

Page Number : 6 of 11
 Client : CH2M HILL PTY LTD
 Work Order : ES0613014



Analytical Results

				Client Sample ID :	MG10B/1.8	MG10B/3.0	BH14A/1.4	BH14A/2.4	BHF/7.0
				Sample Matrix Type / Description :	SOIL	SOIL	SOIL	SOIL	SOIL
				Sample Date / Time :	18 Oct 2006 15:00	18 Oct 2006 15:00	18 Oct 2006 15:00	18 Oct 2006 15:00	18 Oct 2006 15:00
				Laboratory Sample ID :					
Analyte	CAS number	LOR	Units		ES0613014-006	ES0613014-007	ES0613014-008	ES0613014-009	ES0613014-010
EP080/071: Total Petroleum Hydrocarbons									
C29 - C36 Fraction		100	mg/kg		<100	<100	<100	<100	<100
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	0.4	<0.2	0.8
Toluene	108-88-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	0.4
Ethylbenzene	100-41-4	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
meta- & para-Xylene	108-38-3	0.2	mg/kg		<0.2	<0.2	0.4	<0.2	0.6
	106-42-3								
ortho-Xylene	95-47-6	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	0.4
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		118	123	114	110	110
2-Chlorophenol-D4	93951-73-6	0.1	%		107	117	106	101	104
2,4,6-Tribromophenol	118-79-6	0.1	%		77.1	65.8	69.4	53.5	53.2
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		105	107	100	93.9	95.5
Anthracene-d10	1719-06-8	0.1	%		105	106	99.4	93.5	95.1
4-Terphenyl-d14	1718-51-0	0.1	%		107	110	102	97.2	98.4
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		105	102	103	101	96.5
Toluene-D8	2037-26-5	0.1	%		84.2	95.8	81.8	88.6	84.6
4-Bromofluorobenzene	460-00-4	0.1	%		86.5	96.9	90.3	87.5	82.1

Page Number : 7 of 11
 Client : CH2M HILL PTY LTD
 Work Order : ES0613014



Analytical Results

Client Sample ID : Sample Matrix Type / Description : Sample Date / Time : Laboratory Sample ID :				DUP21 SOIL 17 Oct 2006 15:00 ES0613014-012	DUP22 SOIL 18 Oct 2006 15:00 ES0613014-013	TRIP SPIKE 2 SOIL 18 Oct 2006 15:00 ES0613014-014	TRIP BLANK 2 SOIL 18 Oct 2006 15:00 ES0613014-015	TRIP SPIKE CONTROL SOIL 13 Oct 2006 15:00 ES0613014-016
Analyte	CAS number	LOR	Units					
EA055: Moisture Content								
Moisture Content (dried @ 103°C)		1.0	%	15.5	13.2	2.8	1.8	3.1
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1.0	mg/kg	<1.0	----	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	----	----	----
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	<1.0	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	----	----	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	----	----	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	----	----	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	----	----	----
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	----	----	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	----	----	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	----	----	----
Pentachlorophenol	87-86-5	2.0	mg/kg	<2.0	<2.0	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.5	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	----	----	----
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction		2	mg/kg	<2	8	----	<2	----
C10 - C14 Fraction		50	mg/kg	<50	<50	----	<50	----
C15 - C28 Fraction		100	mg/kg	<100	<100	----	<100	----

Page Number : 8 of 11
 Client : CH2M HILL PTY LTD
 Work Order : ES0613014



Analytical Results

				Client Sample ID :	DUP21	DUP22	TRIP SPIKE 2	TRIP BLANK 2	TRIP SPIKE CONTROL
				Sample Matrix Type / Description :	SOIL	SOIL	SOIL	SOIL	SOIL
				Sample Date / Time :	17 Oct 2006 15:00	18 Oct 2006 15:00	18 Oct 2006 15:00	18 Oct 2006 15:00	13 Oct 2006 15:00
				Laboratory Sample ID :					
Analyte	CAS number	LOR	Units		ES0613014-012	ES0613014-013	ES0613014-014	ES0613014-015	ES0613014-016
EP080/071: Total Petroleum Hydrocarbons									
C29 - C36 Fraction		100	mg/kg		<100	<100	----	<100	----
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	1.0	0.7	<0.2	0.7
Toluene	108-88-3	0.2	mg/kg		<0.2	0.4	8.9	<0.2	9.7
Ethylbenzene	100-41-4	0.2	mg/kg		<0.2	<0.2	1.4	<0.2	1.6
meta- & para-Xylene	108-38-3	0.2	mg/kg		<0.2	0.6	7.3	<0.2	8.0
	106-42-3								
ortho-Xylene	95-47-6	0.2	mg/kg		<0.2	0.5	3.0	<0.2	3.3
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		106	117	----	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%		111	108	----	----	----
2,4,6-Tribromophenol	118-79-6	0.1	%		69.0	52.5	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		99.5	99.5	----	----	----
Anthracene-d10	1719-06-8	0.1	%		96.5	99.4	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%		102	101	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		103	106	111	111	118
Toluene-D8	2037-26-5	0.1	%		86.1	87.4	87.1	89.9	93.7
4-Bromofluorobenzene	460-00-4	0.1	%		88.0	92.1	90.3	86.9	96.2

Page Number : 9 of 11
 Client : CH2M HILL PTY LTD
 Work Order : ES0613014



Analytical Results

Client Sample ID :				EQ1				
Sample Matrix Type / Description :				WATER				
Sample Date / Time :				17 Oct 2006 15:00				
Laboratory Sample ID :				ES0613014-011				
Analyte	CAS number	LOR	Units					
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	1.0	µg/L	<1.0				
2-Chlorophenol	95-57-8	1.0	µg/L	<1.0				
2-Methylphenol	95-48-7	1.0	µg/L	<1.0				
3- & 4-Methylphenol	1319-77-3	2.0	µg/L	<2.0				
2-Nitrophenol	88-75-5	1.0	µg/L	<1.0				
2,4-Dimethylphenol	105-67-9	1.0	µg/L	<1.0				
2,4-Dichlorophenol	120-83-2	1.0	µg/L	<1.0				
2,6-Dichlorophenol	87-65-0	1.0	µg/L	<1.0				
4-Chloro-3-Methylphenol	59-50-7	1.0	µg/L	<1.0				
2,4,6-Trichlorophenol	88-06-2	1.0	µg/L	<1.0				
2,4,5-Trichlorophenol	95-95-4	1.0	µg/L	<1.0				
Pentachlorophenol	87-86-5	2.0	µg/L	<2.0				
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	<1.0				
Acenaphthylene	208-96-8	1.0	µg/L	<1.0				
Acenaphthene	83-32-9	1.0	µg/L	<1.0				
Fluorene	86-73-7	1.0	µg/L	<1.0				
Phenanthrene	85-01-8	1.0	µg/L	<1.0				
Anthracene	120-12-7	1.0	µg/L	<1.0				
Fluoranthene	206-44-0	1.0	µg/L	<1.0				
Pyrene	129-00-0	1.0	µg/L	<1.0				
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0				
Chrysene	218-01-9	1.0	µg/L	<1.0				
Benzo(b)fluoranthene	205-99-2	1.0	µg/L	<1.0				
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0				
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5				
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	<1.0				
Dibenz(a,h)anthracene	53-70-3	1.0	µg/L	<1.0				
Benzo(g,h,i)perylene	191-24-2	1.0	µg/L	<1.0				
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction		20	µg/L	<20				
C10 - C14 Fraction		50	µg/L	<50				
C15 - C28 Fraction		100	µg/L	<100				
C29 - C36 Fraction		50	µg/L	<50				
EP080: BTEX								
Benzene	71-43-2	1	µg/L	<1				
Toluene	108-88-3	2	µg/L	<2				

Page Number : 10 of 11
 Client : CH2M HILL PTY LTD
 Work Order : ES0613014



Analytical Results

				Client Sample ID :	EQ1				
				Sample Matrix Type / Description :	WATER				
				Sample Date / Time :	17 Oct 2006 15:00				
				Laboratory Sample ID :					
Analyte	CAS number	LOR	Units		ES0613014-011				
EP080: BTEX									
Ethylbenzene	100-41-4	2	µg/L		<2				
meta- & para-Xylene	108-38-3	2	µg/L		<2				
	106-42-3								
ortho-Xylene	95-47-6	2	µg/L		<2				
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		29.3				
2-Chlorophenol-D4	93951-73-6	0.1	%		79.6				
2,4,6-Tribromophenol	118-79-6	0.1	%		84.2				
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		81.8				
Anthracene-d10	1719-06-8	0.1	%		82.7				
4-Terphenyl-d14	1718-51-0	0.1	%		81.1				
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		87.0				
Toluene-D8	2037-26-5	0.1	%		107				
4-Bromofluorobenzene	460-00-4	0.1	%		101				

Surrogate Control Limits

Matrix Type: WATER - Surrogate Control Limits

		Surrogate Control Limits	
Method name	Analyte name	Lower Limit	Upper Limit
EP075(SIM): PAH/Phenols (GC/MS - SIM)			
EP075(SIM)S: Phenolic Compound Surrogates	Phenol-d6	10	94
	2-Chlorophenol-D4	23	134
	2,4,6-Tribromophenol	10	123
EP075(SIM)T: PAH Surrogates	2-Fluorobiphenyl	43	116
	Anthracene-d10	27	133
	4-Terphenyl-d14	33	141
EP080: TPH Volatiles/BTEX			
EP080S: TPH(V)/BTEX Surrogates	1,2-Dichloroethane-D4	80	120
	Toluene-D8	88	110
	4-Bromofluorobenzene	86	115

