

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 #

Project # 347496		Purchase Order # SY/148/06		TOTAL # OF CONTAINERS		Requested Analytical Method #								QA REQUIREMENTS						
Project Name Macdonaldtown Gasworks						S-2 S-4 S-7 S-12 S-14A S-19 EKO26 Asbestos HOLD Preservative								Matrix Spike ☐ Yes ☐ No Matrix Duplicate ☐ Yes ☐ No Laboratory Duplicate ☐ Yes ☐ No Lab Blank ☐ Yes ☐ No Surrogate Spike ☐ Yes ☐ No RPDs ☐ Yes ☐ No Spike Recovery Data ☐ Yes ☐ No						
Company Name ALS														LAB USE ONLY						
Project Manager or Contact & Phone # Adam Sullivan 0400 500 264														Custody Seals ☐ Yes ☐ No						
Report Copy to:														ICE ☐ Yes ☐ No						
Requested Completion Date: standard TAT		Site ID Macdonaldtown		Sample Disposal: Dispose ☒ Return ☐										Comments						
Sampling		Type	Matrix	CLIENT SAMPLE ID (9 CHARACTERS)				LAB QC									Lab ID			
Date	Time		Soil																	
17/9/06			X	TP	16	3.5		①	X	X			X		X					
				TP	18	1.2		②					X		X					
				TP	18	1.9		③					X			X				
				TP	18	3.2		④	X		X			X						
				TP	18	4.4		⑤	X		X									
				DUPO8				⑥					X	X						
				MG	10	0.2		⑦							X					
				MG	09	B		⑧							X					
				TP	18			⑨							X					
				Trip Blank				⑩		X										
Sampled By and Title A. Sullivan				(Please sign and print name) 				Date/Time 18/8/06	Relinquished By A. Sullivan				(Please sign and print name) 				Date/Time			
Received by HBS				(Please sign and print name) 				Date/Time 18/8/06	Relinquished By				(Please sign and print name)				Date/Time			
Received by Frank Ferraro				(Please sign and print name) 				Date/Time 18/8/06 15:32	Shipped Via				Shipping #							
Special Instructions:																				

CONTRACT WORK

WO: ES0610221

LAB: ASET (Asbestos)

DATE: 18-8-06

SPLIT:

ALS Environmental
 Sydney
 Work Order
ES0610221



DISTRIB

Telephone: +61 (02) 8784 8555

Laboratory Quotation #

2/2

COC #

DISTRIBUTION: Original - LAB. Yellow - LAB. Pink - CH2MHILL

Margaret Valencic

From: Adam.Sullivan@ch2m.com.au
Sent: Saturday, 19 August 2006 1:50 PM
To: Margaret Valencic
Cc: Adam.Sullivan@ch2m.com.au
Subject: RE: COC for ALS Work Order ES0609995, Macdonaldtown Gasworks
Importance: High

Hi Margaret

I have an urgent request to halt analysis on a number of samples that were received recently from our site in Macdonaldtown. The request is presented in the table below.

ALS Work Order #	CH2MHILL Sample ID	Analysis to be removed
ES0609995	MG01/0.1	S-7
	MG01/0.5	S-7
	TP01/0.25	S-7
	TP02/0.25	S-19
	TP02/0.5	S-7
	TP03/0.25	S-7
ES0610062	MG02/2.0	S-7
	MG02/3.3	S-7
	TP04/0.25	S-19
	TP05/0.25	S-7
	TP06/0.25	S-7 and S-2
	TP07/0.25	S-7
	TP08/0.25	S-2 and S-4
	TP09/0.25	S-7
	TP10/0.25	S-7
ES0610135	MG08/0.3	S-7
	MG08/1.0	S-7
	MG09C/1.5	S-19
	MG05/1.2	S-7
	MG05/3.4	S-4
	TP14/1.0	S-2 and S-4
ES0610221	MG11/1.5 - 15	S-7

These samples can be placed on hold and may be tested at a later date.

Please confirm that this request can be action asap.

This is an urgent request. Please let me know if there will be any issues with this request.

Thanks in advance and sorry for any inconvenience.

Regards

Adam

From: Margaret Valencic [mailto:Margaret.Valencic@als.com.au]

21/08/2006

Sent: Wed 16/08/2006 9:12 AM

To: Sullivan, Adam /SYD

Subject: COC for ALS Work Order ES0609995, Macdonaldtown Gasworks

Adam,

Please find attached COC for work order ES0609995, as discussed.

We did not receive sample TP02/1.5 on the second page of COC.

<<es0609995_coc.pdf>>

Regards

Margaret Valencic
Administration Supervisor

ALS Laboratory Group
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www.alsenviro.com

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This email has been scanned through the ALS Domain



QUALITY CONTROL REPORT

Client	: CH2M HILL PTY LTD	Laboratory	: ALS Environmental Sydney	Page	: 1 of 29
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	: ES0610221
				Amendment No.	:
Project	: 347496 MACDONALDTOWN GASWORKS	Quote number	: ----	Date received	: 18 Aug 2006
Order number	: - Not provided -			Date issued	: 29 Aug 2006
C-O-C number	: - Not provided -				
Site	: MACDONALDTOWN				
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	: 22
Facsimile	: 02 9950 0600	Facsimile	: +61 (02) 8784 8500	Analysed	: 18

This final report for the ALSE work order reference ES0610221 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

EPO68: Surrogate (TP16/1.0) could not be determined for sample TP16/1.0 due to sample matrix interferences.

EPO66 & EPO68 :Sample MG11/2.0 required dilution due to matrix interferences. LOR values have been adjusted accordingly.

EPO75(SIM) : Surrogate (Phenol-d6) could not be determined for sample W06 due to sample matrix interference.

LCS recovery for various organic analytes fall outside ALS dynamic control limits, However they are within the acceptance criteria based on USEPA SW-846.

ALSE - Excellence in Analytical Testing



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Accredited for compliance with ISO/IEC 17025

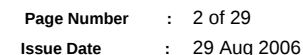
This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatory

Celine Conceicao
Pabi Subba
PHALAK INTAKESONE
Phyu Phyu Lwin
Sarah Millington

Department

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



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: 261547)				%	%	%		
ES0610218-001	Anonymous	Moisture Content (dried @ 103°C)	1.0 %	38.6	41.5	7.2		
ES0610220-014	Anonymous	Moisture Content (dried @ 103°C)	1.0 %	14.9	17.7	17.0		
EA055: Moisture Content - (QC Lot: 261548)				%	%	%		
ES0610221-004	TP18/3.2	Moisture Content (dried @ 103°C)	1.0 %	23.4	23.6	0.7		
ES0610221-019	TP11/1.0	Moisture Content (dried @ 103°C)	1.0 %	14.6	14.6	0.0		
EA055: Moisture Content - (QC Lot: 262249)				%	%	%		
ES0610313-002	Anonymous	Moisture Content (dried @ 103°C)	1.0 %	5.5	5.6	0.0		
ES0610350-009	Anonymous	Moisture Content (dried @ 103°C)	1.0 %	8.3	12.4	39.4		
EG005T: Total Metals by ICP-AES								
EG005T: Total Metals by ICP-AES - (QC Lot: 261950)				mg/kg	mg/kg	%		
ES0610200-017	Anonymous	Arsenic	5 mg/kg	<5	<5	0.0		
		Cadmium	1 mg/kg	<1	<1	0.0		
ES0610221-019	TP11/1.0	Chromium	2 mg/kg	2	2	0.0		
		Copper	5 mg/kg	<5	<5	0.0		
		Lead	5 mg/kg	9	<5	58.1		
		Nickel	2 mg/kg	<2	<2	0.0		
		Zinc	5 mg/kg	<5	<5	0.0		
		Arsenic	5 mg/kg	<5	<5	0.0		
		Cadmium	1 mg/kg	<1	<1	0.0		
		Chromium	2 mg/kg	12	9	34.0		
		Copper	5 mg/kg	<5	<5	0.0		
		Lead	5 mg/kg	<5	<5	0.0		
		Nickel	2 mg/kg	<2	<2	0.0		
		Zinc	5 mg/kg	32	28	15.1		
		EG005T: Total Metals by ICP-AES - (QC Lot: 262307)				mg/kg	mg/kg	%

