AECOM Australia Pty Ltd
17 Warabrook Boulevarde,
Warabrook, NSW 2304

CT 60266102 **AT** 9 May 12

CT A Huntlee Phase 2 ESA

CATI North Rothbury

I I T Solid-Stem Auger

SA I T SPT

J. Deacon

C TS Refusal at 1.8 m on suspected sandstone.

PID (ppm)	RECOVERY	SAMPLE NUMBER	ANALYSED	DEPTH (m BGS)	GRAPHIC LOG	USCS CLASS	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
0		BH10_0-0.05	✳			TOPSOIL	TOPSOIL, Loose, Dry, Brown, Rootlets, NOC	0.15
				0.2		CLS	SANDY CLAY, Very Stiff, Slightly Moist, Low Plasticity, Brown, Rootlets, NOC	0.40
0		BH10_0.4-0.5		0.4		CLS	SANDY CLAY, Very Stiff, Dry, Low Plasticity, Orange and Grey Mottles, NOC	0.70
				0.6				
				0.8		CLS	SANDY CLAY (Weathered Sandstone), Very Stiff, Dry, Low Plasticity, Orange, NOC	
0		BH10_0.9-1.0		1.0				
				1.2				
				1.4				
				1.6				
0		BH10_1.7-1.8	✳	1.8			Total Depth: 1.80 m	1.80

60266102 _BORELOGS.GPJ 15/6/12

AECOM Australia Pty Ltd
17 Warabrook Boulevarde,
Warabrook, NSW 2304

CT 60266102 **AT** 9 May 12
CT A Huntlee Phase 2 ESA
CATI North Rothbury
I I T Solid-Stem Auger
SA I T SPT

J. Deacon
C TS Borehole terminated, target depth reached.

PID (ppm)	RECOVERY	SAMPLE NUMBER	ANALYSED	DEPTH (m BGS)	GRAPHIC LOG	USCS CLASS	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
0		BH11_0.03-0.13	✳	0		TOPSOIL	TOPSOIL, Loose, Dry, Brown, Rootlets, NOC	0.03
				0.2		CLS	SANDY CLAY, Very Stiff, Dry to Slightly Moist, Low Plasticity, Orange and Grey Mottles, Rootlets, NOC	
0		BH11_0.4-0.5		0.4				
				0.6				
				0.8				
0		BH11_0.9-1.0		1.0				
				1.2				
				1.4				
				1.6				
				1.8				
0		BH11_1.9-2.0	✳	2.0			Total Depth: 2.00 m	2.00

60266102 _BORELOGS.GPJ 15/6/12

Appendix D

Calibration Certificates

Appendix D Calibration Certificates

PID Calibration Certificate

Instrument PhoCheck Tiger
Serial No. T-105927

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation	✓				
	Filter	✓				
	Flow	✓				
	Valves, Diaphragm	✓				
PCB	Condition	✓				
Connectors	Condition	✓				
Sensor	PID	✓	10.6 ev			
Alarms	Beeper	✓	**Low**	**High**	**TWA**	**STEL**
	Settings	✓	50ppm	100ppm		
Software	Version	✓				
Data logger	Operation	✓				
Download	Operation	✓				
Other tests:						

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Diffusion mode Aspirated mode

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No		Instrument Reading
PID Lamp		100ppm Isobutylene	NIST	797443		100.3ppm

Calibrated by: Jacob Arnott

Calibration date: 4/05/2012

Next calibration due: 3/06/2012

AECOM

16;#Australia New Zealand|a541b326-6e42-45fc-a7d5-d797f3cb72ce

PID Calibration Form

Q4AN(EV)-336-FM12

Project Name	
Project Number	
Frequency	☑ Daily on User ☐ Twice Daily

PID Serial No.	Date/Time	Hired Equipment Y/N (if yes, attach calibration sheet)	Fresh Air Cal. OK Y/N	Gas	Calibrate OK Y/N	Filter Change Required Y/N	Pump Clean Required Y/N	Charging Required Y/N	Comments	Name (print)	Signature
	9/5/12	Y	Y	ISOBUT	Y	N	N	N	SWAP BATTERY	J DEACON	

Appendix E

Laboratory Certificates

Appendix E Laboratory Certificates

#336824

CHAIN OF CUSTODY

ALS

ALS Laboratory: please tick →

☐ Sydney 277 Woodpark Rd, Smithfield NSW 2164 Ph 02 8784 8555 E samples.sydney@alsenviro.com
☐ Newcastle 5 Rosegum Rd, Warabrook NSW 2304 Ph 02 4968 9433 E samples.newcastle@alsenviro.com
☐ Brisbane 32 Shand St, Stafford QLD 4053 Ph 07 3243 7222 E samples.brisbane@alsenviro.com
☐ Townsville 14-15 Desma Ct, Bohle QLD 4818 Ph 07 4796 0600 E townsville.environmental@alsenviro.com
☐ Melbourne 2-4 Westall Rd, Springvale VIC 3171 Ph 03 8549 9600 E samples.melbourne@alsenviro.com
☐ Adelaide 2/1 Burma Rd, Pooraka SA 5095 Ph 08 8359 0890 E adelaide@alsenviro.com
☐ Perth 10 Hod Way, Malaga, WA 6090 Ph 08 9209 7655 E samples.perth@alsenviro.com
☐ Launceston 27 Wellington St, Launceston, TAS 7250 Ph 03 6331 2158 E launceston@alsenviro.com

CLIENT: AECOM
OFFICE: Wollongong
PROJECT: 60266102
PURCHASE ORDER NUMBER:
PROJECT MANAGER: Lucy Swart
CONTACT PH:
SAMPLER: Jonathon Dyson
SAMPLER MOBILE: [illegible]
COC emailed to ALS? (YES / NO)
EDD FORMAT (or default):
Email Reports to (will default to PM if no other addresses are listed):
Email Invoice to (will default to PM if no other addresses are listed):

TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)
☐ Standard TAT (List due date):
☐ Non Standard or urgent TAT (List due date):

ALS QUOTE NO.:

COC SEQUENCE NUMBER (Circle)
COC: 1 2 3 4 5 (6) 7
OF: 1 2 3 4 5 6 7

FOR LABORATORY USE ONLY (Circle)
Custody Seal Intact? Yes No N/A
Free ice / frozen ice bricks present upon receipt? Yes No N/A
Random Sample Temperature on Receipt: °C
Other comment:

RELINQUISHED BY: [illegible]
DATE/TIME: 9/5/12

RECEIVED BY: [illegible]
DATE/TIME: 9/5/12

RELINQUISHED BY:
DATE/TIME:

RECEIVED BY: TRDI
DATE/TIME: 10/5/12 3pm

COMMENTS/ SPECIAL HANDLING/STORAGE OR DISPOSAL:
rec'd 11/5/12. 1½pm ES1211388

ALS USE — LAB ID	SAMPLE ID	DATE/ TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	Hold	S-27	S-12						Additional Information — Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
(67)	QC01	8/5/12	S			✓								
	QC02			MY08314			X		forward to MGT					(MGT)
28	QC03			↓			X	X						
	QC04			15					forward to MGT					(
29	QC05	9/5/12					X	X						
	QC06			↓ 16					forward to MGT					
30	QC07						X	X						
31	QC08						X	X						
	QC09			↓ 17			X	X	forward to MGT					(MGT).
(68)	QC10													
32	RINSATE01	8/5/12	W		4		X	✓						
33	RINSATE02	9/5/12	W		4		X	✓						
				TOTAL										

ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic, ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic, V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag

154953

mgt LabMark
ENVIRONMENTAL LABORATORIES

ABN – 50 005 085 521 e.mail : enviro@mgtlabmark.com.au web : www.mgtlabmark.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh Vic 3166
Phone : +61 3 9564 7055
NATA # 1261
Site # 1254

Sydney
Unit F6, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 8215 6222
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Sample Receipt Advice

Company name: **AECOM Australia P/L Newcastle**

Contact name: Lucy Stuart
Client job number: 60266102
COC number: Not provided
Turn around time: 5 Day
Date/Time received: May 11, 2012 12:00 PM
MGT lab reference: **336824**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Organic samples had Teflon liners.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Notes

Suite 6 TPH/BTEX/M8 | Suite 3 PAH/Phenols(speciated)| Suite 14 OCP/OPPs.

