{36}	µg/L	<100	<100	2,400	<100	1,500
Surrogate o-Terphenyl	%	96	87	#	100	80

sTPH in Water (C10-C36)						
Our Reference:	UNITS	43277-6	43277-7	43277-8	43277-9	43277-10
Your Reference	----------	Sample 2 - Run 2	Sample 3 - Run 2	Sample 4 - Run 2	Sample 1 - Run 3	Sample 2 - Run 3
Date Sampled	----------	9/07/2010	9/07/2010	9/07/2010	9/07/2010	9/07/2010
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Date analysed	-	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
TPH C_{10} - C_{14}	µg/L	52	<50	<50	<50	<50
TPH C_{15} - C_{28}	µg/L	270	190	<100	3,500	<100
TPH C_{29} - C_{36}	µg/L	<100	<100	<100	2,200	<100
Surrogate o-Terphenyl	%	92	77	86	99	86

sTPH in Water (C10-C36)				
Our Reference:	UNITS	43277-11	43277-12	43277-13
Your Reference	----------	Sample 3 - Run 3	Sample 4 - Run 3	MW04s
Date Sampled	----------	9/07/2010	9/07/2010	9/07/2010
Type of sample		Water	Water	Water
Date extracted	-	13/07/2010	13/07/2010	13/07/2010
Date analysed	-	13/07/2010	13/07/2010	13/07/2010
TPH C_{10} - C_{14}	µg/L	<50	<50	<50
TPH C_{15} - C_{28}	µg/L	410	<100	3,800
TPH C_{29} - C_{36}	µg/L	820	<100	2,800
Surrogate o-Terphenyl	%	96	93	73

PAHs in Water - Low Level Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	43277-1 Sample 1 - Run 1 9/07/2010 Water	43277-2 Sample 2 - Run 1 9/07/2010 Water	43277-3 Sample 3 - Run 1 9/07/2010 Water	43277-5 Sample 1 - Run 2 9/07/2010 Water	43277-6 Sample 2 - Run 2 9/07/2010 Water
Date extracted	-	13/7/2010	13/7/2010	13/7/2010	13/7/2010	13/7/2010
Date analysed	-	13/7/2010	13/7/2010	13/7/2010	13/7/2010	13/7/2010
Naphthalene	µg/L	2.2	0.3	0.2	3.4	0.2
Acenaphthylene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	µg/L	0.7	0.4	0.3	0.5	0.5
Fluorene	µg/L	0.5	0.4	0.2	0.4	0.5
Phenanthrene	µg/L	<0.1	0.4	0.1	<0.1	1.0
Anthracene	µg/L	<0.1	<0.1	<0.1	<0.1	0.2
Fluoranthene	µg/L	<0.1	0.2	<0.1	<0.1	0.7
Pyrene	µg/L	<0.1	0.1	<0.1	<0.1	0.4
Benzo(a)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	129	111	129	123	99

PAHs in Water - Low Level Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	43277-7 Sample 3 - Run 2 9/07/2010 Water	43277-9 Sample 1 - Run 3 9/07/2010 Water	43277-10 Sample 2 - Run 3 9/07/2010 Water	43277-11 Sample 3 - Run 3 9/07/2010 Water	43277-13 MW04s 9/07/2010 Water
Date extracted	-	13/7/2010	13/7/2010	13/7/2010	13/7/2010	13/7/2010
Date analysed	-	13/7/2010	13/7/2010	13/7/2010	13/7/2010	13/7/2010
Naphthalene	µg/L	0.2	3.8	0.2	0.2	5.6
Acenaphthylene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	µg/L	0.4	0.8	0.6	0.6	<0.1
Fluorene	µg/L	0.4	0.6	0.5	0.5	<0.1
Phenanthrene	µg/L	0.5	<0.1	0.1	0.6	<0.1
Anthracene	µg/L	<0.1	<0.1	<0.1	0.1	<0.1
Fluoranthene	µg/L	<0.1	<0.1	0.1	0.1	0.2
Pyrene	µg/L	<0.1	<0.1	<0.1	0.1	0.2
Benzo(a)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	84	127	111	127	87

PAH low level in Water Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	43277-4 Sample 4 - Run 1 9/07/2010 Water	43277-8 Sample 4 - Run 2 9/07/2010 Water	43277-12 Sample 4 - Run 3 9/07/2010 Water
Date extracted	-	22/07/2010	22/07/2010	22/07/2010
Date analysed	-	23/7/2010	23/7/2010	23/7/2010
Naphthalene	µg/L	<0.01	<0.01	<0.01
Acenaphthylene	µg/L	<0.01	<0.01	<0.01
Acenaphthene	µg/L	<0.01	<0.01	<0.01
Fluorene	µg/L	<0.01	<0.01	<0.01
Phenanthrene	µg/L	<0.01	<0.01	<0.01
Anthracene	µg/L	<0.01	<0.01	<0.01
Fluoranthene	µg/L	<0.01	<0.01	<0.01
Pyrene	µg/L	<0.01	<0.01	<0.01
Benz(a)anthracene	µg/L	<0.01	<0.01	<0.01
Chrysene	µg/L	<0.01	<0.01	<0.01
Benzo(b)&(k)fluoranthene	µg/L	<0.02	<0.02	<0.02
Benzo(a)pyrene	µg/L	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	<0.01	<0.01	<0.01
Dibenz(ah)anthracene	µg/L	<0.01	<0.01	<0.01
Benzo(ghi)perylene	µg/L	<0.01	<0.01	<0.01

Total Phenolics in Water						
Our Reference:	UNITS	43277-1	43277-2	43277-3	43277-4	43277-5
Your Reference	----------	Sample 1 - Run 1	Sample 2 - Run 1	Sample 3 - Run 1	Sample 4 - Run 1	Sample 1 - Run 2
Date Sampled	----------	9/07/2010	9/07/2010	9/07/2010	9/07/2010	9/07/2010
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	14/7/2010	14/7/2010	14/7/2010	14/7/2010	14/7/2010
Date analysed	-	14/7/2010	14/7/2010	14/7/2010	14/7/2010	14/7/2010
Total Phenolics (as Phenol)	mg/L	<0.050	<0.050	<0.050	0.080	<0.050

Total Phenolics in Water						
Our Reference:	UNITS	43277-6	43277-7	43277-8	43277-9	43277-10
Your Reference	----------	Sample 2 - Run 2	Sample 3 - Run 2	Sample 4 - Run 2	Sample 1 - Run 3	Sample 2 - Run 3
Date Sampled	----------	9/07/2010	9/07/2010	9/07/2010	9/07/2010	9/07/2010
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	14/7/2010	14/7/2010	14/7/2010	14/7/2010	14/7/2010
Date analysed	-	14/7/2010	14/7/2010	14/7/2010	14/7/2010	14/7/2010
Total Phenolics (as Phenol)	mg/L	<0.050	<0.050	<0.050	0.12	<0.050