Client : CH2M HILL PTY LTD
 Project : 347496 MACDONALDTOWN GASWORKS

Work Order : ES0610221
 ALS Quote Reference : ----

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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
EG005T: Total Metals by ICP-AES - continued						
EG005T: Total Metals by ICP-AES - (QC Lot: 262307) - continued				mg/kg	mg/kg	%
ES0610221-021	TP16/0.3	Arsenic	5 mg/kg	11	9	13.0
		Cadmium	1 mg/kg	<1	<1	0.0
		Chromium	2 mg/kg	7	6	20.1
		Copper	5 mg/kg	273	275	0.7
		Lead	5 mg/kg	175	177	1.2
		Nickel	2 mg/kg	11	11	0.0
		Zinc	5 mg/kg	74	60	20.3
ES0610260-003	Anonymous	Arsenic	5 mg/kg	<5	<5	0.0
		Cadmium	1 mg/kg	<1	<1	0.0
		Chromium	2 mg/kg	10	10	0.0
		Copper	5 mg/kg	169	140	19.2
		Lead	5 mg/kg	6	6	0.0
		Nickel	2 mg/kg	6	6	0.0
		Zinc	5 mg/kg	73	66	11.3
EG035T: Total Mercury by FIMS						
EG035T: Total Mercury by FIMS - (QC Lot: 261951)				mg/kg	mg/kg	%
ES0610220-015	Anonymous	Mercury	0.1 mg/kg	<0.1	<0.1	0.0
ES0610221-019	TP11/1.0	Mercury	0.1 mg/kg	<0.1	<0.1	0.0
EG035T: Total Mercury by FIMS - (QC Lot: 262308)				mg/kg	mg/kg	%
ES0610221-021	TP16/0.3	Mercury	0.1 mg/kg	3.3	3.3	0.0
ES0610260-003	Anonymous	Mercury	0.1 mg/kg	<0.1	<0.1	0.0
EK025G: Free cyanide by Discrete Analyser						
EK025G: Free cyanide by Discrete Analyser - (QC Lot: 261288)				mg/kg	mg/kg	%
ES0610221-001	TP16/3.5	Total Cyanide	1.0 mg/kg	<1.0	<1.0	0.0
ES0610221-022	TP16/1.0	Total Cyanide	1.0 mg/kg	<1.0	<1.0	0.0
EP066: Polychlorinated Biphenyls (PCB)						
EP066: Polychlorinated Biphenyls (PCB) - (QC Lot: 260403)				mg/kg	mg/kg	%
ES0610221-002	TP18/1.2	Total Polychlorinated biphenyls	0.10 mg/kg	<0.10	<0.10	0.0
EP068A: Organochlorine Pesticides (OC)						

Client : CH2M HILL PTY LTD
 Project : 347496 MACDONALDTOWN GASWORKS

Work Order : ES0610221
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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
EP068A: Organochlorine Pesticides (OC) - continued						
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 260404)				mg/kg	mg/kg	%
ES0610221-002	TP18/1.2	alpha-BHC	0.05 mg/kg	<0.05	<0.05	0.0
		Hexachlorobenzene (HCB)	0.05 mg/kg	<0.05	<0.05	0.0
		beta-BHC	0.05 mg/kg	<0.05	<0.05	0.0
		gamma-BHC	0.05 mg/kg	<0.05	<0.05	0.0
		delta-BHC	0.05 mg/kg	<0.05	<0.05	0.0
		Heptachlor	0.05 mg/kg	<0.05	<0.05	0.0
		Aldrin	0.05 mg/kg	<0.05	<0.05	0.0
		Heptachlor epoxide	0.05 mg/kg	<0.05	<0.05	0.0
		trans-Chlordane	0.05 mg/kg	<0.05	<0.05	0.0
		alpha-Endosulfan	0.05 mg/kg	<0.05	<0.05	0.0
		cis-Chlordane	0.05 mg/kg	<0.05	<0.05	0.0
		Dieldrin	0.05 mg/kg	<0.05	<0.05	0.0
		4,4'-DDE	0.05 mg/kg	<0.05	<0.05	0.0
		Endrin	0.05 mg/kg	<0.05	<0.05	0.0
		beta-Endosulfan	0.05 mg/kg	<0.05	<0.05	0.0
		4,4'-DDD	0.05 mg/kg	<0.05	<0.05	0.0
		Endrin aldehyde	0.05 mg/kg	<0.05	<0.05	0.0
		Endosulfan sulfate	0.05 mg/kg	<0.05	<0.05	0.0
		4,4'-DDT	0.2 mg/kg	<0.2	<0.2	0.0
		Endrin ketone	0.05 mg/kg	<0.05	<0.05	0.0
		Methoxychlor	0.2 mg/kg	<0.2	<0.2	0.0
EP068B: Organophosphorus Pesticides (OP)						
EP068B: Organophosphorus Pesticides (OP) - (QC Lot: 260404)				mg/kg	mg/kg	%
ES0610221-002	TP18/1.2	Dichlorvos	0.05 mg/kg	<0.05	<0.05	0.0
		Demeton-S-methyl	0.05 mg/kg	<0.05	<0.05	0.0
		Monocrotophos	0.2 mg/kg	<0.2	<0.2	0.0
		Dimethoate	0.05 mg/kg	<0.05	<0.05	0.0
		Diazinon	0.05 mg/kg	<0.05	<0.05	0.0
		Chlorpyrifos-methyl	0.05 mg/kg	<0.05	<0.05	0.0

Client : CH2M HILL PTY LTD
Project : 347496 MACDONALDTOWN GASWORKS

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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
EP068B: Organophosphorus Pesticides (OP) - continued						
EP068B: Organophosphorus Pesticides (OP) - (QC Lot: 260404) - continued				mg/kg	mg/kg	%
ES0610221-002	TP18/1.2	Parathion-methyl	0.2 mg/kg	<0.2	<0.2	0.0
		Malathion	0.05 mg/kg	<0.05	<0.05	0.0
		Fenthion	0.05 mg/kg	<0.05	<0.05	0.0
		Chlorpyrifos	0.05 mg/kg	<0.05	<0.05	0.0
		Parathion	0.2 mg/kg	<0.2	<0.2	0.0
		Pirimphos-ethyl	0.05 mg/kg	<0.05	<0.05	0.0
		Chlorfenvinphos	0.05 mg/kg	<0.05	<0.05	0.0
		Bromophos-ethyl	0.05 mg/kg	<0.05	<0.05	0.0
		Fenamiphos	0.05 mg/kg	<0.05	<0.05	0.0
		Prothiofos	0.05 mg/kg	<0.05	<0.05	0.0
		Ethion	0.05 mg/kg	<0.05	<0.05	0.0
		Carbophenothion	0.05 mg/kg	<0.05	<0.05	0.0
		Methyl Azinphos	0.05 mg/kg	<0.05	<0.05	0.0
EP075(SIM)A: Phenolic Compounds						
EP075(SIM)A: Phenolic Compounds - (QC Lot: 261611)				mg/kg	mg/kg	%
ES0610221-001	TP16/3.5	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
ES0610221-018	TP11/0.2	Phenol	0.5 mg/kg	<0.5	<0.5	0.0
		2-Chlorophenol	0.5 mg/kg	<0.5	<0.5	0.0

Client : CH2M HILL PTY LTD
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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: 261611) - continued				mg/kg	mg/kg	%
ES0610221-018	TP11/0.2	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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons						
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 261611)				mg/kg	mg/kg	%
ES0610221-001	TP16/3.5	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
		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
ES0610221-018	TP11/0.2	Naphthalene	0.5 mg/kg	0.8	<0.5	40.5