Matrix Type: SOIL - Surrogate Control Limits

		Surrogate Control Limits	
Method name	Analyte name	Lower Limit	Upper Limit
EP075(SIM): PAH/Phenols (SIM)			
EP075(SIM)S: Phenolic Compound Surrogates	Phenol-d6	24	113
	2-Chlorophenol-D4	23	134
	2,4,6-Tribromophenol	19	122
EP075(SIM)T: PAH Surrogates	2-Fluorobiphenyl	30	115
	Anthracene-d10	27	133
	4-Terphenyl-d14	18	137
EP080: TPH Volatiles/BTEX			
EP080S: TPH(V)/BTEX Surrogates	1,2-Dichloroethane-D4	80	120
	Toluene-D8	81	117
	4-Bromofluorobenzene	74	121

CH2MHILL ACN 050 070 892
CHAIN OF CUSTODY RECORD

Level 7, 9 Help Street, Chatswood, NSW 2067 Australia Tel (61 2) 9950 0200 Fax (61 2) 9950 0600

Laboratory
Quotation #

1/2

COC # ~~5549~~

Project # 347496		Purchase Order # SY/148/06		TOTAL # OF CONTAINERS	Requested Analytical Method #								QA REQUIREMENTS	
Project Name Macdonaldtown Geesworks					S-7 Phenols EK026 S-4 HOLD	●	Matrix Spike		☐ Yes	☐ No				
Company Name ALS							Matrix Duplicate		☐ Yes	☐ No				
Project Manager or Contact & Phone # Adam Sullivan 0400 500 264							Laboratory Duplicate		☐ Yes	☐ No				
Report Copy to: →							Lab Blank		☐ Yes	☐ No				
Requested Completion Date: Standard TAT		Site ID Macdonaldtown					Surrogate Spike		☐ Yes	☐ No				
		Sample Disposal: Dispose ☒ Return ☐					RPDs		☐ Yes	☐ No				
							Spike Recovery Data		☐ Yes	☐ No				
							Preservative		LAB USE ONLY					
									Custody Seals		☐ Yes	☐ No		
						ICE		☐ Yes	☐ No					
Sampling		Type	Matrix	CLIENT SAMPLE ID (9 CHARACTERS)		LAB QC		Comments		Lab ID				
Date	Time													
17/10	①		✓	TP15A/6.0				X	X	X				
"	②		✓	TP15A/7.0				X	X	X				
"	③		✓	MG09A1/0.7				X	X	X				
"	④		✓	MG09A1/3.6				X	X	X				
"	⑤		✓	MG09A1/4.8				X	X	X				
18/10	⑥		✓	MG09A1/5.5						X				
"	⑦		✓	MG10B/1.8				X	X					
"	⑧		✓	MG10B/3.0				X	X					
"	⑨		✓	BH14A/1.4				X	X					
"	⑩		✓	BH14A/2.4				X	X					
"	18		✓	BH14A/4.6						X				
"	⑩		✓	BH14A/7.0				X	X	X				
Sampled By and Title Adam Sullivan		(Please sign and print name) A. Sullivan		Date/Time 18/10/06		Relinquished By A. Sullivan		(Please sign and print name) A. Sullivan		Date/Time 18/10/06				
Received by Noreen		(Please sign and print name) Noreen		Date/Time 18.10.06/4.00pm		Relinquished By		(Please sign and print name)		Date/Time				
Received by		(Please sign and print name)		Date/Time		Shipped Via		Shipping #						
Special Instructions:														

ALS Environmental
Sydney
Work Order

ES0613014



Telephone : +61 (02) 8784 8555

CH2MHILL ACN 050 070 892
CHAIN OF CUSTODY RECORD

Level 7, 9 Help Street, Chatswood, NSW 2067 Australia Tel (61 2) 9950 0200 Fax (61 2) 9950 0600

Laboratory
Quotation #

2/2

COC # ~~5549~~

Project # 347496		Purchase Order # SY/148/06		TOTAL # OF CONTAINERS	Requested Analytical Method #								QA REQUIREMENTS						
Project Name Macdonaldtown Gasworks					S-7 Phenols EK026 S-4 HOLD							Matrix Spike	☐ Yes ☐ No						
Company Name ALS												Matrix Duplicate	☐ Yes ☐ No						
Project Manager or Contact & Phone # Adam Sullivan 0400 500 264												Report Copy to:	Laboratory Duplicate	☐ Yes ☐ No					
Report Copy to:												Lab Blank	☐ Yes ☐ No						
Requested Completion Date: Standard TAT		Site ID Macdonaldtown		Sample Disposal: Dispose ☒ Return ☐		Preservative								LAB USE ONLY					
Sampling		Type	Matrix	CLIENT SAMPLE ID (9 CHARACTERS)				LAB QC										Custody Seals ☐ Yes ☐ No	
Date	Time																	ICE ☐ Yes ☐ No	
17/10	11		X	EQ1						X	X								
17/10	12		X	DUP 21						X	X	X							
18/10	13			DUP 22						X	X								
"	14			Trip spike (2)										X					
"	15			Trip blank (2)										X					
19	16			BHF/8.4															
	17			Trip spike control						13.10.06									
Sampled By and Title				Date/Time		Relinquished By				Date/Time									
Received by Voreen				Date/Time 18.10.06/4pm		Relinquished By				Date/Time									
Received by				Date/Time		Shipped Via				Shipping #									
Special Instructions:																			



QUALITY CONTROL REPORT

Client	: CH2M HILL PTY LTD	Laboratory	: ALS Environmental Sydney	Page	: 1 of 13
Contact	: MR ADAM SULLIVAN	Contact	: Greg Vogel		
Address	: PO BOX 5392 CHATSWOOD NSW AUSTRALIA 1515	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164	Work order	: ES0613014
				Amendment No.	:
Project	: 347496 Macdonaldtown Gasworks	Quote number	: ----	Date received	: 18 Oct 2006
Order number	: - Not provided -			Date issued	: 25 Oct 2006
C-O-C number	: - Not provided -				
Site	: - Not provided -				
E-mail	: adam.sullivan@ch2m.com.au	E-mail	: Greg.Vogel@alsenviro.com	No. of samples	
Telephone	: 02 9950 0200	Telephone	: +61 (02) 8784 8555	Received	: 19
Facsimile	: 02 9950 0600	Facsimile	: +61 (02) 8784 8500	Analysed	: 16

This final report for the ALSE work order reference ES0613014 supersedes any previous reports with this reference.

Results apply to the samples as submitted. All pages of this report have been checked and approved for release.

This report contains the following information:

- 1 Laboratory Duplicates (DUP); Relative Percentage Difference (RPD) and Acceptance Limits
- 1 Method Blank (MB) and Laboratory Control Samples (LCS); Recovery and Acceptance Limits
- 1 Matrix Spikes (MS); Recovery and Acceptance Limits

Work order specific comments

The trip spike and control were prepared in the lab using reagent grade sand spiked with petrol. The spike was dispatched from the lab and the control retained.

ALSE - Excellence in Analytical Testing



NATA Accredited Laboratory - 825

This document is issued in accordance with NATA's accreditation requirements.

Accredited for compliance with ISO/IEC 17025

This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatory

PHALAK INTAKESONE
Sarah Millington

Department

Organics - NATA 825 (10911 - Sydney)
Inorganics - NATA 825 (10911 - Sydney)

Client : CH2M HILL PTY LTD
Project : 347496 Macdonaldtown Gasworks

Work Order : ES0613014
ALS Quote Reference : ----

Page Number : 2 of 13
Issue Date : 25 Oct 2006

Quality Control Report - Laboratory Duplicates (DUP)

The quality control term **Laboratory Duplicate** refers to an intralaboratory split sample randomly selected from the sample batch. Laboratory duplicates provide information on method precision and sample heterogeneity.
- Anonymous - Client Sample IDs refer to samples which are not specifically part of this work order but formed part of the QC process lot. *Abbreviations: LOR = Limit of Reporting, RPD = Relative Percent Difference.*
* Indicates failed QC. The permitted ranges for the RPD of Laboratory Duplicates (relative percent deviation) are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting:- Result < 10 times LOR, no limit - Result between 10 and 20 times LOR, 0% - 50% - Result > 20 times LOR, 0% - 20%