Total Phenolics in Water				
Our Reference:	UNITS	43277-11	43277-12	43277-13
Your Reference	----------	Sample 3 - Run 3	Sample 4 - Run 3	MW04s
Date Sampled	----------	9/07/2010	9/07/2010	9/07/2010
Type of sample		Water	Water	Water
Date extracted	-	14/7/2010	14/7/2010	14/7/2010
Date analysed	-	14/7/2010	14/7/2010	14/7/2010
Total Phenolics (as Phenol)	mg/L	<0.050	<0.050	<0.050

HM in water - dissolved Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	43277-1 Sample 1 - Run 1 9/07/2010 Water	43277-2 Sample 2 - Run 1 9/07/2010 Water	43277-3 Sample 3 - Run 1 9/07/2010 Water	43277-4 Sample 4 - Run 1 9/07/2010 Water	43277-5 Sample 1 - Run 2 9/07/2010 Water
Date prepared	-	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Date analysed	-	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Arsenic-Dissolved	µg/L	<1	<1	<1	16	<1
Cadmium-Dissolved	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium-Dissolved	µg/L	<1	<1	<1	<1	<1
Copper-Dissolved	µg/L	<1	1	10	<1	3
Lead-Dissolved	µg/L	<1	<1	<1	<1	<1
Mercury-Dissolved	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel-Dissolved	µg/L	1	2	8	<1	7
Zinc-Dissolved	µg/L	110	100	63	1	170

HM in water - dissolved Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	43277-6 Sample 2 - Run 2 9/07/2010 Water	43277-7 Sample 3 - Run 2 9/07/2010 Water	43277-8 Sample 4 - Run 2 9/07/2010 Water	43277-9 Sample 1 - Run 3 9/07/2010 Water	43277-10 Sample 2 - Run 3 9/07/2010 Water
Date prepared	-	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Date analysed	-	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Arsenic-Dissolved	µg/L	<1	<1	17	<1	<1
Cadmium-Dissolved	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium-Dissolved	µg/L	<1	<1	<1	<1	<1
Copper-Dissolved	µg/L	4	7	<1	<1	<1
Lead-Dissolved	µg/L	<1	<1	<1	<1	<1
Mercury-Dissolved	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel-Dissolved	µg/L	9	8	<1	2	2
Zinc-Dissolved	µg/L	91	48	<1	160	140

HM in water - dissolved				
Our Reference:	UNITS	43277-11	43277-12	43277-13
Your Reference	----------	Sample 3 - Run 3	Sample 4 - Run 3	MW04s
Date Sampled	----------	9/07/2010	9/07/2010	9/07/2010
Type of sample		Water	Water	Water
Date prepared	-	13/07/2010	13/07/2010	13/07/2010
Date analysed	-	13/07/2010	13/07/2010	13/07/2010
Arsenic-Dissolved	µg/L	<1	24	<1
Cadmium-Dissolved	µg/L	<0.1	<0.1	<0.1
Chromium-Dissolved	µg/L	<1	<1	<1
Copper-Dissolved	µg/L	4	<1	9
Lead-Dissolved	µg/L	1	<1	<1
Mercury-Dissolved	µg/L	<0.5	<0.5	<0.5
Nickel-Dissolved	µg/L	2	<1	3
Zinc-Dissolved	µg/L	49	<1	45

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.
GC.12 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Ext-020	Analysis subcontracted to Australian Government - National Measurement Institute. NATA Accreditation No: 198
LAB.30	Total Phenolics - determined colorimetrically following disitillation.
Metals.22 ICP-MS	Determination of various metals by ICP-MS.
Metals.21 CV-AAS	Determination of Mercury by Cold Vapour AAS.

QUALITY CONTROL VOCs in water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			13/07/2010	[NT]	[NT]	LCS-W1	13/07/2010
Date analysed	-			13/07/2010	[NT]	[NT]	LCS-W1	13/07/2010
Dichlorodifluoromethane	µg/L	10	GC.13	<10	[NT]	[NT]	[NR]	[NR]
Chloromethane	µg/L	10	GC.13	<10	[NT]	[NT]	[NR]	[NR]
Vinyl Chloride	µg/L	10	GC.13	<10	[NT]	[NT]	[NR]	[NR]
Bromomethane	µg/L	10	GC.13	<10	[NT]	[NT]	[NR]	[NR]
Chloroethane	µg/L	10	GC.13	<10	[NT]	[NT]	[NR]	[NR]
Trichlorofluoromethane	µg/L	10	GC.13	<10	[NT]	[NT]	[NR]	[NR]
1,1-Dichloroethene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Trans-1,2-dichloroethene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,1-dichloroethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	112%
Cis-1,2-dichloroethene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Bromochloromethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Chloroform	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	110%
2,2-dichloropropane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,2-dichloroethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	105%
1,1,1-trichloroethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	105%
1,1-dichloropropene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Cyclohexane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Carbon tetrachloride	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Benzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Dibromomethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,2-dichloropropane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Trichloroethene	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	114%
Bromodichloromethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	111%
trans-1,3-dichloropropene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
cis-1,3-dichloropropene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,1,2-trichloroethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Toluene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,3-dichloropropane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Dibromochloromethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	113%
1,2-dibromoethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Tetrachloroethene	µg/L	1	GC.13	<1.0	[NT]	[NT]	LCS-W1	110%
1,1,1,2-tetrachloroethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Chlorobenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Ethylbenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Bromoform	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
m+p-xylene	µg/L	2	GC.13	<2.0	[NT]	[NT]	[NR]	[NR]
Styrene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL VOCs in water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
1,1,2,2-tetrachloroethane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
o-xylene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,2,3-trichloropropane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Isopropylbenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Bromobenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
n-propyl benzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
2-chlorotoluene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
4-chlorotoluene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,3,5-trimethyl benzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Tert-butyl benzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,2,4-trimethyl benzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,3-dichlorobenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Sec-butyl benzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,4-dichlorobenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
4-isopropyl toluene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,2-dichlorobenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
n-butyl benzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,2-dibromo-3-chloropropane	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,2,4-trichlorobenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Hexachlorobutadiene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
1,2,3-trichlorobenzene	µg/L	1	GC.13	<1.0	[NT]	[NT]	[NR]	[NR]
Surrogate Dibromofluoromethane	%		GC.13	102	[NT]	[NT]	LCS-W1	114%
Surrogate toluene-d8	%		GC.13	101	[NT]	[NT]	LCS-W1	107%
Surrogate 4-BFB	%		GC.13	101	[NT]	[NT]	LCS-W1	100%