Client : CH2M HILL PTY LTD
 Project : 347496 MACDONALDTOWN GASWORKS

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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: 261611) - continued				mg/kg	mg/kg	%
ES0610221-018	TP11/0.2	Acenaphthylene	0.5 mg/kg	1.4	1.1	26.5
		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	4.9	4.6	5.6
		Anthracene	0.5 mg/kg	2.0	1.9	7.4
		Fluoranthene	0.5 mg/kg	9.0	7.1	23.7
		Pyrene	0.5 mg/kg	10.5	8.1	25.7
		Benz(a)anthracene	0.5 mg/kg	6.1	4.6	27.2
		Chrysene	0.5 mg/kg	5.1	3.8	30.2
		Benzo(b)fluoranthene	0.5 mg/kg	6.9	4.8	35.4
		Benzo(k)fluoranthene	0.5 mg/kg	2.3	1.6	38.8
		Benzo(a)pyrene	0.5 mg/kg	6.2	4.4	34.4
		Indeno(1,2,3,cd)pyrene	0.5 mg/kg	2.9	2.0	37.6
		Dibenz(a,h)anthracene	0.5 mg/kg	1.1	0.7	37.8
		Benzo(g,h,i)perylene	0.5 mg/kg	3.6	2.5	37.7
EP080/071: Total Petroleum Hydrocarbons						
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 260952)				mg/kg	mg/kg	%
ES0610251-001	Anonymous	C6 - C9 Fraction	2 mg/kg	237	235	0.9
ES0610256-001	Anonymous	C6 - C9 Fraction	2 mg/kg	34	29	16.9
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 260998)				mg/kg	mg/kg	%
ES0610242-003	Anonymous	C6 - C9 Fraction	2 mg/kg	20	24	18.5
ES0610242-004	Anonymous	C6 - C9 Fraction	2 mg/kg	<2	<2	0.0
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 261612)				mg/kg	mg/kg	%
ES0610221-001	TP16/3.5	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
ES0610221-018	TP11/0.2	C10 - C14 Fraction	50 mg/kg	<50	<50	0.0
		C15 - C28 Fraction	100 mg/kg	850	960	12.4
		C29 - C36 Fraction	100 mg/kg	510	750	38.1

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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						
EP080: BTEX - (QC Lot: 260952)				mg/kg	mg/kg	%
ES0610251-001	Anonymous	Benzene	0.2 mg/kg	2.4	2.5	0.0
		Toluene	0.2 mg/kg	31.0	31.8	2.3
		Ethylbenzene	0.2 mg/kg	18.9	20.6	8.7
		meta- & para-Xylene	0.2 mg/kg	98.9	106	7.3
		ortho-Xylene	0.2 mg/kg	45.5	48.2	5.7
ES0610256-001	Anonymous	Benzene	0.2 mg/kg	<0.2	0.3	0.0
		Toluene	0.2 mg/kg	2.7	2.2	19.5
		Ethylbenzene	0.2 mg/kg	1.0	1.3	24.5
		meta- & para-Xylene	0.2 mg/kg	4.9	5.0	2.4
		ortho-Xylene	0.2 mg/kg	3.1	2.9	8.1
EP080: BTEX - (QC Lot: 260998)				mg/kg	mg/kg	%
ES0610242-003	Anonymous	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	1.1	0.7	49.0
		meta- & para-Xylene	0.2 mg/kg	2.5	1.5	47.9
		ortho-Xylene	0.2 mg/kg	<0.2	<0.2	0.0
ES0610242-004	Anonymous	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

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

Laboratory Sample ID	Client Sample ID	Analyte name	LOR	Original Result	Duplicate Result	RPD
EG020T: Total Metals by ICP-MS						
EG020T: Total Metals by ICP-MS - (QC Lot: 260308)				mg/L	mg/L	%
EP0602041-001	Anonymous	Arsenic	0.001 mg/L	0.003	0.003	0.0
		Cadmium	0.0001 mg/L	0.0002	0.0001	0.0
		Chromium	0.001 mg/L	<0.001	<0.001	0.0
		Copper	0.001 mg/L	<0.001	<0.001	0.0

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Matrix Type: WATER

Laboratory Duplicates (DUP) Report

Laboratory Sample ID	Client Sample ID	Analyte name	LOR	Original Result	Duplicate Result	RPD
EG020T: Total Metals by ICP-MS - continued						
EG020T: Total Metals by ICP-MS - (QC Lot: 260308) - continued				mg/L	mg/L	%
EP0602041-001	Anonymous	Lead	0.001 mg/L	<0.001	<0.001	0.0
		Nickel	0.001 mg/L	<0.001	<0.001	0.0
ES0610241-001	Anonymous	Zinc	0.005 mg/L	0.007	<0.005	29.3
		Arsenic	0.001 mg/L	<0.001	<0.001	0.0
		Cadmium	0.0001 mg/L	<0.0001	<0.0001	0.0
		Chromium	0.001 mg/L	<0.001	<0.001	0.0
		Copper	0.001 mg/L	0.003	0.003	0.0
		Lead	0.001 mg/L	<0.001	<0.001	0.0
		Nickel	0.001 mg/L	<0.001	<0.001	0.0
		Zinc	0.005 mg/L	<0.005	<0.005	0.0
EG035T: Total Mercury by FIMS						
EG035T: Total Mercury by FIMS - (QC Lot: 260382)				mg/L	mg/L	%
ES0610115-012	Anonymous	Mercury	0.0001 mg/L	<0.0001	<0.0001	0.0
ES0610243-005	Anonymous	Mercury	0.0001 mg/L	<0.0001	<0.0001	0.0
EP080/071: Total Petroleum Hydrocarbons						
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 262274)				µg/L	µg/L	%
ES0610200-022	Anonymous	C6 - C9 Fraction	20 µg/L	<20	<20	0.0
ES0610200-027	Anonymous	C6 - C9 Fraction	20 µg/L	140	100	31.5
EP080: BTEX						
EP080: BTEX - (QC Lot: 262274)				µg/L	µg/L	%
ES0610200-022	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
ES0610200-027	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

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Matrix Type: WATER

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: 262274) - continued				µg/L	µg/L	%
ES0610200-027	Anonymous	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. 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
EG005T: Total Metals by ICP-AES						
EG005T: Total Metals by ICP-AES - (QC Lot: 261950)		mg/kg	mg/kg	%	%	%
Arsenic	5 mg/kg	<5	----	----	----	----
	5 mg/kg	----	13.1	106	86.6	123
Cadmium	1 mg/kg	----	2.76	99.0	79.9	120
	1 mg/kg	<1	----	----	----	----
Chromium	2 mg/kg	<2	----	----	----	----
	2 mg/kg	----	60.9	100	87.1	119
Copper	5 mg/kg	<5	----	----	----	----
	5 mg/kg	----	54.7	102	85.2	117
Lead	5 mg/kg	<5	----	----	----	----
	5 mg/kg	----	55.2	97.9	82.1	117
Nickel	2 mg/kg	<2	----	----	----	----
	2 mg/kg	----	54.8	105	88	122
Zinc	5 mg/kg	<5	----	----	----	----
	5 mg/kg	----	104	97.9	79	116
EG005T: Total Metals by ICP-AES - (QC Lot: 262307)		mg/kg	mg/kg	%	%	%
Arsenic	5 mg/kg	<5	----	----	----	----
	5 mg/kg	----	13.1	102	86.6	123
Cadmium	1 mg/kg	<1	----	----	----	----
	1 mg/kg	----	2.76	92.1	79.9	120
Chromium	2 mg/kg	----	60.9	95.1	87.1	119
	2 mg/kg	<2	----	----	----	----
Copper	5 mg/kg	----	54.7	96.4	85.2	117
	5 mg/kg	<5	----	----	----	----
Lead	5 mg/kg	----	55.2	92.3	82.1	117
	5 mg/kg	<5	----	----	----	----