Contact notes

If you have any questions with respect to these samples please contact:

Onur Mehmet on Phone : (+61) (3) 9564 7055 or by e.mail: onur.mehmet@mgtlabmark.com.au

Results will be delivered electronically via e.mail to Lucy Stuart - Lucy.Stuart@aecom.com.

mgt Labmark Sample Receipt

mgt LabMark
ENVIRONMENTAL LABORATORIES

ABN – 50 005 085 521 e.mail : enviro@mgtlabmark.com.au web : www.mgtlabmark.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 9564 7055
NATA # 1261
Site # 1254

Sydney
Unit F6, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 8215 6222
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Company Name: AECOM Australia P/L Newcastle
Address: 18 Warabrook Blvd, PO BOX 73
HRMC
NSW 2310

Order No.:
Report #: 336824
Phone: 02 4968 0044
Fax: 02 4968 0005

Received: May 11, 2012 12:00 PM
Due: May 18, 2012 4:00 PM
Priority: 5 Day
Contact name: Lucy Stuart

Client Job No.: 60266102

mgt-LabMark Client Manager: Onur Mehmet

Sample Detail					% Moisture	HOLD	mgt-LabMark Suite 3	mgt-LabMark Suite 14	mgt-LabMark Suite 6
Laboratory where analysis is conducted									
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217					X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794									
External Laboratory									
Sample ID	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
QC02	May 08, 2012		Soil	S12-My08314	X		X		X
QC04	May 08, 2012		Soil	S12-My08315		X			
QC06	May 09, 2012		Soil	S12-My08316		X			
QC09	May 09, 2012		Soil	S12-My08317	X		X	X	X

mgt LabMark ENVIRONMENTAL LABORATORIES

Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025.
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

AECOM Australia P/L-Newcastle
18 Warabrook Blvd, PO BOX 73
HRMC
NSW 2310

Attention:Lucy Stuart

Report **336824-S**
Client Reference 60266102
Received Date May 11, 2012

Client Sample ID			**QC02**	**QC09**
Sample Matrix			**Soil**	**Soil**
mgt-LabMark Sample No.			**S12-My08314**	**S12-My08317**
Date Sampled			**May 08, 2012**	**May 09, 2012**
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	10	mg/kg	< 10	< 10
TRH C10-C14	50	mg/kg	< 50	< 50
TRH C15-C28	100	mg/kg	< 100	< 100
TRH C29-C36	100	mg/kg	< 100	< 100
TRH C10-36 (Total)	100	mg/kg	< 100	< 100
BTEX				
Benzene	0.5	mg/kg	< 0.5	< 0.5
Toluene	0.5	mg/kg	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	< 0.5
Total m+p-Xylenes	1	mg/kg	< 1	< 1
o-Xylene	0.5	mg/kg	< 0.5	< 0.5
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	96	100
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100
Speciated Phenols				
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5
2.4.5-Trichlorophenol	0.5	mg/kg	< 0.5	< 0.5
2.4.6-Trichlorophenol	0.5	mg/kg	< 0.5	< 0.5
Phenol	0.5	mg/kg	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.5	mg/kg	< 0.5	< 0.5
3&4-Methylphenol (m&p-Cresol)	1	mg/kg	< 1	< 1
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5
2-Nitrophenol	0.5	mg/kg	< 0.5	< 0.5
4-Chloro-3-methylphenol	0.5	mg/kg	< 0.5	< 0.5
Pentachlorophenol	1	mg/kg	< 1	< 1
Phenol-d5 (surr.)	1	%	80	85
Organochlorine Pesticides (OC)				

Client Sample ID			QC02	QC09
Sample Matrix			Soil	Soil
mgt-LabMark Sample No.			S12-My08314	S12-My08317
Date Sampled			May 08, 2012	May 09, 2012
Test/Reference	LOR	Unit		
4.4'-DDD	0.05	mg/kg	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05
4.4'-DDT	0.2	mg/kg	-	< 0.2
a-BHC	0.05	mg/kg	-	< 0.05
a-Chlordane	0.05	mg/kg	-	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05
b-BHC	0.05	mg/kg	-	< 0.05
d-BHC	0.05	mg/kg	-	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05
Endrin	0.05	mg/kg	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05
g-Chlordane	0.05	mg/kg	-	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05
Methoxychlor	0.2	mg/kg	-	< 0.2
Dibutylchlorendate (surr.)	1	%	-	99
Tetrachloro-m-xylene (surr.)	1	%	-	120
Organophosphorus Pesticides (OP)				
Chlorpyrifos	0.5	mg/kg	-	< 0.5
Coumaphos	0.5	mg/kg	-	< 0.5
Demeton (total)	1	mg/kg	-	< 1
Diazinon	0.5	mg/kg	-	< 0.5
Dichlorvos	0.5	mg/kg	-	< 0.5
Dimethoate	0.5	mg/kg	-	< 0.5
Disulfoton	0.5	mg/kg	-	< 0.5
Ethoprop	0.5	mg/kg	-	< 0.5
Fenitrothion	0.5	mg/kg	-	< 0.5
Fensulfothion	0.5	mg/kg	-	< 0.5
Fenthion	0.5	mg/kg	-	< 0.5
Methyl azinphos	0.5	mg/kg	-	< 0.5
Malathion	0.5	mg/kg	-	< 0.5
Methyl parathion	0.5	mg/kg	-	< 0.5
Mevinphos	0.5	mg/kg	-	< 0.5
Monocrotophos	10	mg/kg	-	< 10
Parathion	0.5	mg/kg	-	< 0.5
Phorate	0.5	mg/kg	-	< 0.5
Profenofos	0.5	mg/kg	-	< 0.5
Prothiofos	0.5	mg/kg	-	< 0.5
Ronnel	0.5	mg/kg	-	< 0.5
Stirophos	0.5	mg/kg	-	< 0.5
Trichloronate	0.5	mg/kg	-	< 0.5
Triphenylphosphate (surr.)	1	%	-	84
Polyaromatic Hydrocarbons (PAH)				
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5

Client Sample ID			QC02	QC09
Sample Matrix			Soil	Soil
mgt-LabMark Sample No.			S12-My08314	S12-My08317
Date Sampled			May 08, 2012	May 09, 2012
Test/Reference	LOR	Unit		
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	< 1
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5
Total PAH	1	mg/kg	< 1	< 1
2-Fluorobiphenyl (surr.)	1	%	95	101
p-Terphenyl-d14 (surr.)	1	%	90	96
Heavy Metals				
Arsenic	1	mg/kg	5.7	5.9
Cadmium	0.1	mg/kg	< 0.1	< 0.1
Chromium	2	mg/kg	44	10
Copper	2	mg/kg	5.9	< 2
Lead	2	mg/kg	11	7.1
Mercury	0.05	mg/kg	< 0.05	0.06
Nickel	1	mg/kg	14	2.4
Zinc	5	mg/kg	43	7.3
% Moisture	0.1	%	5.3	13

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Testing Site	Extracted	Holding Time
mgt-LabMark Suite 6			
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * - Method: LM-LTM-ORG2010	Sydney	May 14, 2012	14 Day
Metals M8 - Method: E022 Acid Extractable metals in Soils & E026 Mercury	Sydney	May 14, 2012	28 Day
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	May 14, 2012	14 Day
BTEX - Method: E029/E016 BTEX	Sydney	May 14, 2012	14 Day
mgt-LabMark Suite 3			
Polyaromatic Hydrocarbons (PAH) - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	May 14, 2012	14 Day
Speciated Phenols - Method: E008 Speciated Phenols	Sydney	May 14, 2012	14 Day
mgt-LabMark Suite 14			
Organochlorine Pesticides (OC) - Method: E013 Organochlorine Pesticides (OC)	Sydney	May 14, 2012	14 Day
Organophosphorus Pesticides (OP) - Method: E014 Organophosphorus Pesticides (OP)	Sydney	May 14, 2012	14 Day
% Moisture - Method: E005 Moisture Content	Sydney	May 14, 2012	28 Day

mgt LabMark
ENVIRONMENTAL LABORATORIES

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Phone : +61 3 9564 7055
NATA # 1261
Site # 1254