QUALITY CONTROL vTPH & BTEX in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			13/07/2010	[NT]	[NT]	LCS-W1	13/07/2010
Date analysed	-			13/07/2010	[NT]	[NT]	LCS-W1	13/07/2010
TPH C_6 - C_9	µg/L	10	GC.16	<10	[NT]	[NT]	LCS-W1	113%
Benzene	µg/L	1	GC.16	<1.0	[NT]	[NT]	[NR]	[NR]
Toluene	µg/L	1	GC.16	<1.0	[NT]	[NT]	[NR]	[NR]
Ethylbenzene	µg/L	1	GC.16	<1.0	[NT]	[NT]	[NR]	[NR]
m+p-xylene	µg/L	2	GC.16	<2.0	[NT]	[NT]	[NR]	[NR]
o-xylene	µg/L	1	GC.16	<1.0	[NT]	[NT]	[NR]	[NR]
Surrogate Dibromofluoromethane	%		GC.16	102	[NT]	[NT]	LCS-W1	110%
Surrogate toluene-d8	%		GC.16	101	[NT]	[NT]	LCS-W1	104%
Surrogate 4-BFB	%		GC.16	101	[NT]	[NT]	LCS-W1	101%

QUALITY CONTROL sTPH in Water (C10-C36)	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			13/07/2010	[NT]	[NT]	LCS-W2	13/07/2010
Date analysed	-			13/07/2010	[NT]	[NT]	LCS-W2	13/07/2010
TPH C_{10} - C_{14}	µg/L	50	GC.3	<50	[NT]	[NT]	LCS-W2	69%
TPH C_{15} - C_{28}	µg/L	100	GC.3	<100	[NT]	[NT]	LCS-W2	83%
TPH C_{29} - C_{36}	µg/L	100	GC.3	<100	[NT]	[NT]	LCS-W2	86%
Surrogate o-Terphenyl	%		GC.3	94	[NT]	[NT]	LCS-W2	100%

QUALITY CONTROL PAHs in Water - Low Level	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			13/7/2010	[NT]	[NT]	LCS-W2	13/7/2010
Date analysed	-			13/7/2010	[NT]	[NT]	LCS-W2	13/7/2010
Naphthalene	µg/L	0.1	GC.12 subset	<0.1	[NT]	[NT]	LCS-W2	96%
Acenaphthylene	µg/L	0.1	GC.12 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	µg/L	0.1	GC.12 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Fluorene	µg/L	0.1	GC.12 subset	<0.1	[NT]	[NT]	LCS-W2	112%
Phenanthrene	µg/L	0.1	GC.12 subset	<0.1	[NT]	[NT]	LCS-W2	104%
Anthracene	µg/L	0.1	GC.12 subset	<0.1	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL PAHs in Water - Low Level	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Fluoranthene	µg/L	0.1	GC.12 subset	<0.1	[NT]	[NT]	LCS-W2	104%
Pyrene	µg/L	0.1	GC.12 subset	<0.1	[NT]	[NT]	LCS-W2	110%
Benzo(a)anthracene	µg/L	0.1	GC.12 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Chrysene	µg/L	0.1	GC.12 subset	<0.1	[NT]	[NT]	LCS-W2	117%
Benzo(b+k)fluoranthene	µg/L	0.2	GC.12 subset	<0.2	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	µg/L	0.1	GC.12 subset	<0.1	[NT]	[NT]	LCS-W2	131%
Indeno(1,2,3-c,d)pyrene	µg/L	0.1	GC.12 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	µg/L	0.1	GC.12 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	µg/L	0.1	GC.12 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%		GC.12 subset	75	[NT]	[NT]	LCS-W2	77%

QUALITY CONTROL PAH low level in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			22/07/2010	[NT]	[NT]	LCS-W1	22/7/2010
Date analysed	-			23/07/2010	[NT]	[NT]	LCS-W1	23/7/2010
Naphthalene	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	LCS-W1	90%
Acenaphthylene	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Acenaphthene	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Fluorene	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	LCS-W1	92%
Phenanthrene	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	LCS-W1	89%
Anthracene	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Fluoranthene	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Pyrene	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Benz(a)anthracene	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Chrysene	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	LCS-W1	91%
Benzo(b)&(k)fluoranthene	µg/L	0.02	Ext-020	<0.02	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	LCS-W1	79%
Indeno(1,2,3-cd)pyrene	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Dibenz(ah)anthracene	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	LCS-W1	89%
Benzo(ghi)perylene	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL Total Phenolics in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			14/7/2010	43277-1	14/7/2010 || 14/7/2010	43277-1	14/7/2010
Date analysed	-			14/7/2010	43277-1	14/7/2010 || 14/7/2010	43277-1	14/7/2010
Total Phenolics (as Phenol)	mg/L	0.05	LAB.30	<0.050	43277-1	<0.050 || <0.050	43277-1	87%

QUALITY CONTROL HM in water - dissolved	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			13/07/2010	43277-1	13/07/2010 || 13/07/2010	LCS-W1	13/07/2010
Date analysed	-			13/07/2010	43277-1	13/07/2010 || 13/07/2010	LCS-W1	13/07/2010
Arsenic-Dissolved	µg/L	1	Metals.22 ICP-MS	<1	43277-1	<1 || <1	LCS-W1	106%
Cadmium-Dissolved	µg/L	0.1	Metals.22 ICP-MS	<0.1	43277-1	<0.1 || <0.1	LCS-W1	109%
Chromium-Dissolved	µg/L	1	Metals.22 ICP-MS	<1	43277-1	<1 || <1	LCS-W1	96%
Copper-Dissolved	µg/L	1	Metals.22 ICP-MS	<1	43277-1	<1 || <1	LCS-W1	93%
Lead-Dissolved	µg/L	1	Metals.22 ICP-MS	<1	43277-1	<1 || <1	LCS-W1	101%
Mercury-Dissolved	µg/L	0.5	Metals.21 CV-AAS	<0.5	43277-1	<0.5 || <0.5	LCS-W1	117%
Nickel-Dissolved	µg/L	1	Metals.22 ICP-MS	<1	43277-1	1 || 1 || RPD: 0	LCS-W1	93%
Zinc-Dissolved	µg/L	1	Metals.22 ICP-MS	<1	43277-1	110 || 110 || RPD: 0	LCS-W1	99%

QUALITY CONTROL Total Phenolics in Water	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	43277-11	14/7/2010 || 14/7/2010	43277-2	14/7/2010
Date analysed	-	43277-11	14/7/2010 || 14/7/2010	43277-2	14/7/2010
Total Phenolics (as Phenol)	mg/L	43277-11	<0.050 || <0.050	43277-2	98%
QUALITY CONTROL HM in water - dissolved	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	43277-11	13/07/2010 || 13/07/2010	43277-2	13/07/2010
Date analysed	-	43277-11	13/07/2010 || 13/07/2010	43277-2	13/07/2010
Arsenic-Dissolved	µg/L	43277-11	<1 || <1	43277-2	116%
Cadmium-Dissolved	µg/L	43277-11	<0.1 || <0.1	43277-2	120%
Chromium-Dissolved	µg/L	43277-11	<1 || <1	43277-2	102%
Copper-Dissolved	µg/L	43277-11	4 || 4 || RPD: 0	43277-2	95%
Lead-Dissolved	µg/L	43277-11	1 || <1	43277-2	102%
Mercury-Dissolved	µg/L	43277-11	<0.5 || <0.5	43277-2	115%

QUALITY CONTROL HM in water - dissolved	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Nickel-Dissolved	µg/L	43277-11	2 || 2 || RPD: 0	43277-2	96%
Zinc-Dissolved	µg/L	43277-11	49 || 49 || RPD: 0	43277-2	105%

Report Comments:

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

PAH's in water analysed by NMI. Report No.RN806180.