Matrix Type: SOIL Laboratory Duplicates (DUP) Report

Laboratory Sample ID	Client Sample ID	Analyte name	LOR	Original Result	Duplicate Result	RPD
EA055: Moisture Content						
EA055: Moisture Content - (QC Lot: 293188)				%	%	%
ES0613014-001	TP15A/6.0	Moisture Content (dried @ 103°C)	1.0 %	13.1	13.3	1.4
ES0613014-010	BHF/7.0	Moisture Content (dried @ 103°C)	1.0 %	12.4	12.5	1.3
EK026G: Total Cyanide By Discrete Analyser						
EK026G: Total Cyanide By Discrete Analyser - (QC Lot: 292886)				mg/kg	mg/kg	%
ES0613014-001	TP15A/6.0	Total Cyanide	1.0 mg/kg	<1.0	<1.0	0.0
EP075(SIM)A: Phenolic Compounds						
EP075(SIM)A: Phenolic Compounds - (QC Lot: 293050)				mg/kg	mg/kg	%
ES0613014-001	TP15A/6.0	Phenol	0.5 mg/kg	<0.5	<0.5	0.0
		2-Chlorophenol	0.5 mg/kg	<0.5	<0.5	0.0
		2-Methylphenol	0.5 mg/kg	<0.5	<0.5	0.0
		3- & 4-Methylphenol	1.0 mg/kg	<1.0	<1.0	0.0
		2-Nitrophenol	0.5 mg/kg	<0.5	<0.5	0.0
		2,4-Dimethylphenol	0.5 mg/kg	<0.5	<0.5	0.0
		2,4-Dichlorophenol	0.5 mg/kg	<0.5	<0.5	0.0
		2,6-Dichlorophenol	0.5 mg/kg	<0.5	<0.5	0.0
		4-Chloro-3-Methylphenol	0.5 mg/kg	<0.5	<0.5	0.0
		2,4,6-Trichlorophenol	0.5 mg/kg	<0.5	<0.5	0.0
		2,4,5-Trichlorophenol	0.5 mg/kg	<0.5	<0.5	0.0
		Pentachlorophenol	2.0 mg/kg	<2.0	<2.0	0.0
ES0613014-012	DUP21	Phenol	0.5 mg/kg	<0.5	<0.5	0.0
		2-Chlorophenol	0.5 mg/kg	<0.5	<0.5	0.0
		2-Methylphenol	0.5 mg/kg	<0.5	<0.5	0.0
		3- & 4-Methylphenol	1.0 mg/kg	<1.0	<1.0	0.0
		2-Nitrophenol	0.5 mg/kg	<0.5	<0.5	0.0
		2,4-Dimethylphenol	0.5 mg/kg	<0.5	<0.5	0.0

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Matrix Type: SOIL **Laboratory Duplicates (DUP) Report**

Laboratory Sample ID	Client Sample ID	Analyte name	LOR	Original Result	Duplicate Result	RPD
EP075(SIM)A: Phenolic Compounds - continued						
EP075(SIM)A: Phenolic Compounds - (QC Lot: 293050) - continued				mg/kg	mg/kg	%
ES0613014-012	DUP21	2,4-Dichlorophenol	0.5 mg/kg	<0.5	<0.5	0.0
		2,6-Dichlorophenol	0.5 mg/kg	<0.5	<0.5	0.0
		4-Chloro-3-Methylphenol	0.5 mg/kg	<0.5	<0.5	0.0
		2,4,6-Trichlorophenol	0.5 mg/kg	<0.5	<0.5	0.0
		2,4,5-Trichlorophenol	0.5 mg/kg	<0.5	<0.5	0.0
		Pentachlorophenol	2.0 mg/kg	<2.0	<2.0	0.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons						
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 293050)				mg/kg	mg/kg	%
ES0613014-001	TP15A/6.0	Naphthalene	0.5 mg/kg	0.8	<0.5	48.9
		Acenaphthylene	0.5 mg/kg	<0.5	<0.5	0.0
		Acenaphthene	0.5 mg/kg	<0.5	<0.5	0.0
		Fluorene	0.5 mg/kg	<0.5	<0.5	0.0
		Phenanthrene	0.5 mg/kg	<0.5	<0.5	0.0
		Anthracene	0.5 mg/kg	<0.5	<0.5	0.0
		Fluoranthene	0.5 mg/kg	<0.5	<0.5	0.0
		Pyrene	0.5 mg/kg	<0.5	<0.5	0.0
		Benz(a)anthracene	0.5 mg/kg	<0.5	<0.5	0.0
		Chrysene	0.5 mg/kg	<0.5	<0.5	0.0
		Benzo(b)fluoranthene	0.5 mg/kg	<0.5	<0.5	0.0
		Benzo(k)fluoranthene	0.5 mg/kg	<0.5	<0.5	0.0
		Benzo(a)pyrene	0.5 mg/kg	<0.5	<0.5	0.0
		Indeno(1,2,3,cd)pyrene	0.5 mg/kg	<0.5	<0.5	0.0
		Dibenz(a,h)anthracene	0.5 mg/kg	<0.5	<0.5	0.0
		Benzo(g,h,i)perylene	0.5 mg/kg	<0.5	<0.5	0.0
ES0613014-012	DUP21	Naphthalene	0.5 mg/kg	<0.5	<0.5	0.0
		Acenaphthylene	0.5 mg/kg	<0.5	<0.5	0.0
		Acenaphthene	0.5 mg/kg	<0.5	<0.5	0.0
		Fluorene	0.5 mg/kg	<0.5	<0.5	0.0
		Phenanthrene	0.5 mg/kg	<0.5	<0.5	0.0

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Matrix Type: SOIL **Laboratory Duplicates (DUP) Report**

Laboratory Sample ID	Client Sample ID	Analyte name	LOR	Original Result	Duplicate Result	RPD
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - continued						
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 293050) - continued				mg/kg	mg/kg	%
ES0613014-012	DUP21	Anthracene	0.5 mg/kg	<0.5	<0.5	0.0
		Fluoranthene	0.5 mg/kg	<0.5	<0.5	0.0
		Pyrene	0.5 mg/kg	<0.5	<0.5	0.0
		Benz(a)anthracene	0.5 mg/kg	<0.5	<0.5	0.0
		Chrysene	0.5 mg/kg	<0.5	<0.5	0.0
		Benzo(b)fluoranthene	0.5 mg/kg	<0.5	<0.5	0.0
		Benzo(k)fluoranthene	0.5 mg/kg	<0.5	<0.5	0.0
		Benzo(a)pyrene	0.5 mg/kg	<0.5	<0.5	0.0
		Indeno(1,2,3,cd)pyrene	0.5 mg/kg	<0.5	<0.5	0.0
		Dibenz(a,h)anthracene	0.5 mg/kg	<0.5	<0.5	0.0
		Benzo(g,h,i)perylene	0.5 mg/kg	<0.5	<0.5	0.0
EP080/071: Total Petroleum Hydrocarbons						
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 292797)				mg/kg	mg/kg	%
ES0613014-005	MG09A1/4.8	C6 - C9 Fraction	2 mg/kg	<2	<2	0.0
ES0613014-008	BH14A/1.4	C6 - C9 Fraction	2 mg/kg	9	8	16.1
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 293051)				mg/kg	mg/kg	%
ES0613014-001	TP15A/6.0	C10 - C14 Fraction	50 mg/kg	<50	<50	0.0
		C15 - C28 Fraction	100 mg/kg	<100	<100	0.0
		C29 - C36 Fraction	100 mg/kg	<100	<100	0.0
ES0613014-012	DUP21	C10 - C14 Fraction	50 mg/kg	<50	<50	0.0
		C15 - C28 Fraction	100 mg/kg	<100	<100	0.0
		C29 - C36 Fraction	100 mg/kg	<100	<100	0.0
EP080: BTEX						
EP080: BTEX - (QC Lot: 292797)				mg/kg	mg/kg	%
ES0613014-005	MG09A1/4.8	Benzene	0.2 mg/kg	<0.2	<0.2	0.0
		Toluene	0.2 mg/kg	<0.2	<0.2	0.0
		Ethylbenzene	0.2 mg/kg	<0.2	<0.2	0.0
		meta- & para-Xylene	0.2 mg/kg	<0.2	<0.2	0.0
		ortho-Xylene	0.2 mg/kg	<0.2	<0.2	0.0

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Matrix Type: SOIL **Laboratory Duplicates (DUP) Report**

Laboratory Sample ID	Client Sample ID	Analyte name	LOR	Original Result	Duplicate Result	RPD
EP080: BTEX - continued						
EP080: BTEX - (QC Lot: 292797) - continued				mg/kg	mg/kg	%
ES0613014-008	BH14A/1.4	Benzene	0.2 mg/kg	0.4	0.4	0.0
		Toluene	0.2 mg/kg	<0.2	<0.2	0.0
		Ethylbenzene	0.2 mg/kg	<0.2	<0.2	0.0
		meta- & para-Xylene	0.2 mg/kg	0.4	0.5	0.0
		ortho-Xylene	0.2 mg/kg	<0.2	<0.2	0.0

Matrix Type: WATER **Laboratory Duplicates (DUP) Report**

Laboratory Sample ID	Client Sample ID	Analyte name	LOR	Original Result	Duplicate Result	RPD
EP080/071: Total Petroleum Hydrocarbons						
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 292856)				µg/L	µg/L	%
ES0613033-003	Anonymous	C6 - C9 Fraction	20 µg/L	<20	<20	0.0
ES0613033-010	Anonymous	C6 - C9 Fraction	20 µg/L	130	110	13.2
EP080: BTEX						
EP080: BTEX - (QC Lot: 292856)				µg/L	µg/L	%
ES0613033-003	Anonymous	Benzene	1 µg/L	<1	<1	0.0
		Toluene	2 µg/L	<2	<2	0.0
		Ethylbenzene	2 µg/L	<2	<2	0.0
		meta- & para-Xylene	2 µg/L	<2	<2	0.0
		ortho-Xylene	2 µg/L	<2	<2	0.0
ES0613033-010	Anonymous	Benzene	1 µg/L	11	9	15.9
		Toluene	2 µg/L	<2	<2	0.0
		Ethylbenzene	2 µg/L	<2	<2	0.0
		meta- & para-Xylene	2 µg/L	3	2	0.0
		ortho-Xylene	2 µg/L	<2	<2	0.0

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Quality Control Report - Method Blank (MB) and Laboratory Control Samples (LCS)

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC type is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a known, interference free matrix spiked with target analytes or certified reference material. The purpose of this QC type is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of actual laboratory data. Flagged outliers on control limits for inorganics tests may be within the NEPM specified data quality objective of recoveries in the range of 70 to 130%. Where this occurs, no corrective action is taken. Abbreviations: LOR = Limit of reporting.