Sydney
Unit F6, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 8215 6222
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Company Name: AECOM Australia P/L Newcastle
Address: 18 Warabrook Blvd, PO BOX 73
HRMC
NSW 2310

Order No.:
Report #: 336824
Phone: 02 4968 0044
Fax: 02 4968 0005

Received: May 11, 2012 12:00 PM
Due: May 18, 2012 4:00 PM
Priority: 5 Day
Contact name: Lucy Stuart

Client Job No.: 60266102

mgt-LabMark Client Manager: Onur Mehmet

Sample Detail					% Moisture	HOLD	mgt-LabMark Suite 3	mgt-LabMark Suite 14	mgt-LabMark Suite 6
Laboratory where analysis is conducted									
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217					X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794									
External Laboratory									
Sample ID	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
QC02	May 08, 2012		Soil	S12-My08314	X		X		X
QC04	May 08, 2012		Soil	S12-My08315		X			
QC06	May 09, 2012		Soil	S12-My08316		X			
QC09	May 09, 2012		Soil	S12-My08317	X		X	X	X

First Reported:May 18, 2012
Date Reported:May 18, 2012

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis.
7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001)

For samples received on the last day of holding time, notification of testing requirements should have been received at least

6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as an RPD

UNITS

mg/kg:milligrams per Kilogram

mg/L:milligrams per litre

µg/L:micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%:Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 milliltres

TERMS

Dry:	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR:	Limit Of Reporting.
SPIKE:	Addition of the analyte to the sample and reported as percentage recovery.
RPD:	Relative Percent Difference between two Duplicate pieces of analysis.
LCS:	Laboratory Control Sample - reported as percent recovery.
CRM:	Certified Reference Material - reported as percent recovery.
Method Blank:	In the case of solid samples these are performed on laboratory certified clean sands.
	In the case of water samples these are performed on de-ionised water.
Surr - Surrogate:	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate:	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate:	A second piece of analysis from a sample outside of the client's batch of samples but run within the laboratory batch of analysis.
Batch SPIKE:	Spike recovery reported on a sample from outside of the client's batch of samples but run within the laboratory batch of analysis.
USEPA:	U.S Environmental Protection Agency
APHA:	American Public Health Association
ASLP:	Australian Standard Leaching Procedure (AS4439.3)
TCLP:	Toxicity Characteristic Leaching Procedure
COC:	Chain Of Custody
SRA:	Sample Receipt Advice
CP:	Client Parent - QC was performed on samples pertaining to this report
NCP:	Non-Client Parent - QC was performed on samples not pertaining to this report, however QC is representative of the sequence or batch that client samples were analysed within

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample>
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data below the LOR with a positive RPD - eg: LOR 0.1, Result A = <0.1 (raw data is 0.02) & Result B = <0.1 (raw data is 0.03) resulting in a RPD of 40% calculated from the raw data.