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

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

INS: Insufficient sample for this test NT: Not tested PQL: Practical Quantitation Limit <: Less than >: Greater than

RPD: Relative Percent Difference NA: Test not required LCS: Laboratory Control Sample NR: Not requested

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 sample batch were within 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. Surrogates: 60-140% is acceptable for general organics and 10-140% for

1851

CHAIN OF CUSTODY - Client

ENVIROLAB SERVICES

Client: JBS	**Client Project Name and Number:** Macdonaldtown
Project Mgr: S. DORAIRAG	**PO No.:** 40913
Sampler: T. DAVIS	**Envirolab Services Quote No. :**
Address: 128 O'RIORDAN ST, MASCOT	**Date results required:**
Email: tdavis@jbsgroup.com.au, sdorairag@jbsgroup.com	**Or choose:** (standard) / 1 day / 2 day / 3 day
Phone: 83381011 **Fax:** 83381700	*Note: Inform lab in advance if urgent turnaround is required - surcharge applies*

Envirolab Services
12 Ashley St, Chatswood, NSW, 2067

Phone: 02 9958 5801
Fax: 02 9958 5803
E-mail: tnotaras@envirolabservices.com.au

Contact: Tania Notaras

Envirolab Sample ID	Client Sample ID	Date sampled	Type of sample	8 HEAVY METALS	TPH	LOW LEVEL PAHs	VOCs	BTEX	Phenols	TRACE PAHs									Provide as much information about the sample as you can
1	Sample 1 - Run 1	9/7/10	WATER	X	X	X	X		X										
2	Sample 2 - Run 1			X	X	X	X		X										
3	Sample 3 - Run 1			X	X	X	X		X										
4	Sample 4 - Run 1			X	X		X		X	X									
5	Sample 1 - Run 2			X	X	X	X		X										
6	Sample 2 - Run 2			X	X	X	X		X										
7	Sample 3 - Run 2			X	X	X	X		X										
8	Sample 4 - Run 2			X	X		X		X	X									
9	Sample 1 - Run 3			X	X	X	X		X										
10	Sample 2 - Run 3			X	X	X	X		X										
11	Sample 3 - Run 3			X	X	X	X		X										
12	Sample 4 - Run 3			X	X		X		X	X									
13	MW04S			X	X	X	X		X										
14	TRIP BLANKS							X											
15	TRIP SPIKE	↓	↓					X											

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: 9910 6200

Job No: 43277
Date received: 9/7/10
Time received: 5:30
Received by: SS
Temp: Cool/Ambient
Cooling: Ice/icepack
Security: Intact/Broken/None

Relinquished by (company): JBS	**Received by (company):** ELS
Print Name: T. DAVIS	**Print Name:** SS
Date & Time: 9/7/10	**Date & Time:** 9/7/10
Signature:	**Signature:**

Samples Received: Cool or Ambient (circle one)
Temperature Recieved at: (if applicable)
Transported by: Hand delivered / courier
Page No:

Attachment 4 – WTP Filter Specifications

Automatic Multi Media Water Filters

For Removal Of Suspended Matter

MODELS: FMA-A, FMA-F, FMA-F40 & FMA-F50

FMA 550F40

The multi layered media filter has advantages over conventional filters :

* Greater Dirt Holding Capacity
* Higher Flow Rates
* Greater ability to handle surges
* Reduced Backwash Rates

SPECIFICATIONS:

Operating Pressure.....100 to 700 kPa.
Operating Temperature.....5 to 40°C.
Electrical Requirement.....240V 50Hz.
Tank ..... Filament Wound FRP.

All units automatically backwash and rinse on a periodic basis in order to cleanse and reclassify the filter media. This is normally accomplished by an adjustable timer.

Sediment filters incur an increase pressure loss between inlet and outlet as filtered particles collect in the bed.

OPTIONS:

* Backwash Only
* Flush after Backwash
* Choice of Timers or Signal Start
* Custom Design
* Pressure Gauges
* Pressure Limiting & Relief Valves

FMA - A & FMA - F PIPE SIZE: 25mm - Maximum Flowrate 110L/min

Model	FLOW RATES Difficult(1) L/min	Normal (2) L/min	Maximum(3) L/min	Backwash (4) L/min	DIMENSIONS Bed Area m^2	Cylinder Dia. mm	Height mm	Shipping Weight
FMA 200A	12	16	28	19	0.032	200	1200	50
FMA 250A	19	24	44	29	0.050	250	1200	65
FMA 300F or A-P	29	36	65	43	0.074	300	1200	80
FMA 325F or A-P	33	42	75	50	0.086	325	1500	86
FMA 350F or A-P	39	49	87	58	0.100	350	1500	90
FMA 400F or A-P	49	62	110	74	0.126	400	1200	160
FMA 550F	97	110	110	120 (5)	0.250	550	1400	200

FMA - F40 PIPE SIZE: 40mm - Maximum Flowrate 254L/min

Model	FLOW RATES/PRESSURE DROPS Difficult(1) L/min/kPa	Normal (2) L/min/kPa	Maximum(3) L/min/kPa	Backwash (4) L/min	Bed Area m^2	DIMENSIONS Cylinder Dia. mm	Height mm	Shipping Weight
FMA 400F40	49/20	62/30	110/60	74	0.12	400	1900	150
FMA 550F40	97/50	122/60	219/140	146	0.25	550	1400	200
FMA 600F40	113/55	142/80	254/185	170	0.29	600	2200	350
FMA 750F40	175/100	220/140	254/185	182	0.45	750	2600	700

FMA - F50 PIPE SIZE: 50mm - Maximum Flowrate 580L/min

FMA 900F50	257/50	323/120	577/200	380	0.66	900	2600	1000

(1) Removal of compressible solids eg. Floc carryover at feed concentrations to 300gm/L. Reduces pressure loss and increases period between backwashes. Based on 390L/min/m^2.
(2) Removal of incompressible suspended solids above 10 microns at feed concentrations to 300gm/L. Based on 490L/min/m^2.
(3) Not recommended for continuous use. Based on 875L/min/m^2.
(4) Based on 585L/min/m^2.
(5) Special limit minimum pressure 450 kPa.

* ***SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.***
IF ANY DIMENSIONS ARE CRITICAL CONFIRM WHEN PLACING ORDER.