Matrix Type: SOIL

Method Blank (MB) and Laboratory Control Samples (LCS) Report

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery	Dynamic Recovery Limits	
				LCS	Low	High
EK026G: Total Cyanide By Discrete Analyser						
EK026G: Total Cyanide By Discrete Analyser - (QC Lot: 292886)		mg/kg	mg/kg	%	%	%
Total Cyanide	1 mg/kg	----	50	99.3	70	130
	1.0 mg/kg	<1.0	----	----	----	----
EP075(SIM)A: Phenolic Compounds						
EP075(SIM)A: Phenolic Compounds - (QC Lot: 293050)		mg/kg	mg/kg	%	%	%
2,4,5-Trichlorophenol	0.5 mg/kg	----	4	79.5	68.9	112
	0.5 mg/kg	<0.5	----	----	----	----
2,4,6-Trichlorophenol	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	68.6	62.2	115
2,4-Dichlorophenol	0.5 mg/kg	----	4	80.2	71.6	113
	0.5 mg/kg	<0.5	----	----	----	----
2,4-Dimethylphenol	0.5 mg/kg	----	4	87.6	74.5	119
	0.5 mg/kg	<0.5	----	----	----	----
2,6-Dichlorophenol	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	83.0	74.8	115
2-Chlorophenol	0.5 mg/kg	----	4	101	80.2	115
	0.5 mg/kg	<0.5	----	----	----	----
2-Methylphenol	0.5 mg/kg	----	4	90.4	76.8	114
	0.5 mg/kg	<0.5	----	----	----	----
2-Nitrophenol	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	68.8	60.3	117
3- & 4-Methylphenol	1.0 mg/kg	<1.0	----	----	----	----
	1.0 mg/kg	----	8	89.6	72	119
4-Chloro-3-Methylphenol	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	75.5	76.4	114

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Matrix Type: SOIL Method Blank (MB) and Laboratory Control Samples (LCS) Report

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery	Dynamic Recovery Limits	
				LCS	Low	High
EP075(SIM)A: Phenolic Compounds - continued						
EP075(SIM)A: Phenolic Compounds - (QC Lot: 293050) - continued		mg/kg	mg/kg	%	%	%
Pentachlorophenol	1.0 mg/kg	<1.0	----	----	----	----
	1.0 mg/kg	----	8	19.0	1.23	91.6
Phenol	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	99.7	73.9	115
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons						
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 293050)		mg/kg	mg/kg	%	%	%
Acenaphthene	0.5 mg/kg	----	4	95.0	81.5	112
	0.5 mg/kg	<0.5	----	----	----	----
Acenaphthylene	0.5 mg/kg	----	4	95.3	79.6	113
	0.5 mg/kg	<0.5	----	----	----	----
Anthracene	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	92.7	81.1	112
Benz(a)anthracene	0.5 mg/kg	----	4	97.3	77.2	112
	0.5 mg/kg	<0.5	----	----	----	----
Benzo(a)pyrene	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	93.1	76.4	113
Benzo(b)fluoranthene	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	96.2	71.8	118
Benzo(g,h,i)perylene	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	92.1	72.4	114
Benzo(k)fluoranthene	0.5 mg/kg	----	4	94.7	74.2	117
	0.5 mg/kg	<0.5	----	----	----	----
Chrysene	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	93.5	79.8	114
Dibenz(a,h)anthracene	0.5 mg/kg	----	4	90.5	71.7	113
	0.5 mg/kg	<0.5	----	----	----	----
Fluoranthene	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	93.6	78.8	113
Fluorene	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	95.4	79.9	112

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Matrix Type: SOIL Method Blank (MB) and Laboratory Control Samples (LCS) Report

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery	Dynamic Recovery Limits	
				LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - continued						
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 293050) - continued		mg/kg	mg/kg	%	%	%
Indeno(1,2,3,cd)pyrene	0.5 mg/kg	----	4	91.4	71	113
	0.5 mg/kg	<0.5	----	----	----	----
Naphthalene	0.5 mg/kg	----	4	97.7	81.9	113
	0.5 mg/kg	<0.5	----	----	----	----
Phenanthrene	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	94.4	79.4	114
Pyrene	0.5 mg/kg	----	4	87.9	78.9	113
	0.5 mg/kg	<0.5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons						
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 292797)		mg/kg	mg/kg	%	%	%
C6 - C9 Fraction	2 mg/kg	<2	----	----	----	----
	2 mg/kg	----	26	84.6	68.4	128
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 293051)		mg/kg	mg/kg	%	%	%
C10 - C14 Fraction	50 mg/kg	----	200	104	75.2	116
	50 mg/kg	<50	----	----	----	----
C15 - C28 Fraction	100 mg/kg	<100	----	----	----	----
	100 mg/kg	----	200	107	75.3	113
C29 - C36 Fraction	100 mg/kg	<100	----	----	----	----
	100 mg/kg	----	200	94.0	72.6	117
EP080: BTEX						
EP080: BTEX - (QC Lot: 292797)		mg/kg	mg/kg	%	%	%
Benzene	0.2 mg/kg	<0.2	----	----	----	----
	0.2 mg/kg	----	1	96.8	67.5	125
Ethylbenzene	0.2 mg/kg	----	1	93.3	65.3	126
	0.2 mg/kg	<0.2	----	----	----	----
meta- & para-Xylene	0.2 mg/kg	----	2	85.6	66.5	124
	0.2 mg/kg	<0.2	----	----	----	----
ortho-Xylene	0.2 mg/kg	----	1	90.3	66.7	123
	0.2 mg/kg	<0.2	----	----	----	----

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Matrix Type: SOIL **Method Blank (MB) and Laboratory Control Samples (LCS) Report**

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery	Dynamic Recovery Limits	
				LCS	Low	High
EP080: BTEX - continued						
EP080: BTEX - (QC Lot: 292797) - continued		mg/kg	mg/kg	%	%	%
Toluene	0.2 mg/kg	<0.2	----	----	----	----
	0.2 mg/kg	----	1	89.7	69	122

Matrix Type: WATER **Method Blank (MB) and Laboratory Control Samples (LCS) Report**

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery	Dynamic Recovery Limits	
				LCS	Low	High
EP075(SIM)A: Phenolic Compounds						
EP075(SIM)A: Phenolic Compounds - (QC Lot: 292806)		µg/L	µg/L	%	%	%
2,4,5-Trichlorophenol	0.2 µg/L	----	2	98.4	65.3	121
	0.5 µg/L	<0.5	----	----	----	----
2,4,6-Trichlorophenol	0.2 µg/L	----	2	97.1	63.1	122
	0.5 µg/L	<0.5	----	----	----	----
2,4-Dichlorophenol	0.2 µg/L	----	2	96.4	64.4	121
	0.5 µg/L	<0.5	----	----	----	----
2,4-Dimethylphenol	0.2 µg/L	----	2	91.6	61.7	118
	0.5 µg/L	<0.5	----	----	----	----
2,6-Dichlorophenol	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	98.2	65.7	120
2-Chlorophenol	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	97.5	62.3	117
2-Methylphenol	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	82.4	53.9	110
2-Nitrophenol	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	115	58.2	127
3- & 4-Methylphenol	0.4 µg/L	----	4	73.4	40.9	103
	1.0 µg/L	<1.0	----	----	----	----
4-Chloro-3-Methylphenol	0.2 µg/L	----	2	98.7	66.4	119
	0.5 µg/L	<0.5	----	----	----	----
Pentachlorophenol	0.4 µg/L	----	4	107	10.9	145
	1.0 µg/L	<1.0	----	----	----	----

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Matrix Type: WATER

Method Blank (MB) and Laboratory Control Samples (LCS) Report

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery	Dynamic Recovery Limits	
				LCS	Low	High
EP075(SIM)A: Phenolic Compounds - continued						
EP075(SIM)A: Phenolic Compounds - (QC Lot: 292806) - continued		µg/L	µg/L	%	%	%
Phenol	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	45.0	19.5	60.7
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons						
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 292806)		µg/L	µg/L	%	%	%
Acenaphthene	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	112	62.2	113
Acenaphthylene	0.2 µg/L	----	2	112	63.6	114
	0.5 µg/L	<0.5	----	----	----	----
Anthracene	0.2 µg/L	----	2	110	64.3	116
	0.5 µg/L	<0.5	----	----	----	----
Benz(a)anthracene	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	115	64.1	117
Benzo(a)pyrene	0.2 µg/L	----	2	114	63.3	117
	0.5 µg/L	<0.5	----	----	----	----
Benzo(b)fluoranthene	0.2 µg/L	----	2	119	61.7	119
	0.5 µg/L	<0.5	----	----	----	----
Benzo(g,h,i)perylene	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	111	59.1	118
Benzo(k)fluoranthene	0.2 µg/L	----	2	108	61.7	117
	0.5 µg/L	<0.5	----	----	----	----
Chrysene	0.2 µg/L	----	2	112	62.5	116
	0.5 µg/L	<0.5	----	----	----	----
Dibenz(a,h)anthracene	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	112	61.2	117
Fluoranthene	0.2 µg/L	----	2	116	63.6	118
	0.5 µg/L	<0.5	----	----	----	----
Fluorene	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	115	63.9	115
Indeno(1,2,3,cd)pyrene	0.2 µg/L	----	2	113	59.9	118
	0.5 µg/L	<0.5	----	----	----	----