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							
TRH C6-C9	mg/kg	< 10			10	Pass	
TRH C10-C14	mg/kg	< 50			50	Pass	
TRH C15-C28	mg/kg	< 100			100	Pass	
TRH C29-C36	mg/kg	< 100			100	Pass	
Method Blank							
BTEX E029/E016 BTEX							
Benzene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.5			0.5	Pass	
Ethylbenzene	mg/kg	< 0.5			0.5	Pass	
Total m+p-Xylenes	mg/kg	< 1			1	Pass	
o-Xylene	mg/kg	< 0.5			0.5	Pass	
Xylenes(ortho.meta and para)	mg/kg	< 1.5			1.5	Pass	
Total BTEX	mg/kg	< 1.5			1.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Speciated Phenols E008 Speciated Phenols							
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.6-Trichlorophenol	mg/kg	< 0.5			0.5	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.5			0.5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 1			1	Pass	
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2-Nitrophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 0.5			0.5	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Method Blank							
Organochlorine Pesticides (OC) E013 Organochlorine Pesticides (OC)							
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.2			0.2	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
a-Chlordane	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
g-Chlordane	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Organophosphorus Pesticides (OP) E014 Organophosphorus Pesticides (OP)							
Chlorpyrifos	mg/kg	< 0.5			0.5	Pass	
Coumaphos	mg/kg	< 0.5			0.5	Pass	
Demeton (total)	mg/kg	< 1			1	Pass	
Diazinon	mg/kg	< 0.5			0.5	Pass	
Dichlorvos	mg/kg	< 0.5			0.5	Pass	
Dimethoate	mg/kg	< 0.5			0.5	Pass	
Disulfoton	mg/kg	< 0.5			0.5	Pass	
Ethoprop	mg/kg	< 0.5			0.5	Pass	
Fenitrothion	mg/kg	< 0.5			0.5	Pass	
Fensulfothion	mg/kg	< 0.5			0.5	Pass	
Fenthion	mg/kg	< 0.5			0.5	Pass	
Methyl azinphos	mg/kg	< 0.5			0.5	Pass	
Malathion	mg/kg	< 0.5			0.5	Pass	
Methyl parathion	mg/kg	< 0.5			0.5	Pass	
Mevinphos	mg/kg	< 0.5			0.5	Pass	
Monocrotophos	mg/kg	< 10			10	Pass	
Parathion	mg/kg	< 0.5			0.5	Pass	
Phorate	mg/kg	< 0.5			0.5	Pass	
Profenofos	mg/kg	< 0.5			0.5	Pass	
Prothiofos	mg/kg	< 0.5			0.5	Pass	
Ronnel	mg/kg	< 0.5			0.5	Pass	
Stirophos	mg/kg	< 0.5			0.5	Pass	
Trichloronate	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	mg/kg	< 1			1	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Metals M8 E022 Acid Extractable metals in Soils & E026 Mercury							
Arsenic	mg/kg	< 1			1	Pass	
Cadmium	mg/kg	< 0.1			0.1	Pass	
Chromium	mg/kg	< 2			2	Pass	
Copper	mg/kg	< 2			2	Pass	
Lead	mg/kg	< 2			2	Pass	
Mercury	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Nickel	mg/kg	< 1			1	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							
TRH C6-C9	%	103			70-130	Pass	
TRH C10-C14	%	111			70-130	Pass	
LCS - % Recovery							
BTEX E029/E016 BTEX							
Benzene	%	104			70-130	Pass	
Toluene	%	103			70-130	Pass	
Ethylbenzene	%	106			70-130	Pass	
Total m+p-Xylenes	%	106			70-130	Pass	
o-Xylene	%	104			70-130	Pass	
Xylenes(ortho.meta and para)	%	105			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							
TRH C6-C10	%	98			70-130	Pass	
TRH >C10-C16	%	107			70-130	Pass	
LCS - % Recovery							
Speciated Phenols E008 Speciated Phenols							
2.4-Dichlorophenol	%	98			70-130	Pass	
2.4-Dimethylphenol	%	95			70-130	Pass	
2.4.5-Trichlorophenol	%	100			70-130	Pass	
2.4.6-Trichlorophenol	%	84			70-130	Pass	
Phenol	%	95			70-130	Pass	
2-Methylphenol (o-Cresol)	%	99			70-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	107			70-130	Pass	
2-Chlorophenol	%	101			70-130	Pass	
2-Nitrophenol	%	78			70-130	Pass	
4-Chloro-3-methylphenol	%	89			70-130	Pass	
Pentachlorophenol	%	44			70-130	Fail	Q13
LCS - % Recovery							
Organochlorine Pesticides (OC) E013 Organochlorine Pesticides (OC)							
4.4'-DDD	%	129			70-130	Pass	
4.4'-DDE	%	109			70-130	Pass	
4.4'-DDT	%	88			70-130	Pass	
a-BHC	%	107			70-130	Pass	
a-Chlordane	%	114			70-130	Pass	
Aldrin	%	117			70-130	Pass	
b-BHC	%	123			70-130	Pass	
d-BHC	%	129			70-130	Pass	
Dieldrin	%	113			70-130	Pass	
Endosulfan I	%	104			70-130	Pass	
Endosulfan II	%	111			70-130	Pass	
Endosulfan sulphate	%	80			70-130	Pass	
Endrin	%	130			70-130	Pass	
Endrin aldehyde	%	80			70-130	Pass	
Endrin ketone	%	83			70-130	Pass	
g-BHC (Lindane)	%	109			70-130	Pass	
g-Chlordane	%	111			70-130	Pass	
Heptachlor	%	115			70-130	Pass	
Heptachlor epoxide	%	119			70-130	Pass	
Hexachlorobenzene	%	128			70-130	Pass	
Methoxychlor	%	115			70-130	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Organophosphorus Pesticides (OP) E014 Organophosphorus Pesticides (OP)							
Chlorpyrifos	%	97			70-130	Pass	
Coumaphos	%	102			70-130	Pass	
Diazinon	%	102			70-130	Pass	
Dichlorvos	%	99			70-130	Pass	
Dimethoate	%	99			70-130	Pass	
Disulfoton	%	105			70-130	Pass	
Ethoprop	%	106			70-130	Pass	
Fenitrothion	%	93			70-130	Pass	
Fensulfothion	%	97			70-130	Pass	
Fenthion	%	96			70-130	Pass	
Methyl azinphos	%	101			70-130	Pass	
Malathion	%	96			70-130	Pass	
Methyl parathion	%	95			70-130	Pass	
Mevinphos	%	106			70-130	Pass	
Monocrotophos	%	100			70-130	Pass	
Parathion	%	99			70-130	Pass	
Phorate	%	108			70-130	Pass	
Profenofos	%	97			70-130	Pass	
Prothiofos	%	94			70-130	Pass	
Ronnel	%	99			70-130	Pass	
Stirophos	%	97			70-130	Pass	
Trichloronate	%	100			70-130	Pass	
LCS - % Recovery							
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)							
Acenaphthene	%	107			70-130	Pass	
Acenaphthylene	%	101			70-130	Pass	
Anthracene	%	112			70-130	Pass	
Benz(a)anthracene	%	104			70-130	Pass	
Benzo(a)pyrene	%	103			70-130	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	%	100			70-130	Pass	
Benzo(g.h.i)perylene	%	97			70-130	Pass	
Chrysene	%	100			70-130	Pass	
Dibenz(a.h)anthracene	%	100			70-130	Pass	
Fluoranthene	%	102			70-130	Pass	
Fluorene	%	102			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	98			70-130	Pass	
Naphthalene	%	107			70-130	Pass	
Phenanthrene	%	106			70-130	Pass	
Pyrene	%	109			70-130	Pass	
LCS - % Recovery							
Metals M8 E022 Acid Extractable metals in Soils & E026 Mercury							
Arsenic	%	91			70-130	Pass	
Cadmium	%	105			70-130	Pass	
Chromium	%	97			70-130	Pass	
Copper	%	90			70-130	Pass	
Lead	%	111			70-130	Pass	
Mercury	%	79			70-130	Pass	
Nickel	%	88			70-130	Pass	
Zinc	%	116			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S12-My08314	CP	%	97			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C10-C14	S12-My08214	NCP	%	120			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S12-My08314	CP	%	100			70-130	Pass	
Toluene	S12-My08314	CP	%	98			70-130	Pass	
Ethylbenzene	S12-My08314	CP	%	100			70-130	Pass	
Total m+p-Xylenes	S12-My08314	CP	%	99			70-130	Pass	
o-Xylene	S12-My08314	CP	%	98			70-130	Pass	
Xylenes(ortho.meta and para)	S12-My08314	CP	%	99			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1					
Naphthalene	S12-My08314	CP	%	72			70-130	Pass	
TRH C6-C10	S12-My08314	CP	%	91			70-130	Pass	
TRH >C10-C16	S12-My08214	NCP	%	114			70-130	Pass	
Spike - % Recovery									
Speciated Phenols				Result 1					
2.4-Dichlorophenol	S12-My08185	NCP	%	105			70-130	Pass	
2.4-Dimethylphenol	S12-My08185	NCP	%	110			70-130	Pass	
2.4.5-Trichlorophenol	S12-My08185	NCP	%	111			70-130	Pass	
2.4.6-Trichlorophenol	S12-My08185	NCP	%	97			70-130	Pass	
Phenol	S12-My08185	NCP	%	102			70-130	Pass	
2-Methylphenol (o-Cresol)	S12-My08185	NCP	%	104			70-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S12-My08185	NCP	%	115			70-130	Pass	
2-Chlorophenol	S12-My08185	NCP	%	106			70-130	Pass	
2-Nitrophenol	S12-My08185	NCP	%	83			70-130	Pass	
4-Chloro-3-methylphenol	S12-My08185	NCP	%	100			70-130	Pass	
Pentachlorophenol	S12-My08185	NCP	%	77			70-130	Pass	
Spike - % Recovery									
Polyaromatic Hydrocarbons (PAH)				Result 1					
Acenaphthene	S11-De08691	NCP	%	109			70-130	Pass	
Acenaphthylene	S11-De08691	NCP	%	106			70-130	Pass	
Anthracene	S11-De08691	NCP	%	109			70-130	Pass	
Benz(a)anthracene	S11-De08691	NCP	%	107			70-130	Pass	
Benzo(a)pyrene	S11-De08691	NCP	%	110			70-130	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S11-De08691	NCP	%	109			70-130	Pass	
Benzo(g.h.i)perylene	S11-De08691	NCP	%	103			70-130	Pass	
Chrysene	S11-De08691	NCP	%	103			70-130	Pass	
Dibenz(a.h)anthracene	S11-De08691	NCP	%	108			70-130	Pass	
Fluoranthene	S11-De08691	NCP	%	114			70-130	Pass	
Fluorene	S11-De08691	NCP	%	108			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S11-De08691	NCP	%	107			70-130	Pass	
Naphthalene	S11-De08691	NCP	%	107			70-130	Pass	
Phenanthrene	S11-De08691	NCP	%	109			70-130	Pass	
Pyrene	S11-De08691	NCP	%	116			70-130	Pass	
Spike - % Recovery									
Metals M8				Result 1					
Arsenic	S12-My07128	NCP	%	87			70-130	Pass	
Cadmium	S12-My07128	NCP	%	112			70-130	Pass	
Chromium	S12-My07128	NCP	%	89			70-130	Pass	
Copper	S12-My07128	NCP	%	83			70-130	Pass	
Lead	S12-My07128	NCP	%	96			70-130	Pass	
Mercury	S12-My10390	NCP	%	72			70-130	Pass	
Nickel	S12-My07128	NCP	%	89			70-130	Pass	
Zinc	S12-My07128	NCP	%	130			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides (OC)				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4.4'-DDD	S12-My07838	NCP	%	121			70-130	Pass	