Abtech Environmental Services Pty Ltd
6 - 10 Leith Street
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Appendix D

Sydney Water Trade Waste Acceptance Criteria Brochure

Industrial customers

Acceptance standards and charging rates for 2010-11

Sydney Water accepts trade wastewater to the sewer, if it meets certain acceptance standards.

What are acceptance standards?

Acceptance standards are generally limits to the concentration of substances, in composite samples of trade wastewater discharge. For substances that pose a particular health and safety risk, acceptance standards also apply to the concentration of substances in a discrete sample of trade wastewater discharge.

These substances are highlighted in **bold** print in the tables in this fact sheet.

The acceptance standards for domestic substances are listed in Table 1, and for non-domestic in Table 2. Table 1 also lists the value of the domestic equivalent concentrations, which we deduct when calculating charges.

The Independent Pricing and Regulatory Tribunal (IPART) determined that all trade waste fees and charges will be adjusted from 1 July (under Determination No.1, 2008)

Testing

Customers must make sure substances specified in trade waste agreements or permits are only analysed in laboratories registered by the National Association of Testing Authorities (NATA), for the class of test(s) or specific test(s).

The approved analytical methods may be downloaded from sydneywater.com.au

What are they based on?

Acceptance standards are based on:

- safe levels of substances that may otherwise pose a health risk to workers in and around the sewerage system
- safe levels of substances to protect public health
- pollution reduction targets and discharge licence conditions set by the Department of Environment, Climate Change and Water NSW (DECCW NSW)
- the need to protect our assets and treatment processes
- the capability of the sewerage system to transport 'domestic substances', ie suspended solids, grease and BOD
- concentrations obtainable by using proven pre-treatment technology (provision is made to trial new technology)
- quality specifications for biosolids and reuse water
- reuse considerations, including the need to provide wastewater that does not interfere with reuse treatment processes, or limit reuse opportunities
- national acceptance criteria published as *Guidelines for Sewerage Systems, Acceptance of Trade Waste (Industrial Waste)*, (ARMCANZ & ANZECC, November 1994).

Table 1: Acceptance standards, domestic equivalents and charging rates for domestic substances

Substance	Acceptance standard (mg/L)	Domestic equivalent (mg/L)	Note	Charging rate ($/kg)
Suspended solids	600	200		0.862
BOD5 - primary treatment		230	1	0.120 + {0.0178 x (BOD/600)}
BOD5 - secondary treatment		230	1	0.678 + {0.0178 x (BOD/600)}
Soluble BOD	100	Not applicable	15	0.120 + {0.0178 x (BOD/600)}
Grease – primary treatment	110	50	2	1.214
Grease – secondary treatment	200	50	2	1.214
Ammonia	**100**	**35**	**3, 5**	**2.014**
Nitrogen	150	50	4	0.170
Phosphorus	50	10	4	1.347
Sulphate	2000	50		0.133 x (SO_4/2000)
Total dissolved solids (ocean systems, no discharge limitation)	10000	450	12	0.0058
Total dissolved solids (inland and ocean systems with limitation)	500	450	12	0.0058
Total dissolved solids (inland and ocean systems with advanced treatment to remove TDS)	10000	450	12, 16	0.173 x fraction of average dry weather flow treated

Trade waste requirements

- Sydney Water will determine standards for colour and interference with ultra violet disinfection on a system-specific basis.
- There must be no fibrous material in the trade wastewater, if we believe it could obstruct or block the sewerage system.
- Non-faecal gross solids must have a maximum linear dimension of less than 20 mm, a maximum cross section of 6 mm and must have a quiescent settling velocity of less than 3 m/hr.
- Sydney Water will negotiate radioactive material activity rates for sewer discharge on a site-specific basis.
- The Manager, Business Customer Delivery will determine acceptance standards for substances other than those listed in Tables 1 and 2. Sydney Water does not accept substances (or mixtures of substances) that cannot mix with water.

Provisional standards

Where we determine that an additional substance should be included on our list of acceptance standards, the new acceptance standard will be declared provisional.

The substance will be provisional for six months. During this time, the customer must test for the substance, but no charges will be levied.

There are currently no provisional standards.

Sydney WATER

Table 2 Acceptance standards and charging rates for non-domestic substances

Substance	Acceptance standard (mg/L)	Note	Charging rate ($/kg)
Acetaldehyde	**5**	**5**	**13.502**
Acetone	**400**	**5**	**0.127**
Aluminium	100		0.677
Arsenic	1		67.574
Barium	5		13.502
Boron	100		0.677
Bromine	**5**	**5**	**13.502**
Cadmium	1		67.574
Chlorinated phenolics	0.05	6	1351.675
Chlorine	**10**	**5**	**6.756**
Chromium	3	7	22.281
Cobalt	5		13.502
Copper	5		13.502
Cyanide	**1**	**5, 8**	**67.574**
Fluoride	20	4	3.346
Formaldehyde	**30**	**5**	**2.234**
General pesticides (excludes OC and OP)	0.1	9	675.811
Herbicides and defoliants	0.1		675.811
Iron	50		1.344
Lead	2		33.750
Lithium (specified systems only)	10	10	6.756
Manganese	10		6.756
Mercaptans	1		67.574
Mercury	0.03		2230.222
Methyl Ethyl Ketone	**100**	**5**	**0.677**
Molybdenum	100		0.677
Nickel	3		22.281
Organoarsenic compounds	0.1		675.811
pH	**7-10 units**	**1**	
Petroleum hydrocarbons (flammable)	**10**	**5, 11, 14,18**	**6.756**
- Benzene	**0.1**	**5, 18**	
- Toluene	**0.5**	**5, 18**	
- Ethylbenzene	**1**	**5, 18**	
- Xylene	**1**	**5, 18**	
Phenolic compounds (non-chlorinated)	1		67.574
Polynuclear aromatic hydrocarbons	5		13.502
Propionaldehyde	**5**	**5**	**13.502**
Selenium	5		13.502
Silver	5		13.502
Sulphide	**5**	**5**	**13.502**
Sulphite	50		1.344
Temperature	**38°C**	**1**	
Thiosulphate	300		0.243
Tin	10		6.756
Uranium	10		6.756
Volatile halocarbons	**1**	**5, 13, 17**	**67.574**
- Chloroform	**0.1**	**5, 17**	
- Perchloroethylene	**0.3**	**5, 17**	
- Trichloroethylene	**0.1**	**5, 17**	
Zinc	5		13.502