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Matrix Type: WATER

Method Blank (MB) and Laboratory Control Samples (LCS) Report

		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery	Dynamic Recovery Limits	
				LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - continued						
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 292806) - continued		µg/L	µg/L	%	%	%
Naphthalene	0.2 µg/L	----	2	113	62.4	114
	0.5 µg/L	<0.5	----	----	----	----
Phenanthrene	0.2 µg/L	----	2	114	62.6	116
	0.5 µg/L	<0.5	----	----	----	----
Pyrene	0.2 µg/L	----	2	113	63.1	118
	0.5 µg/L	<0.5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons						
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 292807)		µg/L	µg/L	%	%	%
C10 - C14 Fraction	50 µg/L	<50	----	----	----	----
	50 µg/L	----	200	75.2	58.9	131
C15 - C28 Fraction	100 µg/L	----	200	90.6	73.9	138
	100 µg/L	<100	----	----	----	----
C29 - C36 Fraction	50 µg/L	<50	----	----	----	----
	50 µg/L	----	200	88.8	62.7	131
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 292856)		µg/L	µg/L	%	%	%
C6 - C9 Fraction	20 µg/L	----	260	83.4	75	127
	20 µg/L	<20	----	----	----	----
EP080: BTEX						
EP080: BTEX - (QC Lot: 292856)		µg/L	µg/L	%	%	%
Benzene	1 µg/L	<1	----	----	----	----
	1 µg/L	----	10	91.8	76.2	124
Ethylbenzene	2 µg/L	<2	----	----	----	----
	2 µg/L	----	10	102	76.1	122
meta- & para-Xylene	2 µg/L	----	10	96.0	75.7	123
	2 µg/L	<2	----	----	----	----
ortho-Xylene	2 µg/L	----	10	95.8	77.9	121
	2 µg/L	<2	----	----	----	----
Toluene	2 µg/L	<2	----	----	----	----
	2 µg/L	----	10	98.0	74.4	124

Client : CH2M HILL PTY LTD
 Project : 347496 Macdonaldtown Gasworks

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Quality Control Report - Matrix Spikes (MS)

The quality control term **Matrix Spike (MS)** refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC type is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQO's). 'Ideal' recovery ranges stated may be waived in the event of sample matrix interferences. - Anonymous - Client Sample IDs refer to samples which are not specifically part of this work order but formed part of the QC process lot. *Abbreviations: LOR = Limit of Reporting, RPD = Relative Percent Difference.*

* Indicates failed QC

Matrix Type: SOIL **Matrix Spike (MS) Report**

					Actual Results		Recovery Limits		
Analyte name		Laboratory Sample ID	Client Sample ID	LOR	Spike Concentration	Sample Result	Spike Recovery	Static Limits	
							MS	Low	High
EK026G: Total Cyanide By Discrete Analyser									
EK026G: Total Cyanide By Discrete Analyser - (QC Lot: 292886)					mg/kg	mg/kg	%	%	%
Total Cyanide	ES0613014-001	TP15A/6.0	1 mg/kg	50	<1.0	88.9	70	130	
EP075(SIM)A: Phenolic Compounds									
EP075(SIM)A: Phenolic Compounds - (QC Lot: 293050)					mg/kg	mg/kg	%	%	%
Phenol	ES0613014-001	TP15A/6.0	0.5 mg/kg	10	<0.5	93.8	70	130	
2-Chlorophenol			0.5 mg/kg	10	<0.5	91.4	70	130	
2-Nitrophenol			0.5 mg/kg	10	<0.5	80.6	60	130	
4-Chloro-3-Methylphenol			0.5 mg/kg	10	<0.5	77.1	70	130	
Pentachlorophenol			2.0 mg/kg	10	<2.0	50.0	20	130	
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 293050)					mg/kg	mg/kg	%	%	%
Acenaphthene	ES0613014-001	TP15A/6.0	0.5 mg/kg	10	<0.5	93.2	70	130	
Pyrene			0.5 mg/kg	10	<0.5	89.8	70	130	
EP080/071: Total Petroleum Hydrocarbons									
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 292797)					mg/kg	mg/kg	%	%	%
C6 - C9 Fraction	ES0613014-005	MG09A1/4.8	2 mg/kg	26	<2	96.8	70	130	
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 293051)					mg/kg	mg/kg	%	%	%
C10 - C14 Fraction	ES0613014-001	TP15A/6.0	50 mg/kg	700	<50	88.3	70	130	
C15 - C28 Fraction			100 mg/kg	3400	<100	110	70	130	
C29 - C36 Fraction			100 mg/kg	3600	<100	85.3	70	130	
EP080: BTEX									
EP080: BTEX - (QC Lot: 292797)					mg/kg	mg/kg	%	%	%
Benzene	ES0613014-005	MG09A1/4.8	0.2 mg/kg	2.5	<0.2	111	70	130	
Toluene			0.2 mg/kg	2.5	<0.2	84.7	70	130	
Ethylbenzene			0.2 mg/kg	2.5	<0.2	92.3	70	130	

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Matrix Type: SOIL Matrix Spike (MS) Report

					Actual Results		Recovery Limits	
					Sample Result	Spike Recovery	Static Limits	
						MS	Low	High
Analyte name	Laboratory Sample ID	Client Sample ID	LOR	Spike Concentration				
EP080: BTEX - continued								
EP080: BTEX - (QC Lot: 292797) - continued				mg/kg	mg/kg	%	%	%
meta- & para-Xylene	ES0613014-005	MG09A1/4.8	0.2 mg/kg	2.5	<0.2	76.6	70	130
ortho-Xylene			0.2 mg/kg	2.5	<0.2	92.4	70	130

Matrix Type: WATER Matrix Spike (MS) Report

					Actual Results		Recovery Limits	
Analyte name	Laboratory Sample ID	Client Sample ID	LOR	Spike Concentration	Sample Result	Spike Recovery	Static Limits	
						MS	Low	High
EP080/071: Total Petroleum Hydrocarbons								
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 292856)				µg/L	µg/L	%	%	%
C6 - C9 Fraction	ES0613033-003	Anonymous	20 µg/L	250	<20	110	70	130
EP080: BTEX								
EP080: BTEX - (QC Lot: 292856)				µg/L	µg/L	%	%	%
Benzene	ES0613033-003	Anonymous	1 µg/L	25	<1	82.7	70	130
Toluene			2 µg/L	25	<2	77.3	70	130
Ethylbenzene			2 µg/L	25	<2	86.0	70	130
meta- & para-Xylene			2 µg/L	25	<2	86.6	70	130
ortho-Xylene			2 µg/L	25	<2	82.8	70	130

INTERPRETIVE QUALITY CONTROL REPORT

Client	: CH2M HILL PTY LTD	Laboratory	: ALS Environmental Sydney	Page	: 1 of 6
Contact	: MR ADAM SULLIVAN	Contact	: Greg Vogel		
Address	: PO BOX 5392 CHATSWOOD NSW AUSTRALIA 1515	Address	: Smithfield NSW Australia 2164	Work order	: ES0613014
				Amendment No.	:
Project	: 347496 Macdonaldtown Gasworks	Quote number	: ----	Date received	: 18 Oct 2006
Order number	: - Not provided -			Date issued	: 25 Oct 2006
C-O-C number	: - Not provided -				
Site	: - Not provided -				
E-mail	: adam.sullivan@ch2m.com.au	E-mail	: Greg.Vogel@alsenviro.com	No. of samples	
Telephone	: 02 9950 0200	Telephone	: +61 (02) 8784 8555	Received	: 19
Facsimile	: 02 9950 0600	Facsimile	: +61 (02) 8784 8500	Analysed	: 16

This Interpretive Quality Control Report was issued on 25 Oct 2006 for the ALS work order reference ES0613014 and supersedes any previous reports with this reference.

This report contains the following information:

- 1 Analysis Holding Time Compliance
- 1 Quality Control Type Frequency Compliance
- 1 Summary of all Quality Control Outliers
- 1 Brief Method Summaries

Client : CH2M HILL PTY LTD
Project : 347496 Macdonaldtown Gasworks

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Interpretive Quality Control Report - Analysis Holding Time

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the sample aliquot was taken. Elapsed time to analysis represents time from sampling where no extraction / digestion is involved or time from extraction / digestion where this is present. For composite samples, sampling date/time is taken as that of the oldest sample contributing to that composite. Sample date/time for laboratory produced leaches are taken from the completion date/time of the leaching process. Outliers for holding time are based on USEPA SW846, APHA, AS and NEPM (1999). Failed outliers, refer to the 'Summary of Outliers'.