4.4'-DDE	S12-My07838	NCP	%	96			70-130	Pass	
4.4'-DDT	S12-My07838	NCP	%	76			70-130	Pass	
a-BHC	S12-My07838	NCP	%	109			70-130	Pass	
a-Chlordane	S12-My07838	NCP	%	96			70-130	Pass	
Aldrin	S12-My07838	NCP	%	104			70-130	Pass	
b-BHC	S12-My07838	NCP	%	96			70-130	Pass	
d-BHC	S12-My07838	NCP	%	108			70-130	Pass	
Dieldrin	S12-My07838	NCP	%	105			70-130	Pass	
Endosulfan I	S12-My07838	NCP	%	87			70-130	Pass	
Endosulfan II	S12-My07838	NCP	%	99			70-130	Pass	
Endosulfan sulphate	S12-My07838	NCP	%	75			70-130	Pass	
Endrin	S12-My07838	NCP	%	127			70-130	Pass	
Endrin aldehyde	S12-My07838	NCP	%	78			70-130	Pass	
Endrin ketone	S12-My07838	NCP	%	76			70-130	Pass	
g-BHC (Lindane)	S12-My07838	NCP	%	105			70-130	Pass	
g-Chlordane	S12-My07838	NCP	%	91			70-130	Pass	
Heptachlor	S12-My07838	NCP	%	103			70-130	Pass	
Heptachlor epoxide	S12-My07838	NCP	%	103			70-130	Pass	
Hexachlorobenzene	S12-My07838	NCP	%	124			70-130	Pass	
Methoxychlor	S12-My07838	NCP	%	103			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides (OP)				Result 1					
Chlorpyrifos	S12-My07838	NCP	%	95			70-130	Pass	
Coumaphos	S12-My07838	NCP	%	97			70-130	Pass	
Diazinon	S12-My07838	NCP	%	96			70-130	Pass	
Dichlorvos	S12-My07838	NCP	%	105			70-130	Pass	
Dimethoate	S12-My07838	NCP	%	89			70-130	Pass	
Disulfoton	S12-My07838	NCP	%	94			70-130	Pass	
Ethoprop	S12-My07838	NCP	%	97			70-130	Pass	
Fenitrothion	S12-My07838	NCP	%	95			70-130	Pass	
Fensulfothion	S12-My07838	NCP	%	107			70-130	Pass	
Fenthion	S12-My07838	NCP	%	91			70-130	Pass	
Methyl azinphos	S12-My07838	NCP	%	95			70-130	Pass	
Malathion	S12-My07838	NCP	%	97			70-130	Pass	
Methyl parathion	S12-My07838	NCP	%	100			70-130	Pass	
Mevinphos	S12-My07838	NCP	%	96			70-130	Pass	
Monocrotophos	S12-My07838	NCP	%	87			70-130	Pass	
Parathion	S12-My07838	NCP	%	97			70-130	Pass	
Phorate	S12-My07838	NCP	%	98			70-130	Pass	
Profenofos	S12-My07838	NCP	%	98			70-130	Pass	
Prothiofos	S12-My07838	NCP	%	98			70-130	Pass	
Ronnel	S12-My07838	NCP	%	95			70-130	Pass	
Stirophos	S12-My07838	NCP	%	95			70-130	Pass	
Trichloronate	S12-My07838	NCP	%	96			70-130	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S12-My08314	CP	mg/kg	< 10	< 10	<1	30%	Pass	
TRH C10-C14	S12-My08214	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C15-C28	S12-My08214	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH C29-C36	S12-My08214	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S12-My08314	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Toluene	S12-My08314	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	S12-My08314	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Total m+p-Xylenes	S12-My08314	CP	mg/kg	< 1	< 1	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
o-Xylene	S12-My08314	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes(ortho.meta and para)	S12-My08314	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	
Total BTEX	S12-My08314	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1	Result 2	RPD			
Naphthalene	S12-My08314	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S12-My08314	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S12-My08314	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S12-My08214	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S12-My08214	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S12-My08185	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Speciated Phenols				Result 1	Result 2	RPD			
2.4-Dichlorophenol	S12-My08185	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dimethylphenol	S12-My08185	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S12-My08185	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.6-Trichlorophenol	S12-My08185	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenol	S12-My08185	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S12-My08185	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S12-My08185	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Chlorophenol	S12-My08185	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitrophenol	S12-My08185	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S12-My08185	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorophenol	S12-My08185	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Polyaromatic Hydrocarbons (PAH)				Result 1	Result 2	RPD			
Acenaphthene	S11-De08691	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S11-De08691	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S11-De08691	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S11-De08691	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S11-De08691	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S11-De08691	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Benzo(g.h.i)perylene	S11-De08691	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S11-De08691	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S11-De08691	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S11-De08691	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S11-De08691	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S11-De08691	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S11-De08691	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S11-De08691	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S11-De08691	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Metals M8				Result 1	Result 2	RPD			
Arsenic	S12-My08613	NCP	mg/kg	9.8	5.9	50	30%	Fail	Q15
Cadmium	S12-My08613	NCP	mg/kg	0.30	0.30	12	30%	Pass	
Chromium	S12-My08613	NCP	mg/kg	2.0	2.2	9.0	30%	Pass	
Copper	S12-My08613	NCP	mg/kg	42	34	21	30%	Pass	
Lead	S12-My08613	NCP	mg/kg	7.7	12	45	30%	Fail	Q15
Mercury	S12-My10389	NCP	mg/kg	< 0.05	< 0.05	13	30%	Pass	
Nickel	S12-My08157	NCP	mg/kg	< 1	< 1	16	30%	Pass	
Zinc	S12-My08613	NCP	mg/kg	140	110	23	30%	Pass	
Duplicate									
Organochlorine Pesticides (OC)				Result 1	Result 2	RPD			
4.4'-DDD	S12-My06343	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S12-My06343	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S12-My06343	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
a-BHC	S12-My06343	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-Chlordane	S12-My06343	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S12-My06343	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S12-My06343	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S12-My06343	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S12-My06343	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S12-My06343	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S12-My06343	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S12-My06343	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S12-My06343	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S12-My06343	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S12-My06343	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S12-My06343	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-Chlordane	S12-My06343	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S12-My06343	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S12-My06343	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S12-My06343	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S12-My06343	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides (OP)				Result 1	Result 2	RPD			
Chlorpyrifos	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Coumaphos	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diazinon	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorvos	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethoate	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Disulfoton	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethoprop	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fenitrothion	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fensulfothion	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fenthion	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methyl azinphos	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Malathion	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methyl parathion	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Mevinphos	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Monocrotophos	S12-My07838	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Parathion	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phorate	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Profenofos	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Prothiofos	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ronnel	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Stirophos	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloronate	S12-My07838	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q13	Some elements for this test have failed in the QC sample. However when at least 80% have passed the QC can be released. All other QC has passed in this test batch
Q15	The RPD reported passes mgt-LabMark's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Dr. Bob Symons
Laboratory Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