Notes to acceptance standards

1. Sydney Water will introduce acceptance standards for a substance on a sub-system specific basis as determined by:
   - how much the receiving system can transport and treat
   - how corroded the sub-system is
   - how sewage treatment products will be used.
2. Discrete oil, fat or grease must not be discharged.
3. Where ammonia is present with other nitrogenous compounds, the amount of nitrogen in the ammonia is deducted from the total nitrogen as measured by Total Kjeldahl Nitrogen, before calculating the charge for nitrogen.
4. Fluoride, phosphorus and nitrogen limits don't apply where the customer's sewerage system is connected to a sewage treatment plant that discharges to the ocean.
5. **Acceptance standards also apply to concentrations of ammonia, benzene, bromine, chlorine, cyanide, formaldehyde, petroleum hydrocarbons, sulphide and volatile halocarbons in discrete samples.**
6. We will determine acceptance standards for individual chlorinated phenolics on a catchment basis, following pollution reduction targets set by the DECCW NSW for the sewage treatment plant effluent. The concentration limit is a guide only and we may set lower limits for individual chlorinated phenolic compounds.
7. We do not allow discharge from comfort air conditioning cooling towers and evaporative condensers using products containing hexavalent chromium (chromate) or organometallic algicides, if the blow down (or 'bleed-off') is connected to the sewer. Comfort cooling towers are defined as cooling towers dedicated to heating, ventilation, air-conditioning or refrigeration systems.
8. Cyanide is defined as labile cyanide amenable to alkaline chlorination. This includes free cyanide as well as those complex cyanides that are particularly dissociable, almost wholly, or in a large degree, and therefore potentially toxic in low concentrations.
9. We will not consent to any discharge of organochlorine pesticides (including chlordane, dieldrin and heptachlor), or organophosphorus pesticides (including chlorpyrifos, diazinon and malathion) into the sewerage system.
10. The limit for lithium applies only to the Rouse Hill sewage catchment.
11. Where flammable and/or explosive substances may be present, the customer must demonstrate to us that there is no possibility of explosions, or fires in the sewerage system. We will discuss limits and charges with individual customers, before a trade waste agreement is negotiated. The flammability of the discharge must never exceed five per cent of the Lower Explosive Limit (LEL) of hexane at 25 ^{0}C. In some cases a customer may be required to install an LEL meter.
12. We will determine acceptance standards for total dissolved solids on a catchment-specific basis. A limit of 500 mg/L may apply to customers discharging to an inland sewage treatment plant or to a sewage treatment plant that is part of a designated reuse system. Acceptance standards will only apply to those customers discharging in excess of 100kg/d of total dissolved solids (TDS) or greater than one per cent of the total catchment TDS load (whichever is the lesser).
13. Analysis of volatile halocarbons must at a minimum include methylene chloride, chloroform, trichloroethylene and perchloroethylene.
14. This substance is made up of several substances including benzene, toluene, ethylbenzene, (m+p)-xylene and o-xylene.
15. As at 1 July 2010, the limit for soluble BOD applies only to the Smithfield sewage and SPS 67 catchments, due to corrosion.
16. This is a guide only. Exact $/kg rates are determined on a system-specific basis.
17. Charges will apply for total volatile halocarbons
18. Charges will apply for total petroleum hydrocarbons (flammable)

Want to know more?

Visit sydneywater.com.au

Appendix E

DECC Immobilisation Technical Note 1

Immobilisation Technical Note 1

Process Equipment for Treatment of Contaminated Soil and Sludge Waste

In the context of hazardous waste treatment under the POEO Act, it is imperative that the responsible person uses proper process plant and equipment competently to conduct the treatment. This approach would help assure that the favourable treatment results achieved at the laboratory or pilot scale trials can be repeated consistently at the full scale treatment and high treatment standards are maintained at all times.

Industry may practise either or both of the following methods in the immobilisation treatment of contaminated soil and sludge waste:

1. Chemical fixation: Chemical reagents are used to convert the target contaminants contained in the waste to a chemically stable form(s) suitable for landfill disposal.
2. Stabilisation/solidification: Cement and/or pozzolans reagents are used to transform the waste into a stable monolithic substance suitable for landfill disposal.

Unlike washed and clean aggregates used in cement concrete, contaminated soil and sludge waste including river sediments can be very heterogeneous with a mixture of materials of different particle size distributions, shapes, densities and surface properties (eg clayey and plastic). Such dissimilar characteristics and rheological properties can compromise the immobilisation treatment.

The responsible person must use a properly designed and engineered treatment plant that is adequately equipped with automatic or semi automatic control in respect of waste and chemical reagents handling. Avoid or prohibit any manual operation which is prone to human error and may be unreliable. A typical process flow diagram for the treatment of contaminated soil and sludge waste is in Annex A.

The mechanical mixer functions as the chemical reactor of the immobilisation treatment process. It should be equipped with a stationary mixing compartment and an agitator fitted with heavy duty mixing paddles/blades; and it can perform the following mixing duties:

- Provide positive agitation/stirring of the mix and achieve rigorous mixing e.g. turbulent flow within the mixing compartment.
- Adequately handle homogeneous and heterogeneous solids including soil, aggregates and sludges, and materials exhibiting plastic properties e.g. silt and clay.
- Capable of achieving a homogenous mix within minutes of mixing.

As a matter of DECC policy the tumbler type mixer e.g. small DIY rotating concrete mixer, rotating mixer mounted on a delivery truck, rotary hoe or bull dozer are not acceptable mixing devices for the immobilisation treatment of contaminated soil and sludge waste. Such machineries cannot discharge the above mixing duties for processing hazardous waste or sludge.

The following types of mixer (Perry, Chemical Engineers Handbook, McGraw Hill) could attain the above mixing duties and are considered suitable for the purposes of the immobilisation treatment of contaminated soil or sludge waste. They are commonly used in industry operations.