Matrix Type: SOIL

Analysis Holding Time and Preservation

Method Container / Client Sample ID(s)	Date Sampled	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Pass?	Date analysed	Due for analysis	Pass?
EA055-103: Moisture Content							
Soil Glass Jar - Unpreserved TRIP SPIKE CONTROL	13 Oct 2006	----	----	----	20 Oct 2006	20 Oct 2006	Pass
Soil Glass Jar - Unpreserved TP15A/6.0, TP15A/7.0, MG09A1/0.7, MG09A1/3.6, MG09A1/4.8, DUP21	17 Oct 2006	----	----	----	20 Oct 2006	24 Oct 2006	Pass
Soil Glass Jar - Unpreserved MG10B/1.8, MG10B/3.0, BH14A/1.4, BH14A/2.4, BHF/7.0, DUP22, TRIP SPIKE 2, TRIP BLANK 2	18 Oct 2006	----	----	----	20 Oct 2006	25 Oct 2006	Pass
EK026G: Total Cyanide By Discrete Analyser							
Soil Glass Jar - Unpreserved TP15A/6.0, TP15A/7.0, MG09A1/0.7, MG09A1/3.6, MG09A1/4.8, DUP21	17 Oct 2006	20 Oct 2006	24 Oct 2006	Pass	20 Oct 2006	3 Nov 2006	Pass
Soil Glass Jar - Unpreserved BHF/7.0	18 Oct 2006	20 Oct 2006	25 Oct 2006	Pass	20 Oct 2006	3 Nov 2006	Pass
EP071: TPH - Semivolatile Fraction							
Soil Glass Jar - Unpreserved TP15A/6.0, TP15A/7.0, MG09A1/0.7, MG09A1/3.6, MG09A1/4.8, DUP21	17 Oct 2006	20 Oct 2006	31 Oct 2006	Pass	20 Oct 2006	29 Nov 2006	Pass
Soil Glass Jar - Unpreserved MG10B/1.8, MG10B/3.0, BH14A/1.4, BH14A/2.4, BHF/7.0, DUP22, TRIP SPIKE 2, TRIP BLANK 2	18 Oct 2006	20 Oct 2006	1 Nov 2006	Pass	20 Oct 2006	29 Nov 2006	Pass
EP075(SIM): PAH/Phenols (SIM)							
Soil Glass Jar - Unpreserved TP15A/6.0, TP15A/7.0, MG09A1/0.7, MG09A1/3.6, MG09A1/4.8, DUP21	17 Oct 2006	20 Oct 2006	31 Oct 2006	Pass	20 Oct 2006	29 Nov 2006	Pass
Soil Glass Jar - Unpreserved MG10B/1.8, MG10B/3.0, BH14A/1.4, BH14A/2.4, BHF/7.0, DUP22	18 Oct 2006	20 Oct 2006	1 Nov 2006	Pass	20 Oct 2006	29 Nov 2006	Pass

Client : CH2M HILL PTY LTD
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Matrix Type: SOIL **Analysis Holding Time and Preservation**

Method	Date Sampled	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Pass?	Date analysed	Due for analysis	Pass?
EP080: TPH Volatiles/BTEX							
Soil Glass Jar - Unpreserved TRIP SPIKE CONTROL	13 Oct 2006	19 Oct 2006	27 Oct 2006	Pass	20 Oct 2006	27 Oct 2006	Pass
Soil Glass Jar - Unpreserved TP15A/6.0, MG09A1/0.7, MG09A1/4.8,	TP15A/7.0, MG09A1/3.6, DUP21 17 Oct 2006	19 Oct 2006	31 Oct 2006	Pass	20 Oct 2006	31 Oct 2006	Pass
Soil Glass Jar - Unpreserved MG10B/1.8, BH14A/1.4, BHF/7.0, TRIP SPIKE 2,	MG10B/3.0, BH14A/2.4, DUP22, TRIP BLANK 2 18 Oct 2006	19 Oct 2006	1 Nov 2006	Pass	20 Oct 2006	1 Nov 2006	Pass

Matrix Type: WATER **Analysis Holding Time and Preservation**

Method	Date Sampled	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Pass?	Date analysed	Due for analysis	Pass?
EP071: TPH - Semivolatile Fraction							
Amber Glass Bottle - Unpreserved EQ1	17 Oct 2006	20 Oct 2006	24 Oct 2006	Pass	20 Oct 2006	29 Nov 2006	Pass
EP075(SIM): PAH/Phenols (GC/MS - SIM)							
Amber Glass Bottle - Unpreserved EQ1	17 Oct 2006	20 Oct 2006	24 Oct 2006	Pass	20 Oct 2006	29 Nov 2006	Pass
EP080: TPH Volatiles/BTEX							
Amber VOC Vial - HCl or NaHSO4 EQ1	17 Oct 2006	----	----	----	19 Oct 2006	31 Oct 2006	Pass

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Interpretive Quality Control Report - Frequency of Quality Control Samples

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which this work order was processed. Actual rate should be greater than or equal to the expected rate.

Matrix Type: SOIL

Frequency of Quality Control Samples

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
EA055-103: Moisture Content	2	20	10.0	10.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
EK026G: Total Cyanide By Discrete Analyser	1	7	14.3	10.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
EP071: TPH - Semivolatile Fraction	2	20	10.0	10.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
EP075(SIM): PAH/Phenols (SIM)	2	12	16.7	10.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
EP080: TPH Volatiles/BTEX	2	15	13.3	10.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
Laboratory Control Samples (LCS)					
EK026G: Total Cyanide By Discrete Analyser	1	7	14.3	5.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
EP071: TPH - Semivolatile Fraction	1	20	5.0	5.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
EP075(SIM): PAH/Phenols (SIM)	1	12	8.3	5.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
EP080: TPH Volatiles/BTEX	1	15	6.7	5.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
Method Blanks (MB)					
EK026G: Total Cyanide By Discrete Analyser	1	7	14.3	5.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
EP071: TPH - Semivolatile Fraction	1	20	5.0	5.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
EP075(SIM): PAH/Phenols (SIM)	1	12	8.3	5.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
EP080: TPH Volatiles/BTEX	1	15	6.7	5.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
Matrix Spikes (MS)					
EK026G: Total Cyanide By Discrete Analyser	1	7	14.3	5.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
EP071: TPH - Semivolatile Fraction	1	20	5.0	5.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
EP075(SIM): PAH/Phenols (SIM)	1	12	8.3	5.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
EP080: TPH Volatiles/BTEX	1	15	6.7	5.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement

Matrix Type: WATER

Frequency of Quality Control Samples

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
EP080: TPH Volatiles/BTEX	2	19	10.5	10.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
Laboratory Control Samples (LCS)					
EP071: TPH - Semivolatile Fraction	1	11	9.1	5.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
EP075(SIM): PAH/Phenols (GC/MS - SIM)	1	13	7.7	5.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
EP080: TPH Volatiles/BTEX	1	19	5.3	5.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
Method Blanks (MB)					
EP071: TPH - Semivolatile Fraction	1	11	9.1	5.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
EP075(SIM): PAH/Phenols (GC/MS - SIM)	1	13	7.7	5.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
EP080: TPH Volatiles/BTEX	1	19	5.3	5.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement
Matrix Spikes (MS)					
EP080: TPH Volatiles/BTEX	1	19	5.3	5.0	NEPM 1999 Schedule B(3) and ALSE QCS3 requirement

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Interpretive Quality Control Report - Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged on the 'Quality Control Report'. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). Flagged outliers on control limits for inorganics tests may be within the NEPM specified data quality objective of recoveries in the range of 70 to 130%. Where this occurs, no corrective action is taken. - Anonymous - Client Sample IDs refer to samples which are not specifically part of this work order but formed part of the QC process lot.

Non-surrogates

ALS QC Lot	Matrix Type	Laboratory Sample ID	Client Sample ID	Analyte	Data	Limits	Comment
Laboratory Control Samples (LCS)							
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	WATER	323148-002	----	Fluorene	115 %	63.9-115 %	Recovery greater than upper control limit
				Benzo(b)fluoranthene	119 %	61.7-119 %	Recovery greater than upper control limit
EP075(SIM)A: Phenolic Compounds	SOIL	323473-002	----	4-Chloro-3-Methylphenol	75.5 %	76.4-114 %	Recovery less than lower control limit

- 1 For all matrices, no RPD recovery outliers occur for the duplicate analysis.
- 1 For all matrices, no method blank result outliers occur.
- 1 For all matrices, no matrix spike recoveries breaches occur.

Surrogates

ALS QC Lot	Matrix Type	Laboratory Sample ID	Client Sample ID	Analyte	Data	Limits	Comment
Surrogates							
EP075(SIM)S: Phenolic Compound Surrogates	SOIL	ES0613014-001	TP15A/6.0	Phenol-d6	116 %	24-113 %	Recovery greater than upper data quality objective
	SOIL	ES0613014-002	TP15A/7.0	Phenol-d6	115 %	24-113 %	Recovery greater than upper data quality objective
	SOIL	ES0613014-003	MG09A1/0.7	Phenol-d6	118 %	24-113 %	Recovery greater than upper data quality objective
	SOIL	ES0613014-004	MG09A1/3.6	Phenol-d6	118 %	24-113 %	Recovery greater than upper data quality objective
	SOIL	ES0613014-005	MG09A1/4.8	Phenol-d6	113 %	24-113 %	Recovery greater than upper data quality objective
	SOIL	ES0613014-006	MG10B/1.8	Phenol-d6	118 %	24-113 %	Recovery greater than upper data quality objective
	SOIL	ES0613014-007	MG10B/3.0	Phenol-d6	123 %	24-113 %	Recovery greater than upper data quality objective
	SOIL	ES0613014-008	BH14A/1.4	Phenol-d6	114 %	24-113 %	Recovery greater than upper data quality objective
	SOIL	ES0613014-013	DUP22	Phenol-d6	117 %	24-113 %	Recovery greater than upper data quality objective

Outliers : Analysis Holding Time

The following report highlights outliers within this 'Interpretive Quality Control Report - Analysis Holding Time'.

- 1 No holding time outliers occur.

Outliers : Frequency of Quality Control Samples

The following report highlights outliers within this 'Interpretive Quality Control Report - Frequency of Quality Control Samples'.

- 1 No frequency outliers occur.

Client : CH2M HILL PTY LTD
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Method Reference Summary

The analytical procedures used by ALS Environmental are based on established internationally-recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house procedure are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported herein. Reference methods from which ALSE methods are based are provided in parenthesis.