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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
EG005T: Total Metals by ICP-AES - continued						
EG005T: Total Metals by ICP-AES - (QC Lot: 262307) - continued		mg/kg	mg/kg	%	%	%
Nickel	2 mg/kg	<2	----	----	----	----
	2 mg/kg	----	54.8	98.6	88	122
Zinc	5 mg/kg	<5	----	----	----	----
	5 mg/kg	----	104	92.0	79	116
EG035T: Total Mercury by FIMS						
EG035T: Total Mercury by FIMS - (QC Lot: 261951)		mg/kg	mg/kg	%	%	%
Mercury	0.1 mg/kg	<0.1	----	----	----	----
	0.1 mg/kg	----	1.4	89.0	73.7	108
EG035T: Total Mercury by FIMS - (QC Lot: 262308)		mg/kg	mg/kg	%	%	%
Mercury	0.1 mg/kg	----	1.4	85.4	73.7	108
	0.1 mg/kg	<0.1	----	----	----	----
EK025G: Free cyanide by Discrete Analyser						
EK025G: Free cyanide by Discrete Analyser - (QC Lot: 261288)		mg/kg	mg/kg	%	%	%
Total Cyanide	1.0 mg/kg	<1.0	----	----	----	----
	1 mg/kg	----	50	99.0	70	130
EP066: Polychlorinated Biphenyls (PCB)						
EP066: Polychlorinated Biphenyls (PCB) - (QC Lot: 260403)		mg/kg	mg/kg	%	%	%
Total Polychlorinated biphenyls	0.10 mg/kg	<0.10	----	----	----	----
	0.1 mg/kg	----	0.5	70.6	57.4	117
EP068A: Organochlorine Pesticides (OC)						
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 260404)		mg/kg	mg/kg	%	%	%
4,4'-DDD	0.05 mg/kg	----	0.25	75.8	65.3	116
	0.05 mg/kg	<0.05	----	----	----	----
4,4'-DDE	0.05 mg/kg	<0.05	----	----	----	----
	0.05 mg/kg	----	0.25	80.4	67.5	114
4,4'-DDT	0.2 mg/kg	----	0.25	78.1	58.4	127
	0.2 mg/kg	<0.2	----	----	----	----

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		Method blank result	Actual Results		Recovery Limits	
Analyte name	LOR		Spike concentration	Spike Recovery	Dynamic Recovery Limits	
				LCS	Low	High
EP068A: Organochlorine Pesticides (OC) - continued						
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 260404) - continued		mg/kg	mg/kg	%	%	%
Aldrin	0.05 mg/kg	<0.05	----	----	----	----
	0.05 mg/kg	----	0.25	81.0	67	113
alpha-BHC	0.05 mg/kg	----	0.25	97.7	60.8	116
	0.05 mg/kg	<0.05	----	----	----	----
alpha-Endosulfan	0.05 mg/kg	----	0.25	76.1	65.8	116
	0.05 mg/kg	<0.05	----	----	----	----
beta-BHC	0.05 mg/kg	----	0.25	78.0	59.8	117
	0.05 mg/kg	<0.05	----	----	----	----
beta-Endosulfan	0.05 mg/kg	<0.05	----	----	----	----
	0.05 mg/kg	----	0.25	79.7	66.1	117
cis-Chlordane	0.05 mg/kg	<0.05	----	----	----	----
	0.05 mg/kg	----	0.25	81.8	57.3	120
delta-BHC	0.05 mg/kg	<0.05	----	----	----	----
	0.05 mg/kg	----	0.25	94.4	65.8	114
Dieldrin	0.05 mg/kg	----	0.25	79.1	67.4	116
	0.05 mg/kg	<0.05	----	----	----	----
Endosulfan sulfate	0.05 mg/kg	<0.05	----	----	----	----
	0.05 mg/kg	----	0.25	97.5	63.6	119
Endrin	0.05 mg/kg	----	0.25	64.0	63	121
	0.05 mg/kg	<0.05	----	----	----	----
Endrin aldehyde	0.05 mg/kg	----	0.25	85.8	57.3	115
	0.05 mg/kg	<0.05	----	----	----	----
Endrin ketone	0.05 mg/kg	----	0.25	106	63.6	117
	0.05 mg/kg	<0.05	----	----	----	----
gamma-BHC	0.05 mg/kg	----	0.25	82.1	59.8	118
	0.05 mg/kg	<0.05	----	----	----	----
Heptachlor	0.05 mg/kg	----	0.25	82.0	65.6	115
	0.05 mg/kg	<0.05	----	----	----	----
Heptachlor epoxide	0.05 mg/kg	----	0.25	87.7	65.6	113
	0.05 mg/kg	<0.05	----	----	----	----

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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
EP068A: Organochlorine Pesticides (OC) - continued						
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 260404) - continued		mg/kg	mg/kg	%	%	%
Hexachlorobenzene (HCB)	0.05 mg/kg	----	0.25	82.6	59.4	115
	0.05 mg/kg	<0.05	----	----	----	----
Methoxychlor	0.2 mg/kg	----	0.25	67.9	50.4	132
	0.2 mg/kg	<0.2	----	----	----	----
trans-Chlordane	0.05 mg/kg	<0.05	----	----	----	----
	0.05 mg/kg	----	0.25	82.8	60.7	113
EP068B: Organophosphorus Pesticides (OP)						
EP068B: Organophosphorus Pesticides (OP) - (QC Lot: 260404)		mg/kg	mg/kg	%	%	%
Methyl Azinphos	0.05 mg/kg	----	0.25	76.9	29.8	137
	0.05 mg/kg	<0.05	----	----	----	----
Bromophos-ethyl	0.05 mg/kg	<0.05	----	----	----	----
	0.05 mg/kg	----	0.25	78.8	64.3	114
Carbophenothion	0.05 mg/kg	<0.05	----	----	----	----
	0.05 mg/kg	----	0.25	79.8	59.5	119
Chlorfenvinphos	0.05 mg/kg	----	0.25	90.0	61.4	123
	0.05 mg/kg	<0.05	----	----	----	----
Chlorpyrifos	0.05 mg/kg	<0.05	----	----	----	----
	0.05 mg/kg	----	0.25	77.9	64.2	111
Chlorpyrifos-methyl	0.05 mg/kg	----	0.25	84.9	65.1	111
	0.05 mg/kg	<0.05	----	----	----	----
Demeton-S-methyl	0.05 mg/kg	<0.05	----	----	----	----
	0.05 mg/kg	----	0.25	71.0	10.1	159
Diazinon	0.05 mg/kg	<0.05	----	----	----	----
	0.05 mg/kg	----	0.25	82.2	64.9	111
Dichlorvos	0.05 mg/kg	<0.05	----	----	----	----
	0.05 mg/kg	----	0.25	73.8	25.5	124
Dimethoate	0.05 mg/kg	<0.05	----	----	----	----
	0.05 mg/kg	----	0.25	78.4	48.6	126
Ethion	0.05 mg/kg	----	0.25	67.8	62	116
	0.05 mg/kg	<0.05	----	----	----	----

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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
EP068B: Organophosphorus Pesticides (OP) - continued						
EP068B: Organophosphorus Pesticides (OP) - (QC Lot: 260404) - continued		mg/kg	mg/kg	%	%	%
Fenamiphos	0.05 mg/kg	----	0.25	78.4	45.5	128
	0.05 mg/kg	<0.05	----	----	----	----
Fenthion	0.05 mg/kg	----	0.25	81.0	64.7	110
	0.05 mg/kg	<0.05	----	----	----	----
Malathion	0.05 mg/kg	----	0.25	90.6	60.4	127
	0.05 mg/kg	<0.05	----	----	----	----
Monocrotophos	0.2 mg/kg	<0.2	----	----	----	----
	0.2 mg/kg	----	0.25	61.4	2.88	149
Parathion	0.2 mg/kg	----	0.25	97.2	60	116
	0.2 mg/kg	<0.2	----	----	----	----
Parathion-methyl	0.2 mg/kg	<0.2	----	----	----	----
	0.2 mg/kg	----	0.25	82.0	61.4	113
Pirimphos-ethyl	0.05 mg/kg	<0.05	----	----	----	----
	0.05 mg/kg	----	0.25	82.0	64.8	111
Prothiofos	0.05 mg/kg	<0.05	----	----	----	----
	0.05 mg/kg	----	0.25	80.9	65.4	111
EP075(SIM)A: Phenolic Compounds						
EP075(SIM)A: Phenolic Compounds - (QC Lot: 261611)		mg/kg	mg/kg	%	%	%
2,4,5-Trichlorophenol	0.5 mg/kg	----	4	80.4	68.9	112
	0.5 mg/kg	<0.5	----	----	----	----
2,4,6-Trichlorophenol	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	79.7	62.2	115
2,4-Dichlorophenol	0.5 mg/kg	----	4	90.6	71.6	113
	0.5 mg/kg	<0.5	----	----	----	----
2,4-Dimethylphenol	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	97.8	74.5	119
2,6-Dichlorophenol	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	95.6	74.8	115
2-Chlorophenol	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	97.7	80.2	115