CHAIN OF CUSTODY DOCUMENTATION

135329

ALS Laboratory Group

CLIENT: AECOM
ADDRESS / OFFICE: Warabrook
PROJECT MANAGER (PM): LUCY STUART
PROJECT ID: ~~Huntlee~~ 60266102
SITE: Huntlee
P.O. NO.:
RESULTS REQUIRED (Date):
QUOTE NO.:

SAMPLER: JD
MOBILE:
PHONE 0413614458
EMAIL REPORT TO: lucy.stuart@aecom.com
EMAIL INVOICE TO: (if different to report)

ANALYSIS REQUIRED including SUITES (note - suite codes must be listed to attract suite prices)

FOR LABORATORY USE ONLY
COOLER SEAL (Circle appropriate)
Intact Yes No N/A
SAMPLE TEMPERATURE
CHILLED Yes No

COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:

Notes: e.g. Highly contaminated samples
e.g. "High PAHs expected".
~~Extra~~ volume for QC or trace LORs etc.

Subcon / Forward Lab / Split WO
Lab / Analysis: Newcastle / Asbestos
Organised By / Date: Frank
Relinquished By / Date:
Connote / Courier:
WO No.: ES12 10707
Attach By PC / Internal Sheet:

ALS ID	SAMPLE ID	MATRIX	DATE	Time	CONTAINER INFORMATION Type / Code	Total bottles	S27 - TPH, BTEX, PAH, Phenols, Metals	S12 - OC+OP	Asbestos
1	Grab 01	S	3/5/12					X	
2	Grab 02							X	
3	Grab 03							X	
4	Grab 04						X	X	X
5	Grab 05						X	X	
6	Grab 06						X	X	
7	Grab 07						X	X	
8	Grab 08								
9	AS01								X
10	AS02								X

Environmental Division
Sydney
Work Order
ES1210707

Telephone : +61-2-8784 8555

RELINQUISHED BY:		RECEIVED BY		METHOD OF SHIPMENT
Name: Lucy Stuart	Date: 2.50	Name: Frank	Date: 3/5/12	Con' Note No:
Of: AECOM	Time: 5/5/12	Of: ALS	Time: 14:58	
Name: Co	Date: 3-5-12	Name: Frank	Date: 3-5-12	Transport Co:
Of: ALS	Time: 17:00	Of: ALS	Time: 1900	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserveed Plastic; AG = Amber Glass Unpreserved; V = VOA Vial HCl Preserved; VS = VOA Vial Sulphuric Preserved; SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

ALS Laboratory Group

WHITE - LAB COPY
YELLOW - CUSTOMER COPY
PINK - BOOK COPY

COC Page ___ of ___

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **ES1210707**	Page	: 1 of 11
Client	: **AECOM Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: MS LUCY STUART	Contact	: Client Services
Address	: 17 WARABROOK BOULEVARDE PO BOX 73, HUNTER REGION MC NSW 2310 WARABROOK NSW, AUSTRALIA 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: lucy.stuart@aecom.com	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 4911 4900	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 4911 4999	Facsimile	: +61-2-8784 8500
Project	: 60266102	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: 135329	Date Samples Received	: 03-MAY-2012
Sampler	: JD	Issue Date	: 11-MAY-2012
Site	: HUNTLEE		
		No. of samples received	: 10
Quote number	: EN/004/11	No. of samples analysed	: 10

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Evie.Sidarta	Inorganic Chemist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Organics
Peter Rennie	Team Leader - Asbestos	Newcastle

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **EA200 Legend for Asbestos Type:**
- **EA200 'Am' Amosite (brown asbestos)**
- **EA200 'Ch' Chrysotile (white asbestos)**
- **EA200 'Cr' Crocidolite (blue asbestos)**
- **EA200 't' Trace levels**
- **EA200 'UMF' Unknown mineral fibres**
- **EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.**
- **EA200: Confirmation by alternative techniques is recommended for samples where unknown mineral fibres are detected. Negative results for vinyl tiles should be confirmed by an independent analytical technique.**
- **EP068: Particular samples GRAB 06 required dilution due to sample matrix interferences. LOR values have been adjusted accordingly.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: GRAB 01	GRAB 02	GRAB 03	GRAB 04	GRAB 05
				Client sampling date / time: 03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00
				ES1210707-001	ES1210707-002	ES1210707-003	ES1210707-004	ES1210707-005
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**17.7**	**5.8**	**7.6**	**5.5**	**14.3**
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples								
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	----	**No**	----
Asbestos Type	1332-21-4	0.1	--	----	----	----	**-**	----
Sample weight (dry)	----	0.01	g	----	----	----	**57.8**	----
APPROVED IDENTIFIER:	----	-	--	----	----	----	**P.RENNIE**	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	----	----	<5	<5
Cadmium	7440-43-9	1	mg/kg	----	----	----	<1	<1
Chromium	7440-47-3	2	mg/kg	----	----	----	**9**	**18**
Copper	7440-50-8	5	mg/kg	----	----	----	<5	<5
Lead	7439-92-1	5	mg/kg	----	----	----	**7**	**7**
Nickel	7440-02-0	2	mg/kg	----	----	----	**3**	**5**
Zinc	7440-66-6	5	mg/kg	----	----	----	**154**	**13**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	----	----	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: GRAB 01	GRAB 02	GRAB 03	GRAB 04	GRAB 05
				Client sampling date / time: 03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00
				ES1210707-001	ES1210707-002	ES1210707-003	ES1210707-004	ES1210707-005
EP068A: Organochlorine Pesticides (OC) - Continued								
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
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								

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: GRAB 01	GRAB 02	GRAB 03	GRAB 04	GRAB 05
				Client sampling date / time: 03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00
				ES1210707-001	ES1210707-002	ES1210707-003	ES1210707-004	ES1210707-005
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
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
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg	----	----	----	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	----	<10	<10
C10 - C14 Fraction	----	50	mg/kg	----	----	----	<50	<50
C15 - C28 Fraction	----	100	mg/kg	----	----	----	<100	<100
C29 - C36 Fraction	----	100	mg/kg	----	----	----	<100	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	----	----	----	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	----	----	----	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	----	10	mg/kg	----	----	----	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	----	----	----	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	----	----	----	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	----	----	----	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg	----	----	----	<50	<50
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	----	----	----	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	----	----	----	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	----	----	----	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	----	----	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	----	----	----	<0.5	<0.5

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: GRAB 01	GRAB 02	GRAB 03	GRAB 04	GRAB 05
				Client sampling date / time: 03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00
				ES1210707-001	ES1210707-002	ES1210707-003	ES1210707-004	ES1210707-005
EP080: BTEXN								
^ **Sum of BTEX**	----	0.2	mg/kg	----	----	----	<0.2	<0.2
^ **Total Xylenes**	1330-20-7	0.5	mg/kg	----	----	----	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	----	----	----	<1	<1
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	**78.4**	**76.0**	**79.5**	**78.9**	**76.5**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	**97.8**	**79.7**	**94.7**	**98.8**	**87.6**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	----	----	----	**109**	**85.0**
2-Chlorophenol-D4	93951-73-6	0.1	%	----	----	----	**111**	**86.8**
2.4.6-Tribromophenol	118-79-6	0.1	%	----	----	----	**99.5**	**67.5**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	----	----	----	**112**	**83.7**
Anthracene-d10	1719-06-8	0.1	%	----	----	----	**110**	**84.0**
4-Terphenyl-d14	1718-51-0	0.1	%	----	----	----	**102**	**81.1**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	----	----	----	**95.2**	**93.2**
Toluene-D8	2037-26-5	0.1	%	----	----	----	**91.3**	**96.7**
4-Bromofluorobenzene	460-00-4	0.1	%	----	----	----	**87.0**	**86.2**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: GRAB 06	GRAB 07	GRAB 08	AS01	AS02
				Client sampling date / time: 03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00
				ES1210707-006	ES1210707-007	ES1210707-008	ES1210707-009	ES1210707-010
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**12.5**	**17.1**	**16.8**	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples								
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	----	**No**	**Yes**
Asbestos Type	1332-21-4	0.1	--	----	----	----	**-**	**Ch**
Sample weight (dry)	----	0.01	g	----	----	----	**3.79**	**15.3**
APPROVED IDENTIFIER:	----	-	--	----	----	----	**P.RENNIE**	**P.RENNIE**
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	----	----
Chromium	7440-47-3	2	mg/kg	**5**	**6**	**17**	----	----
Copper	7440-50-8	5	mg/kg	<5	<5	<5	----	----
Lead	7439-92-1	5	mg/kg	<5	**7**	**11**	----	----
Nickel	7440-02-0	2	mg/kg	**2**	**3**	**6**	----	----
Zinc	7440-66-6	5	mg/kg	**166**	**16**	**121**	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: GRAB 06	GRAB 07	GRAB 08	AS01	AS02
				Client sampling date / time: 03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00
				ES1210707-006	ES1210707-007	ES1210707-008	ES1210707-009	ES1210707-010
EP068A: Organochlorine Pesticides (OC) - Continued								
Endrin ketone	53494-70-5	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.25	<0.05	<0.05	----	----
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								

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: GRAB 06	GRAB 07	GRAB 08	AS01	AS02
				Client sampling date / time: 03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00
				ES1210707-006	ES1210707-007	ES1210707-008	ES1210707-009	ES1210707-010
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
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	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	----	----
C10 - C14 Fraction	----	50	mg/kg	**60**	<50	<50	----	----
C15 - C28 Fraction	----	100	mg/kg	**17600**	<100	<100	----	----
C29 - C36 Fraction	----	100	mg/kg	**9580**	<100	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	**27200**	<50	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10	----	----
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg	<10	<10	<10	----	----
>C10 - C16 Fraction	----	50	mg/kg	**130**	<50	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg	**25000**	<100	<100	----	----
>C34 - C40 Fraction	----	100	mg/kg	**5430**	<100	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	**30600**	<50	<50	----	----
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: GRAB 06	GRAB 07	GRAB 08	AS01	AS02
				Client sampling date / time: 03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00	03-MAY-2012 15:00
				ES1210707-006	ES1210707-007	ES1210707-008	ES1210707-009	ES1210707-010
EP080: BTEXN								
^ **Sum of BTEX**	----	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
^ **Total Xylenes**	1330-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	**78.2**	**109**	**103**	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	**86.4**	**53.2**	**77.3**	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**82.4**	**102**	**81.2**	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	**83.6**	**104**	**83.2**	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%	**81.1**	**97.8**	**79.2**	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**84.4**	**104**	**85.0**	----	----
Anthracene-d10	1719-06-8	0.1	%	**92.4**	**115**	**95.2**	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	**83.6**	**95.4**	**80.3**	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**79.8**	**84.8**	**93.7**	----	----
Toluene-D8	2037-26-5	0.1	%	**101**	**96.6**	**112**	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	**78.2**	**78.3**	**90.7**	----	----