1. Pug mill mixer.
2. Paddle type mixer including Ribbon mixer and Turbine/Pan mixer.

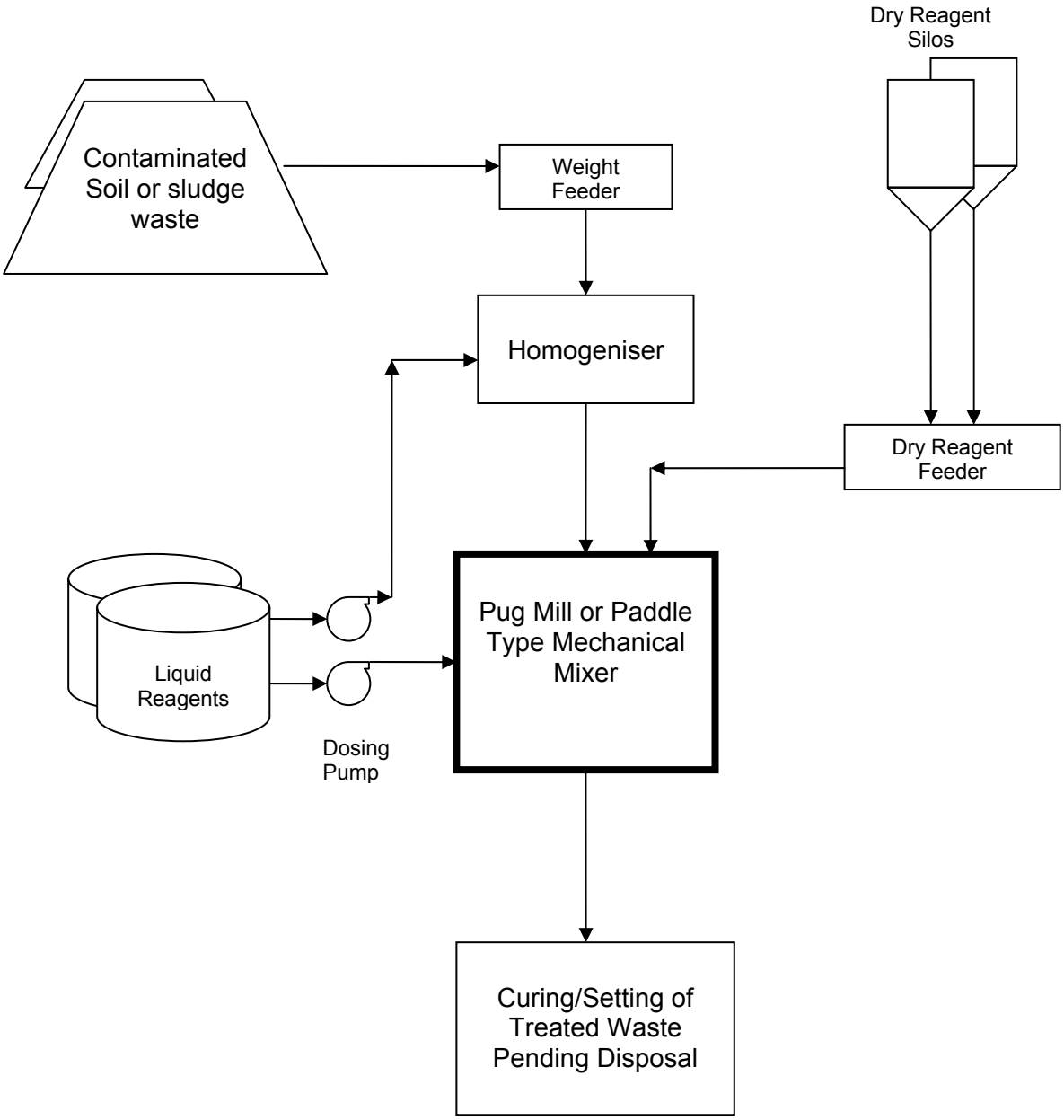
However, the choice of mixer is a waste specific issue and the responsible person should conduct a test run before adopting the equipment for full scale treatment. The DECC would consider and approve other types of mechanical mixing device on merits.

Annex A: Typical Process Flow Diagram for Contaminated Soil Treatment Plant

Page last updated: 26 February 2008

DECC WASTE TECHINICAL NOTE 1: ANNEX A

Typical Process Flow Diagram for Contaminated Soil Treatment Plant



Appendix F

Laboratory Certificates of Analysis

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 42976

Client:
JBS Environmental
P.O. Box 940
MASCOT
NSW 1460

Attention: Tim Davis / Sumi Dorairoj

Sample log in details:

Your Reference:	**40913, Macdonaldtown**
No. of samples:	21 Soils, 1 Water
Date samples received:	02/07/10
Date completed instructions received:	02/07/10

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:	9/07/10
Date of Preliminary Report:	Not issued
Issue Date:	9/07/10

NATA accreditation number 2901. This document shall not be reproduced except in full.
This document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025.
Tests not covered by NATA are denoted with *.

Results Approved By:

David Springer
Business Development & Quality Manager

Sandra Taylor
Senior Organic Chemist

Rhian Morgan
Metals Supervisor

Nancy Zhang
Chemist

Matt Mansfield
Approved Signatory

VOCs in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	42976-1 JBS TP1 0.3-0.4 2/07/2010 Soil	42976-2 JBS TP2 0.4-0.5 2/07/2010 Soil	42976-5 JBS TP2 1.4-1.5 2/07/2010 Soil	42976-6 JBS TP3 1.7 2/07/2010 Soil	42976-7 JBS TP4 0.5 2/07/2010 Soil
Date extracted	-	06/07/2010	06/07/2010	06/07/2010	06/07/2010	06/07/2010
Date analysed	-	07/07/2010	07/07/2010	07/07/2010	07/07/2010	07/07/2010
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	1.4	0.9	<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	2.4	0.72	<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	26	22	<1.0
bromoform	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0	44	13	<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 ---------- ----------	42976-1 JBS TP1 0.3-0.4 2/07/2010 Soil	42976-2 JBS TP2 0.4-0.5 2/07/2010 Soil	42976-5 JBS TP2 1.4-1.5 2/07/2010 Soil	42976-6 JBS TP3 1.7 2/07/2010 Soil	42976-7 JBS TP4 0.5 2/07/2010 Soil
o-Xylene	mg/kg	<1.0	<1.0	22	18	<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	4.4	3.3	<1.0
bromobenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
n-propyl benzene	mg/kg	<1.0	<1.0	5.7	3.2	<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	25	15	<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	54	36	<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	2.7	2.5	<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	3.2	1.9	<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	%	110	108	106	110	106
Surrogate aaa-Trifluorotoluene	%	110	112	90	109	122
Surrogate Toluene-d_8	%	89	83	69	86	86
Surrogate 4-Bromofluorobenzene	%	100	100	118	105	101

VOCs in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	42976-8 JBS TP4 1.0 2/07/2010 Soil	42976-9 JBS TP4 1.6-1.7 2/07/2010 Soil	42976-14 JBS TP5 0.5 2/07/2010 Soil	42976-16 JBS TP5 1.5 2/07/2010 Soil	42976-17 JBS TP5 2.0 2/07/2010 Soil
Date extracted	-	06/07/2010	06/07/2010	06/07/2010	06/07/2010	06/07/2010
Date analysed	-	07/07/2010	07/07/2010	07/07/2010	07/07/2010	07/07/2010
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	5.3	<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 ---------- ----------	42976-8 JBS TP4 1.0 2/07/2010 Soil	42976-9 JBS TP4 1.6-1.7 2/07/2010 Soil	42976-14 JBS TP5 0.5 2/07/2010 Soil	42976-16 JBS TP5 1.5 2/07/2010 Soil	42976-17 JBS TP5 2.0 2/07/2010 Soil
o-Xylene	mg/kg	<1.0	<1.0	<1.0	3.3	<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	4.1	<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	8.5	1.7
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	%	112	113	104	112	114
Surrogate aaa-Trifluorotoluene	%	104	92	87	90	108
Surrogate Toluene-d_8	%	76	66	66	66	78
Surrogate 4-Bromofluorobenzene	%	100	100	100	101	100