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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: 261611) - continued		mg/kg	mg/kg	%	%	%
2-Methylphenol	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	95.5	76.8	114
2-Nitrophenol	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	79.9	60.3	117
3- & 4-Methylphenol	1.0 mg/kg	----	8	93.8	72	119
	1.0 mg/kg	<1.0	----	----	----	----
4-Chloro-3-Methylphenol	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	97.9	76.4	114
Pentachlorophenol	1.0 mg/kg	----	8	27.7	1.23	91.6
	1.0 mg/kg	<1.0	----	----	----	----
Phenol	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	95.4	73.9	115
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons						
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 261611)		mg/kg	mg/kg	%	%	%
Acenaphthene	0.5 mg/kg	----	4	99.3	81.5	112
	0.5 mg/kg	<0.5	----	----	----	----
Acenaphthylene	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	98.5	79.6	113
Anthracene	0.5 mg/kg	----	4	106	81.1	112
	0.5 mg/kg	<0.5	----	----	----	----
Benz(a)anthracene	0.5 mg/kg	----	4	104	77.2	112
	0.5 mg/kg	<0.5	----	----	----	----
Benzo(a)pyrene	0.5 mg/kg	----	4	97.0	76.4	113
	0.5 mg/kg	<0.5	----	----	----	----
Benzo(b)fluoranthene	0.5 mg/kg	----	4	112	71.8	118
	0.5 mg/kg	<0.5	----	----	----	----
Benzo(g,h,i)perylene	0.5 mg/kg	----	4	98.9	72.4	114
	0.5 mg/kg	<0.5	----	----	----	----
Benzo(k)fluoranthene	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	98.9	74.2	117

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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: 261611) - continued		mg/kg	mg/kg	%	%	%
Chrysene	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	102	79.8	114
Dibenz(a,h)anthracene	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	95.8	71.7	113
Fluoranthene	0.5 mg/kg	----	4	104	78.8	113
	0.5 mg/kg	<0.5	----	----	----	----
Fluorene	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	100	79.9	112
Indeno(1,2,3,cd)pyrene	0.5 mg/kg	----	4	96.8	71	113
	0.5 mg/kg	<0.5	----	----	----	----
Naphthalene	0.5 mg/kg	<0.5	----	----	----	----
	0.5 mg/kg	----	4	104	81.9	113
Phenanthrene	0.5 mg/kg	----	4	105	79.4	114
	0.5 mg/kg	<0.5	----	----	----	----
Pyrene	0.5 mg/kg	----	4	106	78.9	113
	0.5 mg/kg	<0.5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons						
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 260952)		mg/kg	mg/kg	%	%	%
C6 - C9 Fraction	2 mg/kg	<2	----	----	----	----
	2 mg/kg	----	26	93.2	68.4	128
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 260998)		mg/kg	mg/kg	%	%	%
C6 - C9 Fraction	2 mg/kg	<2	----	----	----	----
	2 mg/kg	----	26	116	68.4	128
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 261612)		mg/kg	mg/kg	%	%	%
C10 - C14 Fraction	50 mg/kg	----	200	94.3	75.2	116
	50 mg/kg	<50	----	----	----	----
C15 - C28 Fraction	100 mg/kg	----	200	85.7	75.3	113
	100 mg/kg	<100	----	----	----	----

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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
EP080/071: Total Petroleum Hydrocarbons - continued						
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 261612) - continued		mg/kg	mg/kg	%	%	%
C29 - C36 Fraction	100 mg/kg	<100	----	----	----	----
	100 mg/kg	----	200	86.0	72.6	117
EP080: BTEX						
EP080: BTEX - (QC Lot: 260952)		mg/kg	mg/kg	%	%	%
Benzene	0.2 mg/kg	<0.2	----	----	----	----
	0.2 mg/kg	----	1	84.6	67.5	125
Ethylbenzene	0.2 mg/kg	----	1	91.7	65.3	126
	0.2 mg/kg	<0.2	----	----	----	----
meta- & para-Xylene	0.2 mg/kg	<0.2	----	----	----	----
	0.2 mg/kg	----	2	84.2	66.5	124
ortho-Xylene	0.2 mg/kg	<0.2	----	----	----	----
	0.2 mg/kg	----	1	95.5	66.7	123
Toluene	0.2 mg/kg	----	1	84.8	69	122
	0.2 mg/kg	<0.2	----	----	----	----
EP080: BTEX - (QC Lot: 260998)		mg/kg	mg/kg	%	%	%
Benzene	0.2 mg/kg	----	1	119	67.5	125
	0.2 mg/kg	<0.2	----	----	----	----
Ethylbenzene	0.2 mg/kg	----	1	120	65.3	126
	0.2 mg/kg	<0.2	----	----	----	----
meta- & para-Xylene	0.2 mg/kg	<0.2	----	----	----	----
	0.2 mg/kg	----	2	111	66.5	124
ortho-Xylene	0.2 mg/kg	<0.2	----	----	----	----
	0.2 mg/kg	----	1	120	66.7	123
Toluene	0.2 mg/kg	<0.2	----	----	----	----
	0.2 mg/kg	----	1	121	69	122

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

Analyte name	LOR	Method blank result	Actual Results		Recovery Limits	
			Spike concentration	Spike Recovery	Dynamic Recovery Limits	
				LCS	Low	High

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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
EG020T: Total Metals by ICP-MS						
EG020T: Total Metals by ICP-MS - (QC Lot: 260308)		mg/L	mg/L	%	%	%
Arsenic	0.001 mg/L	<0.001	----	----	----	----
	0.001 mg/L	----	0.1	95.1	78.7	111
Cadmium	0.0001 mg/L	<0.0001	----	----	----	----
	0.0001 mg/L	----	0.1	91.3	79.3	111
Chromium	0.001 mg/L	----	0.1	95.1	83.4	114
	0.001 mg/L	<0.001	----	----	----	----
Copper	0.001 mg/L	<0.001	----	----	----	----
	0.001 mg/L	----	0.1	89.8	80.1	118
Lead	0.001 mg/L	----	0.1	92.0	83.2	116
	0.001 mg/L	<0.001	----	----	----	----
Nickel	0.001 mg/L	----	0.1	92.8	84.3	115
	0.001 mg/L	<0.001	----	----	----	----
Zinc	0.005 mg/L	<0.005	----	----	----	----
	0.005 mg/L	----	0.1	88.6	77.2	109
EG035T: Total Mercury by FIMS						
EG035T: Total Mercury by FIMS - (QC Lot: 260382)		mg/L	mg/L	%	%	%
Mercury	0.0001 mg/L	<0.0001	----	----	----	----
	0.0001 mg/L	----	0.010	98.9	78.6	118
EP066: Polychlorinated Biphenyls (PCB)						
EP066: Polychlorinated Biphenyls (PCB) - (QC Lot: 260252)		µg/L	µg/L	%	%	%
Total Polychlorinated biphenyls	1 µg/L	----	10	107	61.6	107
	1 µg/L	<1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)						
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 260253)		µg/L	µg/L	%	%	%
4,4'-DDD	0.5 µg/L	<0.5	----	----	----	----
	0.5 µg/L	----	5	94.5	68.2	117
4,4'-DDE	0.5 µg/L	<0.5	----	----	----	----
	0.5 µg/L	----	5	93.1	68.9	114