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Client sample ID - Client sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples		
EA200: Description	GRAB 04 - 03-MAY-2012 15:00	Mid brown clay soil with some small grey rocks plus some quartz grains and a trace of vegetation
EA200: Description	AS01 - 03-MAY-2012 15:00	Several small pieces of organic fibre board approx 25 x 16 x 5mm
EA200: Description	AS02 - 03-MAY-2012 15:00	One piece of bonded asbestos cemment sheeting approx 65 x 30 x 5mm

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	19.5	167.0
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	22.7	163.5
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	56.3	133.3
2-Chlorophenol-D4	93951-73-6	53.8	133.8
2.4.6-Tribromophenol	118-79-6	23.1	134.9
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	58.9	132.7
Anthracene-d10	1719-06-8	55.0	137.6
4-Terphenyl-d14	1718-51-0	54.0	147.8
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	72.8	133.2
Toluene-D8	2037-26-5	73.9	132.1
4-Bromofluorobenzene	460-00-4	71.6	130.0

Environmental Division

QUALITY CONTROL REPORT

Work Order	: **ES1210707**	Page	: 1 of 15
Client	: **AECOM Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: MS LUCY STUART	Contact	: Client Services
Address	: 17 WARABROOK BOULEVARDE PO BOX 73, HUNTER REGION MC NSW 2310 WARABROOK NSW, AUSTRALIA 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: lucy.stuart@aecom.com	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 4911 4900	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 4911 4999	Facsimile	: +61-2-8784 8500
Project	: 60266102	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: HUNTLEE		
C-O-C number	: 135329	Date Samples Received	: 03-MAY-2012
Sampler	: JD	Issue Date	: 11-MAY-2012
Order number	: ----		
		No. of samples received	: 10
Quote number	: EN/004/11	No. of samples analysed	: 10

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Evie.Sidarta	Inorganic Chemist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Organics
Peter Rennie	Team Leader - Asbestos	Newcastle

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates 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%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA055: Moisture Content (QC Lot: 2291717)									
ES1210707-003	GRAB 03	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	7.6	5.9	25.4	No Limit
ES1210722-006	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	11.9	11.8	1.5	0% - 50%
EG005T: Total Metals by ICP-AES (QC Lot: 2296242)									
ES1210548-002	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	6	6	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	5	5	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	14	14	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	19	19	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	10	10	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	17	18	0.0	No Limit
ES1210707-006	GRAB 06	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	5	5	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	2	2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	166	166	0.0	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2296243)									
ES1210548-002	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1210707-006	GRAB 06	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2291606)									
ES1210722-001	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2291606) - continued									
ES1210722-001	Anonymous	EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES1210722-011	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2293588)									
ES1210736-007	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2293588) - continued									
ES1210736-007	Anonymous	EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 2291606)									
ES1210722-001	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES1210722-011	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 2291606) - continued									
ES1210722-011	Anonymous	EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 2293588)									
ES1210736-007	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 2291376)									
ES1210722-001	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075(SIM)A: Phenolic Compounds (QC Lot: 2291376) - continued									
ES1210722-001	Anonymous	EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2.0	mg/kg	<2.0	<2.0	0.0	No Limit
ES1210722-011	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2.0	mg/kg	<2.0	<2.0	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2291376)									
ES1210722-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES1210722-011	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2291376) - continued									
ES1210722-011	Anonymous	EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2290891)									
ES1210636-037	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES1210707-005	GRAB 05	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2291375)									
ES1210722-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES1210722-011	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2290891)									
ES1210636-037	Anonymous	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES1210707-005	GRAB 05	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2291375)									
ES1210722-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES1210722-011	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080: BTEXN (QC Lot: 2290891)									
ES1210636-037	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES1210707-005	GRAB 05	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP080: BTEXN (QC Lot: 2290891) - continued									
ES1210707-005	GRAB 05	EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

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

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 parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2296242)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	99.6	70	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	96.0	83.3	111
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	98.7	89.2	117
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	103	90.1	114
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	96.0	85.2	111
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.23 mg/kg	102	88.3	116
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	105	88.9	112
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2296243)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	92.8	67	118
EP068A: Organochlorine Pesticides (OC) (QCLot: 2291606)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	91.3	60.8	116
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	97.7	59.4	115
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	86.8	59.8	117
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	89.6	59.8	118
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	78.5	65.8	114
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.7	65.6	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	88.8	67	113
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	91.3	65.6	113
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	91.5	60.7	113
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	99.4	65.8	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	93.3	57.3	120
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	91.2	67.4	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	97.1	67.5	114
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.7	63	121
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	103	66.1	117
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	104	65.3	116
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	75.3	57.3	115
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	91.1	63.6	119
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	99.2	58.4	127
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	93.3	63.6	117
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	93.4	50.4	132
EP068A: Organochlorine Pesticides (OC) (QCLot: 2293588)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	84.8	60.8	116
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	84.9	59.4	115

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 2293588) - continued								
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	92.0	59.8	117
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	86.6	59.8	118
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	91.8	65.8	114
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	87.5	65.6	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	84.2	67	113
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	87.2	65.6	113
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	90.8	60.7	113
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	99.1	65.8	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	90.4	57.3	120
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	92.7	67.4	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.0	67.5	114
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	111	63	121
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	99.8	66.1	117
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	102	65.3	116
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	79.6	57.3	115
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	76.5	63.6	119
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	87.6	58.4	127
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	79.0	63.6	117
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	87.7	50.4	132
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2291606)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	108	25.5	124
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.1	10.1	159
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	97.1	2.88	149
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	105	48.6	126
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	104	64.9	111
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	97.8	65.1	111
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	75.9	61.4	113
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	112	60.4	127
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.9	64.7	110
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	95.8	64.2	111
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	96.5	60	116
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	95.6	64.8	111
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	95.6	61.4	123
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	89.7	64.3	114
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	90.6	45.5	128
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	91.0	65.4	111
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	88.5	62	116
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	103	59.5	119
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	63.2	29.8	137

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2293588)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	79.9	25.5	124
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	98.0	10.1	159
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	102	2.88	149
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	101	48.6	126
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	86.4	64.9	111
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	91.6	65.1	111
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	90.2	61.4	113
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	89.4	60.4	127
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	96.7	64.7	110
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	93.6	64.2	111
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	89.4	60	116
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	94.8	64.8	111
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	93.5	61.4	123
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	97.7	64.3	114
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	102	45.5	128
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	102	65.4	111
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	106	62	116
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	90.8	59.5	119
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	70.8	29.8	137
EP075(SIM)A: Phenolic Compounds (QCLot: 2291376)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	4 mg/kg	103	73.9	115
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	4 mg/kg	102	80.2	115
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	4 mg/kg	110	76.8	114
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	8 mg/kg	102	72	119
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	4 mg/kg	92.2	60.3	117
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	4 mg/kg	106	74.5	119
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	4 mg/kg	98.2	71.6	113
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	4 mg/kg	107	74.8	115
EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	4 mg/kg	95.2	76.4	114
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	4 mg/kg	90.7	62.2	115
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	4 mg/kg	84.8	68.9	112
EP075(SIM): Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	8 mg/kg	25.8	1.23	91.6
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2291376)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	4 mg/kg	106	81.9	113
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	4 mg/kg	106	79.6	113
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	4 mg/kg	102	81.5	112
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	4 mg/kg	105	79.9	112
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	4 mg/kg	102	79.4	114
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	4 mg/kg	103	81.1	112