Matrix Type: SOIL

Method Reference Summary

Preparation Methods

EK026PR : NaOH leach for TCN in Soils - APHA 20th ed., 4500 CN- C & N. Samples are extracted by end-over-end tumbling with NaOH.

ORG16 : Methanolic Extraction of Soils for Purge and Trap - (USEPA SW 846 - 5030A) 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.

ORG17B : Tumbler Extraction of Solids (Option B - Non-concentrating) - In-house, Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 20mL 1:1 DCM/Acetone by end over end tumble. The solvent is transferred directly to a GC vial for analysis.

Analytical Methods

EA055-103 : Moisture Content - A gravimetric procedure based on weight loss over a 12 hour drying period at 103-105 degrees C. This method is compliant with NEPM (1999) Schedule B(3) (Method 102)

EK026G : Total Cyanide By Discrete Analyser - APHA 20th 4500 CN - C & N. Caustic leach extracts of the sample are distilled with sulphuric acid, converting all CN species to HCN. The distillates are analyzed for CN by Seal. This method is compliant with NEPM (1999) Schedule B(3) (Method 403)

EP071 : TPH - Semivolatile Fraction - (USEPA SW 846 - 8015A) Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C36. This method is compliant with NEPM (1999) Schedule B(3) (Method 506.1)

EP075(SIM) : PAH/Phenols (SIM) - (USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 502 and 507)

EP080 : TPH Volatiles/BTEX - (USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 501)

Matrix Type: WATER

Method Reference Summary

Preparation Methods

ORG14 : Separatory Funnel Extraction of Liquids - USEPA SW 846 - 3510B 500 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using 60mL DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2). ALS default excludes sediment which may be resident in the container.

Analytical Methods

EP071 : TPH - Semivolatile Fraction - USEPA SW 846 - 8015A The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)

EP075(SIM) : PAH/Phenols (GC/MS - SIM) - USEPA SW 846 - 8270D Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)

EP080 : TPH Volatiles/BTEX - USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)



ALS Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive report

Client Details

Client : CH2M HILL PTY LTD
 Contact : MR ADAM SULLIVAN
 Address : PO BOX 5392 CHATSWOOD NSW
 AUSTRALIA 1515

 Project : 347496 MACDONALDTOWN GASWORK
 Order number : - Not provided -
 C-O-C Number : - Not provided -
 Site : - Not provided -
 Sampler : - Not provided -

 E-mail : adam.sullivan@ch2m.com.au
 Telephone : 02 9950 0200
 Facsimile : 02 9950 0600

Laboratory Details

Laboratory : ALS Environmental Sydney
 Manager : Greg Vogel
 Address : 277-289 Woodpark Road Smithfield NSW
 Australia 2164

 Quote number : ----
 Work order : ES0613014

 E-mail : Greg.Vogel@alsenviro.com
 Telephone : +61 (02) 8784 8555
 Facsimile : +61 (02) 8784 8500

Dates

Date Samples Received : 18 Oct 2006 SRA Issue Date : 19 Oct 2006
 Scheduled Reporting Date : 25 Oct 2006 Client Requested Date : 25 Oct 2006

Delivery Details

Mode of Delivery : Carrier. Temperature : CHILLED - Ice present
 No. of coolers/boxes : 1 HARD No. of samples - Received 19
 Security Seal : Intact. - Analysed 16

Comments

- 1 Samples received in appropriately pretreated and preserved containers.
 - 1 Sample(s) have been received within recommended holding times.
 - 1 Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).
-
- 1 Analytical work for this work order will be conducted at ALSE Sydney.
 - 1 Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.
 - 1 Please direct any queries related to sample condition / numbering / breakages to Nanthini Coilparampil
 - 1 Please direct any turn around / technical queries to the laboratory contact designated above.
 - 1 When the sampling time is not supplied on the COC documentation, ALSE defaults the sampling time to that of the COC 'relinquishment' time (if supplied). If this also is not supplied, ALSE defaults the sampling time to the 'time of receipt at Laboratory'.

Disclaimer : This document contains privileged and confidential information intended only for the use of the addressee. If you are not the addressee, you are hereby notified that you must not disseminate, copy or take action of its contents. If you have received this document in error, please notify ALS immediately.

SAMPLE RECEIPT NOTIFICATION (SRN) - continued

Client : CH2M HILL PTY LTD
Project : 347496 MACDONALDTOWN GASWORKS

Work Order : ES0613014
ALS Quote Reference : ----



Summary of Sample(s) / Container(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as moisture and preparation tasks, that form an implicit part of that package.

ALS Sample ID.	Client Sample ID - Sample Date	Requested Analysis									
		W-04 - WATER TPH/BTEX	W-14A - WATER PAH/Phenols (SIM)	EA055-103 - SOIL Moisture Content	EK026G (Solids) - SOIL Total Cyanide By Discrete Analyser	EP080 - SOIL BTEX	S-04 - SOIL TPH/BTEX	S-14A - SOIL PAH/Phenols (16 PAH - SIM)			
ES0613014-001	TP15A/6.0 - 17 Oct 2006			1	1		1	1			
ES0613014-002	TP15A/7.0 - 17 Oct 2006			1	1		1	1			
ES0613014-003	MG09A1/0.7 - 17 Oct 2006			1	1		1	1			
ES0613014-004	MG09A1/3.6 - 17 Oct 2006			1	1		1	1			
ES0613014-005	MG09A1/4.8 - 17 Oct 2006			1	1		1	1			
ES0613014-006	MG10B/1.8 - 18 Oct 2006						1	1			
ES0613014-007	MG10B/3.0 - 18 Oct 2006						1	1			
ES0613014-008	BH14A/1.4 - 18 Oct 2006						1	1			
ES0613014-009	BH14A/2.4 - 18 Oct 2006						1	1			
ES0613014-010	BHF/7.0 - 18 Oct 2006			1	1		1	1			
ES0613014-011	EQ1 - 17 Oct 2006	1	1								
ES0613014-012	DUP21 - 17 Oct 2006			1	1		1	1			
ES0613014-013	DUP22 - 18 Oct 2006						1	1			
ES0613014-014	TRIP SPIKE 2 - 18 Oct 2006						1				
ES0613014-015	TRIP BLANK 2 - 18 Oct 2006						1				
ES0613014-016	TRIP SPIKE CONTROL - 13 Oct 2006			1		1					
ES0613014-017	MG09A1/5.5 - 18 Oct 2006										
ES0613014-018	BHF/4.6 - 18 Oct 2006										
ES0613014-019	BHF/8.4 - 18 Oct 2006										
Total(s) :		1	1	8	7	1	14	12			

SAMPLE RECEIPT NOTIFICATION (SRN) - continued

Client : CH2M HILL PTY LTD
Project : 347496 MACDONALDTOWN GASWORKS

Work Order : ES0613014
ALS Quote Reference : ----



Requested Reports

1	ALL ACCOUNTS		
-	Invoice	Email	mogibu.rahman@ch2m.com.au
1	MR ADAM SULLIVAN		
-	A4 - Certificate of Analysis - NEPM format	Email	adam.sullivan@ch2m.com.au
-	A4 - Quality Control Report - NEPM format	Email	adam.sullivan@ch2m.com.au
-	A4 - Interpretive Quality Control Report - NEPM format	Email	adam.sullivan@ch2m.com.au
-	ENMRG Export Format	Email	adam.sullivan@ch2m.com.au
-	ESDAT Export Format	Email	adam.sullivan@ch2m.com.au
-	Chain of Custody Acknowledgement	Email	adam.sullivan@ch2m.com.au
-	A4 - Sample Receipt Notification - Comprehensive format	Email	adam.sullivan@ch2m.com.au

Sample Container(s) / Preservation Non-Compliance Log

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

1 No sample container / preservation non-compliance exist.

CERTIFICATE OF ANALYSIS

<i>Client</i>	: CH2M HILL PTY LTD	<i>Laboratory</i>	: ALS Environmental Sydney	<i>Page</i>	: 1 of 13
<i>Contact</i>	: MR ADAM SULLIVAN	<i>Contact</i>	: Greg Vogel	<i>Work Order</i>	: ES0613192
<i>Address</i>	: PO BOX 5392 CHATSWOOD NSW AUSTRALIA 1515	<i>Address</i>	: 277-289 Woodpark Road Smithfield NSW Australia 2164		
<i>E-mail</i>	: adam.sullivan@ch2m.com.au	<i>E-mail</i>	: Greg.Vogel@alsenviro.com		
<i>Telephone</i>	: 02 9950 0200	<i>Telephone</i>	: +61 (02) 8784 8555		
<i>Facsimile</i>	: 02 9950 0600	<i>Facsimile</i>	: +61 (02) 8784 8500		
<i>Project</i>	: 347496 Macdonaldtown Gasworks	<i>Quote number</i>	: ----	<i>Date received</i>	: 20 Oct 2006
<i>Order number</i>	: - Not provided -			<i>Date issued</i>	: 30 Oct 2006
<i>C-O-C number</i>	: - Not provided -			<i>No. of samples</i>	- Received : 24
<i>Site</i>	: - Not provided -				Analysed : 19

ALSE - Excellence in Analytical Testing


NATA Accredited Laboratory
825

This document is issued in
accordance with NATA's
accreditation requirements.

Accredited for compliance with
ISO/IEC 17025.

This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatory</i>	<i>Position</i>	<i>Department</i>
PHALAK INTAKESONE	Organics Co-ordinator	Organics - NATA 825 (10911 - Sydney)
Sarah Millington	Senior Inorganic Chemist	Inorganics - NATA 825 (10911 - Sydney)

Comments

This report for the ALSE reference ES0613192 supersedes any previous reports with this reference. Results apply to the samples as submitted. All pages of this report have been checked and approved for release.