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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
EP068A: Organochlorine Pesticides (OC) - continued						
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 260253) - continued		µg/L	µg/L	%	%	%
4,4'-DDT	2.0 µg/L	----	5	81.7	57.6	123
	2 µg/L	<2	----	----	----	----
Aldrin	0.5 µg/L	----	5	91.4	68.5	114
	0.5 µg/L	<0.5	----	----	----	----
alpha-BHC	0.5 µg/L	<0.5	----	----	----	----
	0.5 µg/L	----	5	86.8	59.5	123
alpha-Endosulfan	0.5 µg/L	----	5	92.5	68.5	116
	0.5 µg/L	<0.5	----	----	----	----
beta-BHC	0.5 µg/L	----	5	87.1	59.3	122
	0.5 µg/L	<0.5	----	----	----	----
beta-Endosulfan	0.5 µg/L	----	5	93.3	68	117
	0.5 µg/L	<0.5	----	----	----	----
cis-Chlordane	0.5 µg/L	<0.5	----	----	----	----
	0.5 µg/L	----	5	92.4	66.5	117
delta-BHC	0.5 µg/L	<0.5	----	----	----	----
	0.5 µg/L	----	5	88.9	68	116
Dieldrin	0.5 µg/L	----	5	93.0	68.8	116
	0.5 µg/L	<0.5	----	----	----	----
Endosulfan sulfate	0.5 µg/L	----	5	85.9	65.9	119
	0.5 µg/L	<0.5	----	----	----	----
Endrin	0.5 µg/L	<0.5	----	----	----	----
	0.5 µg/L	----	5	94.0	66.2	122
Endrin aldehyde	0.5 µg/L	----	5	92.9	66.6	117
	0.5 µg/L	<0.5	----	----	----	----
Endrin ketone	0.5 µg/L	----	5	91.5	65	118
	0.5 µg/L	<0.5	----	----	----	----
gamma-BHC	0.5 µg/L	<0.5	----	----	----	----
	0.5 µg/L	----	5	105	59.1	121
Heptachlor	0.5 µg/L	<0.5	----	----	----	----
	0.5 µg/L	----	5	90.6	67.1	116

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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
EP068A: Organochlorine Pesticides (OC) - continued						
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 260253) - continued		µg/L	µg/L	%	%	%
Heptachlor epoxide	0.5 µg/L	<0.5	----	----	----	----
	0.5 µg/L	----	5	90.4	69.8	113
Hexachlorobenzene (HCB)	0.5 µg/L	----	5	84.3	58.4	121
	0.5 µg/L	<0.5	----	----	----	----
Methoxychlor	2.0 µg/L	----	5	71.4	49.6	134
	2 µg/L	<2	----	----	----	----
trans-Chlordane	0.5 µg/L	----	5	92.1	68.3	112
	0.5 µg/L	<0.5	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)						
EP068B: Organophosphorus Pesticides (OP) - (QC Lot: 260253)		µg/L	µg/L	%	%	%
Methyl Azinphos	0.5 µg/L	----	5	42.6	45.6	138
	0.5 µg/L	<0.5	----	----	----	----
Bromophos-ethyl	0.5 µg/L	----	5	90.9	67.7	114
	0.5 µg/L	<0.5	----	----	----	----
Carbophenothion	0.5 µg/L	<0.5	----	----	----	----
	0.5 µg/L	----	5	91.1	65	121
Chlorfenvinphos	0.5 µg/L	----	5	95.0	64	127
	0.5 µg/L	<0.5	----	----	----	----
Chlorpyrifos	0.5 µg/L	----	5	89.7	70	112
	0.5 µg/L	<0.5	----	----	----	----
Chlorpyrifos-methyl	0.5 µg/L	<0.5	----	----	----	----
	0.5 µg/L	----	5	85.2	69.5	112
Demeton-S-methyl	0.5 µg/L	<0.5	----	----	----	----
	0.5 µg/L	----	5	77.8	26.8	154
Diazinon	0.5 µg/L	----	5	87.8	66.5	115
	0.5 µg/L	<0.5	----	----	----	----
Dichlorvos	0.5 µg/L	<0.5	----	----	----	----
	0.5 µg/L	----	5	80.7	56.9	128
Dimethoate	0.5 µg/L	----	5	75.6	48.6	126
	0.5 µg/L	<0.5	----	----	----	----

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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
EP068B: Organophosphorus Pesticides (OP) - continued						
EP068B: Organophosphorus Pesticides (OP) - (QC Lot: 260253) - continued		µg/L	µg/L	%	%	%
Ethion	0.5 µg/L	<0.5	----	----	----	----
	0.5 µg/L	----	5	89.9	67	116
Fenamiphos	0.5 µg/L	<0.5	----	----	----	----
	0.5 µg/L	----	5	87.1	50.5	129
Fenthion	0.5 µg/L	<0.5	----	----	----	----
	0.5 µg/L	----	5	89.0	69.8	114
Malathion	0.5 µg/L	<0.5	----	----	----	----
	0.5 µg/L	----	5	77.4	59.8	127
Monocrotophos	0.5 µg/L	----	5	19.1	10	89.1
	2 µg/L	<2	----	----	----	----
Parathion	2.0 µg/L	----	5	89.0	62.5	116
	2 µg/L	<2	----	----	----	----
Parathion-methyl	2.0 µg/L	----	5	83.0	63.9	115
	2 µg/L	<2	----	----	----	----
Pirimphos-ethyl	0.5 µg/L	<0.5	----	----	----	----
	0.5 µg/L	----	5	91.2	67.1	112
Prothiofos	0.5 µg/L	----	5	91.0	69.2	111
	0.5 µg/L	<0.5	----	----	----	----
EP075(SIM)A: Phenolic Compounds						
EP075(SIM)A: Phenolic Compounds - (QC Lot: 260249)		µg/L	µg/L	%	%	%
2,4,5-Trichlorophenol	0.2 µg/L	----	2	78.4	65.3	121
	0.5 µg/L	<0.5	----	----	----	----
2,4,6-Trichlorophenol	0.2 µg/L	----	2	76.9	63.1	122
	0.5 µg/L	<0.5	----	----	----	----
2,4-Dichlorophenol	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	77.3	64.4	121
2,4-Dimethylphenol	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	83.2	61.7	118
2,6-Dichlorophenol	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	79.5	65.7	120

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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: 260249) - continued		µg/L	µg/L	%	%	%
2-Chlorophenol	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	81.1	62.3	117
2-Methylphenol	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	64.1	53.9	110
2-Nitrophenol	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	75.2	58.2	127
3- & 4-Methylphenol	0.4 µg/L	----	4	58.2	40.9	103
	1.0 µg/L	<1.0	----	----	----	----
4-Chloro-3-Methylphenol	0.2 µg/L	----	2	80.8	66.4	119
	0.5 µg/L	<0.5	----	----	----	----
Pentachlorophenol	0.4 µg/L	----	4	44.5	10.9	145
	1.0 µg/L	<1.0	----	----	----	----
Phenol	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	31.2	19.5	60.7
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons						
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 260249)		µg/L	µg/L	%	%	%
Acenaphthene	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	84.8	62.2	113
Acenaphthylene	0.2 µg/L	----	2	85.7	63.6	114
	0.5 µg/L	<0.5	----	----	----	----
Anthracene	0.2 µg/L	----	2	89.9	64.3	116
	0.5 µg/L	<0.5	----	----	----	----
Benz(a)anthracene	0.2 µg/L	----	2	86.0	64.1	117
	0.5 µg/L	<0.5	----	----	----	----
Benzo(a)pyrene	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	84.4	63.3	117
Benzo(b)fluoranthene	0.2 µg/L	----	2	86.4	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	85.4	59.1	118

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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: 260249) - continued		µg/L	µg/L	%	%	%
Benzo(k)fluoranthene	0.2 µg/L	----	2	83.2	61.7	117
	0.5 µg/L	<0.5	----	----	----	----
Chrysene	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	84.1	62.5	116
Dibenz(a,h)anthracene	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	82.6	61.2	117
Fluoranthene	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	87.4	63.6	118
Fluorene	0.2 µg/L	----	2	85.8	63.9	115
	0.5 µg/L	<0.5	----	----	----	----
Indeno(1,2,3,cd)pyrene	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	83.7	59.9	118
Naphthalene	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	116	62.4	114
Phenanthrene	0.2 µg/L	----	2	89.4	62.6	116
	0.5 µg/L	<0.5	----	----	----	----
Pyrene	0.5 µg/L	<0.5	----	----	----	----
	0.2 µg/L	----	2	88.5	63.1	118
EP080/071: Total Petroleum Hydrocarbons						
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 260250)		µg/L	µg/L	%	%	%
C10 - C14 Fraction	50 µg/L	<50	----	----	----	----
	50 µg/L	----	200	99.5	58.9	131
C15 - C28 Fraction	100 µg/L	----	200	95.5	73.9	138
	100 µg/L	<100	----	----	----	----
C29 - C36 Fraction	50 µg/L	<50	----	----	----	----
	50 µg/L	----	200	101	62.7	131
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 262274)		µg/L	µg/L	%	%	%
C6 - C9 Fraction	20 µg/L	<20	----	----	----	----
	20 µg/L	----	260	98.0	75	127