VOCs in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	42976-19 QA2 - 2/07/2010 Soil	42976-21 JBS TP3 4.0-4.2 2/07/2010 Soil
Date extracted	-	06/07/2010	06/07/2010
Date analysed	-	07/07/2010	07/07/2010
Dichlorodifluoromethane	mg/kg	<1.0	<1.0
Chloromethane	mg/kg	<1.0	<1.0
Vinyl Chloride	mg/kg	<1.0	<1.0
Bromomethane	mg/kg	<1.0	<1.0
Chloroethane	mg/kg	<1.0	<1.0
Trichlorofluoromethane	mg/kg	<1.0	<1.0
1,1-Dichloroethene	mg/kg	<1.0	<1.0
trans-1,2-dichloroethene	mg/kg	<1.0	<1.0
1,1-dichloroethane	mg/kg	<1.0	<1.0
cis-1,2-dichloroethene	mg/kg	<1.0	<1.0
bromochloromethane	mg/kg	<1.0	<1.0
chloroform	mg/kg	<1.0	<1.0
2,2-dichloropropane	mg/kg	<1.0	<1.0
1,2-dichloroethane	mg/kg	<1.0	<1.0
1,1,1-trichloroethane	mg/kg	<1.0	<1.0
1,1-dichloropropene	mg/kg	<1.0	<1.0
Cyclohexane	mg/kg	<1.0	<1.0
carbon tetrachloride	mg/kg	<1.0	<1.0
Benzene	mg/kg	<0.5	<0.5
dibromomethane	mg/kg	<1.0	<1.0
1,2-dichloropropane	mg/kg	<1.0	<1.0
trichloroethene	mg/kg	<1.0	<1.0
bromodichloromethane	mg/kg	<1.0	<1.0
trans-1,3-dichloropropene	mg/kg	<1.0	<1.0
cis-1,3-dichloropropene	mg/kg	<1.0	<1.0
1,1,2-trichloroethane	mg/kg	<1.0	<1.0
Toluene	mg/kg	<0.5	<0.5
1,3-dichloropropane	mg/kg	<1.0	<1.0
dibromochloromethane	mg/kg	<1.0	<1.0
1,2-dibromoethane	mg/kg	<1.0	<1.0
tetrachloroethene	mg/kg	<1.0	<1.0
1,1,1,2-tetrachloroethane	mg/kg	<1.0	<1.0
chlorobenzene	mg/kg	<1.0	<1.0
Ethylbenzene	mg/kg	<1.0	<1.0
bromoform	mg/kg	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0
styrene	mg/kg	<1.0	<1.0
1,1,2,2-tetrachloroethane	mg/kg	<1.0	<1.0

VOCs in soil			
Our Reference:	UNITS	42976-19	42976-21
Your Reference	----------	QA2	JBS TP3
Depth	----------	-	4.0-4.2
Date Sampled		2/07/2010	2/07/2010
Type of sample		Soil	Soil
o-Xylene	mg/kg	<1.0	<1.0
1,2,3-trichloropropane	mg/kg	<1.0	<1.0
isopropylbenzene	mg/kg	<1.0	<1.0
bromobenzene	mg/kg	<1.0	<1.0
n-propyl benzene	mg/kg	<1.0	<1.0
2-chlorotoluene	mg/kg	<1.0	<1.0
4-chlorotoluene	mg/kg	<1.0	<1.0
1,3,5-trimethyl benzene	mg/kg	<1.0	<1.0
tert-butyl benzene	mg/kg	<1.0	<1.0
1,2,4-trimethyl benzene	mg/kg	<1.0	2.2
1,3-dichlorobenzene	mg/kg	<1.0	<1.0
sec-butyl benzene	mg/kg	<1.0	<1.0
1,4-dichlorobenzene	mg/kg	<1.0	<1.0
4-isopropyl toluene	mg/kg	<1.0	<1.0
1,2-dichlorobenzene	mg/kg	<1.0	<1.0
n-butyl benzene	mg/kg	<1.0	<1.0
1,2-dibromo-3-chloropropane	mg/kg	<1.0	<1.0
1,2,4-trichlorobenzene	mg/kg	<1.0	<1.0
hexachlorobutadiene	mg/kg	<1.0	<1.0
1,2,3-trichlorobenzene	mg/kg	<1.0	<1.0
Surrogate Dibromofluorometha	%	116	110
Surrogate aaa-Trifluorotoluene	%	111	89
Surrogate Toluene-d_8	%	86	66
Surrogate 4-Bromofluorobenzene	%	101	100

BTEX in Soil			
Our Reference:	UNITS	42976-11	42976-12
Your Reference	----------	Trip Spike	Trip Blank
Depth	----------	-	-
Date Sampled		2/07/2010	2/07/2010
Type of sample		Soil	Soil
Date extracted	-	06/07/2010	06/07/2010
Date analysed	-	07/07/2010	07/07/2010
Benzene	mg/kg	98	<0.5
Toluene	mg/kg	100	<0.5
Ethylbenzene	mg/kg	96	<1.0
m+p-xylene	mg/kg	96	<2.0
o-Xylene	mg/kg	100	<1.0
Surrogate aaa-Trifluorotoluene	%	132	137

PAHs in Soil						
Our Reference:	UNITS	42976-1	42976-2	42976-5	42976-6	42976-7
Your Reference	----------	JBS TP1	JBS TP2	JBS TP2	JBS TP3	JBS TP4
Depth	----------	0.3-0.4	0.4-0.5	1.4-1.5	1.7	0.5
Date Sampled		2/07/2010	2/07/2010	2/07/2010	2/07/2010	2/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	06/07/2010	06/07/2010	06/07/2010	06/07/2010	06/07/2010
Date analysed	-	07/07/2010	07/07/2010	07/07/2010	07/07/2010	07/07/2010
Naphthalene	mg/kg	0.6	13	350	310	0.3
Acenaphthylene	mg/kg	0.7	25	6.0	1.3	0.8
Acenaphthene	mg/kg	0.1	3.8	3.7	3.1	<0.1
Fluorene	mg/kg	0.5	22	9.9	2.7	0.2
Phenanthrene	mg/kg	3.4	110	23	4.6	1.4
Anthracene	mg/kg	0.8	32	6.7	1.3	0.5
Fluoranthene	mg/kg	4.4	110	14	1.8	3.1
Pyrene	mg/kg	4.9	130	19	2.3	5.1
Benzo(a)anthracene	mg/kg	2.6	75	7.5	0.7	2.8
Chrysene	mg/kg	2.6	63	6.2	0.7	3.1
Benzo(b+k)fluoranthene	mg/kg	3.8	79	8.0	0.7	5.6
Benzo(a)pyrene	mg/kg	3.0	64	7.7	0.6	4.4
Indeno(1,2,3-c,d)pyrene	mg/kg	1.3	20	2.6	0.2	2.5
Dibenzo(a,h)anthracene	mg/kg	0.3	6.4	0.7	<0.1	0.6
Benzo(g,h,i)perylene	mg/kg	1.1	17	2.7	0.2	2.8
Surrogate p-Terphenyl-d_{14}	%	97	100	96	97	99