This report contains the following information:

- 1 Analytical Results for Samples Submitted
- 1 Surrogate Recovery Data

The analytical procedures used by ALS Environmental have been developed from established internationally-recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported herein. Reference methods from which ALSE methods are based are provided in parenthesis.

When moisture determination has been performed, results are reported on a dry weight basis. When a reported 'less than' result is higher than the LOR, this may be due to primary sample extracts/digestion dilution and/or insufficient sample amount for analysis. Surrogate Recovery Limits are static and based on USEPA SW846 or ALS-QWI/EN38 (in the absence of specified USEPA limits). Where LOR of reported result differ from standard LOR, this may be due to high moisture, reduced sample amount or matrix interference. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number, LOR = Limit of Reporting. * Indicates failed Surrogate Recoveries.

Specific comments for Work Order **ES0613192**

EP080:ES0613192 #4 required dilution(X10) due to the presence of high level contaminants. LOR values have been adjusted accordingly.

Page Number : 3 of 13
 Client : CH2M HILL PTY LTD
 Work Order : ES0613192



Analytical Results

Analytical Results

Client Sample ID :				BH12A/6.0	BHB/9.0	BHC/6.0	BHE/8.4	BHF/8.5
Sample Matrix Type / Description :				SOIL	SOIL	SOIL	SOIL	SOIL
Sample Date / Time :				19 Oct 2006 15:00	19 Oct 2006 15:00	19 Oct 2006 15:00	19 Oct 2006 15:00	19 Oct 2006 15:00
Laboratory Sample ID :				ES0613192-002	ES0613192-003	ES0613192-004	ES0613192-005	ES0613192-006
Analyte	CAS number	LOR	Units					
EA055: Moisture Content								
Moisture Content (dried @ 103°C)		1.0	%	11.9	8.6	17.3	12.0	10.2
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1.0	mg/kg	----	----	----	<1.0	<1.0
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	2.3	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	2.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	<1.0	2.6	<1.0	<1.0
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	5.0	<0.5	<0.5
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2.0	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	1420	1.9	99.8
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	69.7	<0.5	4.2
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	17.5	<0.5	1.4
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	54.4	<0.5	4.8
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	113	<0.5	7.6
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	32.1	<0.5	2.4
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	45.9	<0.5	3.8
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	57.4	<0.5	3.7
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	21.6	<0.5	1.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	17.8	<0.5	1.2
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	12.8	<0.5	1.1
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	9.1	<0.5	0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	17.6	<0.5	1.1
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	6.6	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	1.9	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	9.0	<0.5	0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction		2	mg/kg	<2	<2	559	2	22
C10 - C14 Fraction		50	mg/kg	<50	<50	5440	<50	650
C15 - C28 Fraction		100	mg/kg	<100	<100	2610	<100	510

Page Number : 4 of 13
 Client : CH2M HILL PTY LTD
 Work Order : ES0613192



Analytical Results

				Client Sample ID :	BH12A/6.0	BHB/9.0	BHC/6.0	BHE/8.4	BHF/8.5
				Sample Matrix Type / Description :	SOIL	SOIL	SOIL	SOIL	SOIL
				Sample Date / Time :	19 Oct 2006 15:00	19 Oct 2006 15:00	19 Oct 2006 15:00	19 Oct 2006 15:00	19 Oct 2006 15:00
				Laboratory Sample ID :					
Analyte	CAS number	LOR	Units		ES0613192-002	ES0613192-003	ES0613192-004	ES0613192-005	ES0613192-006
EP080/071: Total Petroleum Hydrocarbons									
C29 - C36 Fraction		100	mg/kg		<100	<100	710	<100	100
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		0.2	<0.2	6.4	1.6	0.8
Toluene	108-88-3	0.2	mg/kg		<0.2	<0.2	38.7	0.2	<0.2
Ethylbenzene	100-41-4	0.2	mg/kg		<0.2	<0.2	40.8	<0.2	1.9
meta- & para-Xylene	108-38-3	0.2	mg/kg		<0.2	<0.2	164	0.2	4.6
	106-42-3								
ortho-Xylene	95-47-6	0.2	mg/kg		<0.2	<0.2	82.7	0.2	5.2
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		85.6	92.6	85.2	86.4	103
2-Chlorophenol-D4	93951-73-6	0.1	%		81.6	91.1	88.8	90.2	108
2,4,6-Tribromophenol	118-79-6	0.1	%		78.0	76.4	88.2	79.0	105
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		83.7	87.1	81.5	85.0	100
Anthracene-d10	1719-06-8	0.1	%		81.6	84.2	83.5	82.0	98.9
4-Terphenyl-d14	1718-51-0	0.1	%		81.1	84.4	82.4	80.2	96.6
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		105	106	108	110	106
Toluene-D8	2037-26-5	0.1	%		103	102	81.2	111	121
4-Bromofluorobenzene	460-00-4	0.1	%		86.8	89.6	89.9	99.0	106

Page Number : 5 of 13
 Client : CH2M HILL PTY LTD
 Work Order : ES0613192



Analytical Results

Client Sample ID : Sample Matrix Type / Description : Sample Date / Time : Laboratory Sample ID :				TRIP SPIKE SOIL 19 Oct 2006 15:00 ES0613192-007	TRIP BLANK 3 SOIL 19 Oct 2006 15:00 ES0613192-008	BHC1/8.0 SOIL 20 Oct 2006 15:00 ES0613192-010	BHC2/6.0 SOIL 20 Oct 2006 15:00 ES0613192-011	BHC2/8.0 SOIL 20 Oct 2006 15:00 ES0613192-012
Analyte	CAS number	LOR	Units					
EA055: Moisture Content								
Moisture Content (dried @ 103°C)		1.0	%	2.3	3.1	12.8	14.4	12.7
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	----	----	<1.0	<1.0	<1.0
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2.0	mg/kg	----	----	<2.0	<2.0	<2.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction		2	mg/kg	27	<2	<2	<2	<2
C10 - C14 Fraction		50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction		100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction		100	mg/kg	<100	<100	<100	<100	<100

Page Number : 6 of 13
 Client : CH2M HILL PTY LTD
 Work Order : ES0613192



Analytical Results

				Client Sample ID :	TRIP SPIKE	TRIP BLANK 3	BHC1/8.0	BHC2/6.0	BHC2/8.0
				Sample Matrix Type / Description :	SOIL	SOIL	SOIL	SOIL	SOIL
				Sample Date / Time :	19 Oct 2006 15:00	19 Oct 2006 15:00	20 Oct 2006 15:00	20 Oct 2006 15:00	20 Oct 2006 15:00
				Laboratory Sample ID :					
Analyte	CAS number	LOR	Units		ES0613192-007	ES0613192-008	ES0613192-010	ES0613192-011	ES0613192-012
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		0.5	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.2	mg/kg		8.3	<0.2	<0.2	<0.2	<0.2
Ethylbenzene	100-41-4	0.2	mg/kg		1.2	<0.2	<0.2	<0.2	<0.2
meta- & para-Xylene	108-38-3	0.2	mg/kg		6.4	<0.2	<0.2	<0.2	<0.2
	106-42-3								
ortho-Xylene	95-47-6	0.2	mg/kg		2.5	<0.2	<0.2	<0.2	<0.2
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		----	----	89.2	86.4	88.1
2-Chlorophenol-D4	93951-73-6	0.1	%		----	----	87.6	92.2	90.1
2,4,6-Tribromophenol	118-79-6	0.1	%		----	----	73.5	74.2	73.4
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		----	----	86.0	90.9	91.4
Anthracene-d10	1719-06-8	0.1	%		----	----	83.1	87.8	88.1
4-Terphenyl-d14	1718-51-0	0.1	%		----	----	82.7	88.2	88.6
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%		110	104	113	97.5	113
Toluene-D8	2037-26-5	0.1	%		110	105	114	98.9	108
4-Bromofluorobenzene	460-00-4	0.1	%		100	92.0	101	87.6	95.1

Page Number : 7 of 13
 Client : CH2M HILL PTY LTD
 Work Order : ES0613192



Analytical Results

Client Sample ID : Sample Matrix Type / Description : Sample Date / Time : Laboratory Sample ID :				BHD/7.0 SOIL 20 Oct 2006 15:00 ES0613192-013	BHD/8.4 SOIL 20 Oct 2006 15:00 ES0613192-014	BHG/6.0 SOIL 20 Oct 2006 15:00 ES0613192-015	BHG/7.2 SOIL 20 Oct 2006 15:00 ES0613192-016	BHG/8.1 SOIL 20 Oct 2006 15:00 ES0613192-017
Analyte	CAS number	LOR	Units					
EA055: Moisture Content								
Moisture Content (dried @ 103°C)		1.0	%	24.4	16.2	16.6	15.2	10.6
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1.0	mg/kg	----	----	<1.0	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	11.4	7.4	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	0.6	3.9	3.8	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	5.8	5.4	<1.0	<1.0
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	2.4	4.1	<0.5	<0.5
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2.0	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	38.1	1.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	1.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	1.1	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	4.2	0.7	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	10.7	2.1	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	3.2	0.6	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	5.0	1.1	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	5.5	1.3	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	1.7	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	1.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	1.1	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	1.0	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction		2	mg/kg	8	9	24	8	<2
C10 - C14 Fraction		50	mg/kg	<50	<50	160	<50	<50
C15 - C28 Fraction		100	mg/kg	<100	<100	220	<100	<100