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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						
EP080: BTEX - (QC Lot: 262274)		µg/L	µg/L	%	%	%
Benzene	1 µg/L	<1	----	----	----	----
	1 µg/L	----	10	109	76.2	124
Ethylbenzene	2 µg/L	<2	----	----	----	----
	2 µg/L	----	10	101	76.1	122
meta- & para-Xylene	2 µg/L	----	10	102	75.7	123
	2 µg/L	<2	----	----	----	----
ortho-Xylene	2 µg/L	<2	----	----	----	----
	2 µg/L	----	10	97.3	77.9	121
Toluene	2 µg/L	<2	----	----	----	----
	2 µg/L	----	10	105	74.4	124

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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
EG005T: Total Metals by ICP-AES									
EG005T: Total Metals by ICP-AES - (QC Lot: 261950)					mg/kg	mg/kg	%	%	%
Arsenic	ES0610200-017	Anonymous	5 mg/kg	50	<5	104	70	130	
Cadmium			1 mg/kg	50	<1	89.1	70	130	
Chromium			2 mg/kg	50	2	91.7	70	130	
Copper			5 mg/kg	250	<5	113	70	130	
Lead			5 mg/kg	250	9	84.8	70	130	
Nickel			2 mg/kg	50	<2	89.4	70	130	
Zinc			5 mg/kg	250	<5	81.7	70	130	
EG005T: Total Metals by ICP-AES - (QC Lot: 262307)					mg/kg	mg/kg	%	%	%
Arsenic	ES0610221-021	TP16/0.3	5 mg/kg	50	11	104	70	130	
Cadmium			1 mg/kg	50	<1	97.8	70	130	
Chromium			2 mg/kg	50	7	100	70	130	
Copper			5 mg/kg	250	273	112	70	130	
Lead			5 mg/kg	250	175	114	70	130	
Nickel			2 mg/kg	50	11	99.2	70	130	
Zinc			5 mg/kg	250	74	94.4	70	130	
EG035T: Total Mercury by FIMS									
EG035T: Total Mercury by FIMS - (QC Lot: 261951)					mg/kg	mg/kg	%	%	%
Mercury	ES0610220-015	Anonymous	0.1 mg/kg	5	<0.1	95.6	70	130	
EG035T: Total Mercury by FIMS - (QC Lot: 262308)					mg/kg	mg/kg	%	%	%
Mercury	ES0610221-021	TP16/0.3	0.1 mg/kg	5	3.3	78.6	70	130	
EK025G: Free cyanide by Discrete Analyser									
EK025G: Free cyanide by Discrete Analyser - (QC Lot: 261288)					mg/kg	mg/kg	%	%	%
Total Cyanide	ES0610221-001	TP16/3.5	1 mg/kg	50	<1.0	100	70	130	
EP066: Polychlorinated Biphenyls (PCB)									

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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				
EP066: Polychlorinated Biphenyls (PCB) - continued								
EP066: Polychlorinated Biphenyls (PCB) - (QC Lot: 260403)				mg/kg	mg/kg	%	%	%
Total Polychlorinated biphenyls	ES0610221-002	TP18/1.2	0.1 mg/kg	0.5	<0.10	90.6	70	130
EP068A: Organochlorine Pesticides (OC)								
EP068A: Organochlorine Pesticides (OC) - (QC Lot: 260404)				mg/kg	mg/kg	%	%	%
gamma-BHC	ES0610221-002	TP18/1.2	0.05 mg/kg	0.25	<0.05	78.4	75.65	110.44
Heptachlor			0.05 mg/kg	0.25	<0.05	72.8	72.2	106.71
Aldrin			0.05 mg/kg	0.25	<0.05	72.2	77.54	107.0
Dieldrin			0.05 mg/kg	0.25	<0.05	73.6	76.37	109.7
Endrin			0.05 mg/kg	1	<0.05	78.6	68.51	119.47
4,4'-DDT			0.2 mg/kg	1	<0.2	74.4	67.12	118.10
EP068B: Organophosphorus Pesticides (OP)								
EP068B: Organophosphorus Pesticides (OP) - (QC Lot: 260404)				mg/kg	mg/kg	%	%	%
Diazinon	ES0610221-002	TP18/1.2	0.05 mg/kg	0.25	<0.05	81.0	75.85	107.06
Chlorpyrifos-methyl			0.05 mg/kg	0.25	<0.05	75.4	74.84	107.91
Pirimphos-ethyl			0.05 mg/kg	0.25	<0.05	73.0	67.98	109.42
Bromophos-ethyl			0.05 mg/kg	0.25	<0.05	72.2	74.94	107.37
Prothiofos			0.05 mg/kg	0.25	<0.05	75.0	75.45	106.05
EP075(SIM)A: Phenolic Compounds								
EP075(SIM)A: Phenolic Compounds - (QC Lot: 261611)				mg/kg	mg/kg	%	%	%
Phenol	ES0610221-001	TP16/3.5	0.5 mg/kg	10	<0.5	93.0	70	130
2-Chlorophenol			0.5 mg/kg	10	<0.5	99.6	70	130
2-Nitrophenol			0.5 mg/kg	10	<0.5	95.2	60	130
4-Chloro-3-Methylphenol			0.5 mg/kg	10	<0.5	99.0	70	130
Pentachlorophenol			2.0 mg/kg	10	<2.0	108	20	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - (QC Lot: 261611)				mg/kg	mg/kg	%	%	%
Acenaphthene	ES0610221-001	TP16/3.5	0.5 mg/kg	10	<0.5	108	70	130
Pyrene			0.5 mg/kg	10	<0.5	108	70	130
EP080/071: Total Petroleum Hydrocarbons								

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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
EP080/071: Total Petroleum Hydrocarbons - continued									
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 260952)					mg/kg	mg/kg	%	%	%
C6 - C9 Fraction	ES0610256-001	Anonymous	2 mg/kg	26	34	74.9	70	130	
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 260998)					mg/kg	mg/kg	%	%	%
C6 - C9 Fraction	ES0610242-004	Anonymous	2 mg/kg	26	<2	74.0	70	130	
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 261612)					mg/kg	mg/kg	%	%	%
C10 - C14 Fraction	ES0610221-001	TP16/3.5	50 mg/kg	700	<50	71.6	70	130	
C15 - C28 Fraction			100 mg/kg	3400	<100	93.2	70	130	
C29 - C36 Fraction			100 mg/kg	3600	<100	89.8	70	130	
EP080: BTEX									
EP080: BTEX - (QC Lot: 260952)					mg/kg	mg/kg	%	%	%
Benzene	ES0610256-001	Anonymous	0.2 mg/kg	2.5	<0.2	97.7	70	130	
Toluene			0.2 mg/kg	2.5	2.7	80.6	70	130	
Ethylbenzene			0.2 mg/kg	2.5	1.0	95.8	70	130	
meta- & para-Xylene			0.2 mg/kg	2.5	4.9	97.2	70	130	
ortho-Xylene			0.2 mg/kg	2.5	3.1	77.8	70	130	
EP080: BTEX - (QC Lot: 260998)					mg/kg	mg/kg	%	%	%
Benzene	ES0610242-004	Anonymous	0.2 mg/kg	2.5	<0.2	82.3	70	130	
Toluene			0.2 mg/kg	2.5	<0.2	78.1	70	130	
Ethylbenzene			0.2 mg/kg	2.5	<0.2	87.7	70	130	
meta- & para-Xylene			0.2 mg/kg	2.5	<0.2	87.9	70	130	
ortho-Xylene			0.2 mg/kg	2.5	<0.2	85.7	70	130	

Matrix Type: WATER

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				
EG020T: Total Metals by ICP-MS								
EG020T: Total Metals by ICP-MS - (QC Lot: 260308)				mg/L	mg/L	%	%	%
Arsenic	EP0602041-002	Anonymous	0.001 mg/L	1	0.003	102	70	130
Cadmium			0.0001 mg/L	0.25	0.0001	95.5	70	130
Chromium			0.001 mg/L	1	<0.001	91.6	70	130

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Matrix Type: WATER

Matrix Spike (MS) Report

					Actual Results		Recovery Limits		
					Sample Result	Spike Recovery	Static Limits		
						MS	Low	High	
EG020T: Total Metals by ICP-MS - continued									
EG020T: Total Metals by ICP-MS - (QC Lot: 260308) - continued					mg/L	mg/L	%	%	%
Copper	EP0602041-002	Anonymous	0.001 mg/L	1	<0.001	91.4	70	130	
Lead			0.001 mg/L	1	<0.001	92.6	70	130	
Nickel			0.001 mg/L	1	<0.001	93.8	70	130	
Zinc			0.005 mg/L	1	<0.005	93.6	70	130	
EG035T: Total Mercury by FIMS									
EG035T: Total Mercury by FIMS - (QC Lot: 260382)					mg/L	mg/L	%	%	%
Mercury	ES0610115-012	Anonymous	0.0001 mg/L	0.010	<0.0001	86.6	70	130	
EP080/071: Total Petroleum Hydrocarbons									
EP080/071: Total Petroleum Hydrocarbons - (QC Lot: 262274)					µg/L	µg/L	%	%	%
C6 - C9 Fraction	ES0610200-022	Anonymous	20 µg/L	250	<20	109	70	130	
EP080: BTEX									
EP080: BTEX - (QC Lot: 262274)					µg/L	µg/L	%	%	%
Benzene	ES0610200-022	Anonymous	1 µg/L	25	<1	115	70	130	
Toluene			2 µg/L	25	<2	108	70	130	
Ethylbenzene			2 µg/L	25	<2	111	70	130	
meta- & para-Xylene			2 µg/L	25	<2	111	70	130	
ortho-Xylene			2 µg/L	25	<2	111	70	130	

INTERPRETIVE QUALITY CONTROL REPORT

Client	: CH2M HILL PTY LTD	Laboratory	: ALS Environmental Sydney	Page	: 1 of 10
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	: ES0610221
				Amendment No.	:
Project	: 347496 MACDONALDTOWN GASWORKS	Quote number	: ----	Date received	: 18 Aug 2006
Order number	: - Not provided -			Date issued	: 29 Aug 2006
C-O-C number	: - Not provided -				
Site	: MACDONALDTOWN				
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	: 22
Facsimile	: 02 9950 0600	Facsimile	: +61 (02) 8784 8500	Analysed	: 18

This Interpretive Quality Control Report was issued on 29 Aug 2006 for the ALS work order reference ES0610221 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

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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		Date Sampled	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Pass?	Date analysed	Due for analysis	Pass?
EA055-103: Moisture Content								
Soil Glass Jar - Unpreserved		17 Aug 2006	----	----	----	23 Aug 2006	24 Aug 2006	Pass
TP16/3.5,	TP18/1.2,							
TP18/3.2,	TP18/4.4,							
DUP08,	TRIP BLANK,							
MG11/0.2,	MG11/1.5,							
MG11/2.0,	MG11/4.0,							
TP11/0.2,	TP11/1.0,							
TP11/3.5,	TP16/0.3,							
TP16/1.0								
EG005T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved		17 Aug 2006	24 Aug 2006	13 Feb 2007	Pass	25 Aug 2006	13 Feb 2007	Pass
TP16/3.5,	TP18/1.2,							
TP18/3.2,	TP18/4.4,							
DUP08,	MG11/0.2,							
MG11/2.0,	MG11/4.0,							
TP11/0.2,	TP11/1.0,							
TP16/0.3,	TP16/1.0							
EG035T: Total Mercury by FIMS								
Soil Glass Jar - Unpreserved		17 Aug 2006	24 Aug 2006	14 Sep 2006	Pass	25 Aug 2006	14 Sep 2006	Pass
TP16/3.5,	TP18/1.2,							
TP18/3.2,	TP18/4.4,							
DUP08,	MG11/0.2,							
MG11/2.0,	MG11/4.0,							
TP11/0.2,	TP11/1.0,							
TP16/0.3,	TP16/1.0							
EK026G: Total Cyanide By Discrete Analyser								
Soil Glass Jar - Unpreserved		17 Aug 2006	24 Aug 2006	13 Feb 2007	Pass	24 Aug 2006	13 Feb 2007	Pass
TP16/3.5,	TP18/1.2,							
TP18/3.2,	DUP08,							
MG11/0.2,	MG11/1.5,							
MG11/2.0,	MG11/4.0,							
TP11/1.0,	TP16/1.0							
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved		17 Aug 2006	23 Aug 2006	31 Aug 2006	Pass	24 Aug 2006	2 Oct 2006	Pass
TP18/1.2,	DUP08,							
MG11/2.0,	TP11/1.0,							
TP16/1.0								

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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?
EP068: Pesticides by GCMS								
Soil Glass Jar - Unpreserved								
TP18/1.2, MG11/2.0, TP16/1.0	DUP08, TP11/1.0,	17 Aug 2006	23 Aug 2006	31 Aug 2006	Pass	24 Aug 2006	2 Oct 2006	Pass
EP071: TPH - Semivolatile Fraction								
Soil Glass Jar - Unpreserved								
TP16/3.5, TP18/3.2, DUP08, MG11/0.2, MG11/4.0, TP11/1.0, TP16/0.3,	TP18/1.2, TP18/4.4, TRIP BLANK, MG11/2.0, TP11/0.2, TP11/3.5, TP16/1.0	17 Aug 2006	24 Aug 2006	31 Aug 2006	Pass	24 Aug 2006	3 Oct 2006	Pass
EP075(SIM): PAH/Phenols (SIM)								
Soil Glass Jar - Unpreserved								
TP16/3.5, TP18/3.2, DUP08, MG11/2.0, TP11/0.2, TP11/3.5, TP16/1.0	TP18/1.2, TP18/4.4, MG11/0.2, MG11/4.0, TP11/1.0, TP16/0.3,	17 Aug 2006	24 Aug 2006	31 Aug 2006	Pass	24 Aug 2006	3 Oct 2006	Pass
EP080: TPH Volatiles/BTEX								
Soil Glass Jar - Unpreserved								
TP16/3.5, TP18/3.2, DUP08,	TP18/1.2, TP18/4.4, TRIP BLANK	17 Aug 2006	22 Aug 2006	31 Aug 2006	Pass	24 Aug 2006	31 Aug 2006	Pass
Soil Glass Jar - Unpreserved								
MG11/0.2, MG11/4.0, TP11/1.0, TP16/0.3,	MG11/2.0, TP11/0.2, TP11/3.5, TP16/1.0	17 Aug 2006	22 Aug 2006	31 Aug 2006	Pass	25 Aug 2006	31 Aug 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?
EG020A-T: Total Metals by ICP-MS - Suite A								
Clear Plastic Bottle - Nitric Acid; Unfiltered W05, QA01	W06,	17 Aug 2006	22 Aug 2006	13 Feb 2007	Pass	23 Aug 2006	13 Feb 2007	Pass
EG035T: Total Mercury by FIMS								
Clear Plastic Bottle - Nitric Acid; Unfiltered W05, QA01	W06,	17 Aug 2006	----	----	----	24 Aug 2006	14 Sep 2006	Pass

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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?	
EP066: Polychlorinated Biphenyls (PCB)								
Amber Glass Bottle - Unpreserved W05, QA01	W06,	17 Aug 2006	23 Aug 2006	24 Aug 2006	Pass	24 Aug 2006	2 Oct 2006	Pass
EP068: Pesticides								
Amber Glass Bottle - Unpreserved W05, QA01	W06,	17 Aug 2006	23 Aug 2006	24 Aug 2006	Pass	24 Aug 2006	2 Oct 2006	Pass
EP071: TPH - Semivolatile Fraction								
Amber Glass Bottle - Unpreserved W05, QA01	W06,	17 Aug 2006	23 Aug 2006	24 Aug 2006	Pass	24 Aug 2006	2 Oct 2006	Pass
EP075(SIM): PAH/Phenols (GC/MS - SIM)								
Amber Glass Bottle - Unpreserved W05, QA01	W06,	17 Aug 2006	23 Aug 2006	24 Aug 2006	Pass	24 Aug 2006	2 Oct 2006	Pass
EP080: TPH Volatiles/BTEX								
Amber VOC Vial - HCl or NaHSO4 W05, QA01	W06,	17 Aug 2006	----	----	----	25 Aug 2006	31 Aug 2006	Pass