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2291376) - continued								
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	4 mg/kg	101	78.8	113
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	4 mg/kg	106	78.9	113
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	4 mg/kg	104	77.2	112
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	4 mg/kg	102	79.8	114
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	4 mg/kg	96.5	71.8	118
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	4 mg/kg	104	74.2	117
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	4 mg/kg	102	76.4	113
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	4 mg/kg	105	71	113
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	4 mg/kg	107	71.7	113
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	4 mg/kg	100	72.4	114
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2290891)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	87.1	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2291375)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	90.6	59	131
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	109	74	138
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	88.5	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2290891)								
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	31 mg/kg	88.1	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2291375)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	250 mg/kg	94.0	59	131
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	102	74	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
		50	mg/kg	----	150 mg/kg	87.2	63	131
EP080: BTEXN (QCLot: 2290891)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	82.0	62	120
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	85.8	62	128
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	86.0	58	118
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	85.3	60	120
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	84.2	60	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	78.6	62	138

Matrix Spike (MS) Report

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 parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2296242)							
ES1210548-002	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	100	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	95.8	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	97.4	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	102	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	97.7	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	97.5	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	97.2	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2296243)							
ES1210548-002	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	91.4	70	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 2291606)							
ES1210722-001	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	92.6	70	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	80.9	70	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	82.0	70	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	81.3	70	130
		EP068: Endrin	72-20-8	2 mg/kg	86.7	70	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	79.6	70	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 2293588)							
ES1210736-007	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	82.9	70	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	79.4	70	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	76.3	70	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	80.2	70	130
		EP068: Endrin	72-20-8	2 mg/kg	107	70	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	84.6	70	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2291606)							
ES1210722-001	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	106	70	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	93.8	70	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	89.4	70	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	78.5	70	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	81.0	70	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2293588)							
ES1210736-007	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	84.3	70	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	80.3	70	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	81.4	70	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	82.4	70	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	94.3	70	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP075(SIM)A: Phenolic Compounds (QCLot: 2291376)							
ES1210722-001	Anonymous	EP075(SIM): Phenol	108-95-2	10 mg/kg	105	70	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	107	70	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	86.7	60	130
		EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	10 mg/kg	95.7	70	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	70.6	20	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2291376)							
ES1210722-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	108	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	101	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2290891)							
ES1210636-037	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	89.4	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2291375)							
ES1210722-001	Anonymous	EP071: C10 - C14 Fraction	----	640 mg/kg	93.0	73	137
		EP071: C15 - C28 Fraction	----	3140 mg/kg	83.6	53	131
		EP071: C29 - C36 Fraction	----	2860 mg/kg	57.1	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2290891)							
ES1210636-037	Anonymous	EP080: C6 - C10 Fraction	----	37.5 mg/kg	89.1	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2291375)							
ES1210722-001	Anonymous	EP071: >C10 - C16 Fraction	----	850 mg/kg	105	73	137
		EP071: >C16 - C34 Fraction	----	4800 mg/kg	70.2	53	131
		EP071: >C34 - C40 Fraction	----	2400 mg/kg	56.9	52	132
EP080: BTEXN (QCLot: 2290891)							
ES1210636-037	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	74.3	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	85.2	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	83.0	70	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	81.0	70	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	81.6	70	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	81.2	70	130

Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **ES1210707**	Page	: 1 of 6
Client	: AECOM Australia Pty Ltd	Laboratory	: Environmental Division Sydney
Contact	: MS LUCY STUART	Contact	: Client Services
Address	: 17 WARABROOK BOULEVARDE PO BOX 73, HUNTER REGION MC NSW 2310 WARABROOK NSW, AUSTRALIA 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: lucy.stuart@aecom.com	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 4911 4900	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 4911 4999	Facsimile	: +61-2-8784 8500
Project	: 60266102	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: HUNTLEE		
C-O-C number	: 135329	Date Samples Received	: 03-MAY-2012
Sampler	: JD	Issue Date	: 11-MAY-2012
Order number	: ----		
		No. of samples received	: 10
Quote number	: EN/004/11	No. of samples analysed	: 10

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers

Analysis Holding Time Compliance

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 precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content							
Soil Glass Jar - Unpreserved (EA055-103)							
GRAB 01, GRAB 02, GRAB 03, GRAB 04, GRAB 05, GRAB 06, GRAB 07, GRAB 08	**03-MAY-2012**	**----**	----	----	**07-MAY-2012**	17-MAY-2012	✓
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples							
Snap Lock Bag (EA200)							
GRAB 04, AS01, AS02	**03-MAY-2012**	**---**	30-OCT-2012	----	**10-MAY-2012**	06-NOV-2012	✓
EG005T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
GRAB 04, GRAB 05, GRAB 06, GRAB 07, GRAB 08	**03-MAY-2012**	**10-MAY-2012**	30-OCT-2012	✓	**10-MAY-2012**	30-OCT-2012	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
GRAB 04, GRAB 05, GRAB 06, GRAB 07, GRAB 08	**03-MAY-2012**	**10-MAY-2012**	31-MAY-2012	✓	**10-MAY-2012**	31-MAY-2012	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
GRAB 01, GRAB 02, GRAB 03, GRAB 04, GRAB 05, GRAB 06	**03-MAY-2012**	**08-MAY-2012**	17-MAY-2012	✓	**10-MAY-2012**	17-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP068)							
GRAB 07, GRAB 08	**03-MAY-2012**	**09-MAY-2012**	17-MAY-2012	✓	**10-MAY-2012**	18-JUN-2012	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068)							
GRAB 01, GRAB 02, GRAB 03, GRAB 04, GRAB 05, GRAB 06	**03-MAY-2012**	**08-MAY-2012**	17-MAY-2012	✓	**10-MAY-2012**	17-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP068)							
GRAB 07, GRAB 08	**03-MAY-2012**	**09-MAY-2012**	17-MAY-2012	✓	**10-MAY-2012**	18-JUN-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP071) GRAB 04, GRAB 05, GRAB 06, GRAB 07, GRAB 08	**03-MAY-2012**	**08-MAY-2012**	17-MAY-2012	✓	**09-MAY-2012**	17-JUN-2012	✓
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075(SIM)) GRAB 04, GRAB 05, GRAB 06, GRAB 07, GRAB 08	**03-MAY-2012**	**08-MAY-2012**	17-MAY-2012	✓	**09-MAY-2012**	17-JUN-2012	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) GRAB 04, GRAB 05, GRAB 06, GRAB 07, GRAB 08	**03-MAY-2012**	**08-MAY-2012**	17-MAY-2012	✓	**09-MAY-2012**	17-JUN-2012	✓
EP080: BTEX							
Soil Glass Jar - Unpreserved (EP080) GRAB 04, GRAB 05, GRAB 06, GRAB 07, GRAB 08	**03-MAY-2012**	**07-MAY-2012**	17-MAY-2012	✓	**09-MAY-2012**	17-MAY-2012	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) GRAB 04, GRAB 05, GRAB 06, GRAB 07, GRAB 08	**03-MAY-2012**	**07-MAY-2012**	17-MAY-2012	✓	**09-MAY-2012**	17-MAY-2012	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft							
Soil Glass Jar - Unpreserved (EP080) GRAB 04, GRAB 05, GRAB 06, GRAB 07, GRAB 08	**03-MAY-2012**	**07-MAY-2012**	17-MAY-2012	✓	**09-MAY-2012**	17-MAY-2012	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055-103	2	20	**10.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	2	19	**10.5**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	3	30	**10.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	20	**10.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	2	19	**10.5**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	2	19	**10.5**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	18	**11.1**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	19	**5.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	2	30	**6.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	**5.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	19	**5.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	19	**5.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	18	**5.6**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	19	**5.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	2	30	**6.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	**5.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	19	**5.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	19	**5.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	18	**5.6**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	19	**5.3**	**5.0**	✓	ALS QCS3 requirement
Pesticides by GCMS	EP068	2	30	**6.7**	**5.0**	✓	ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	**5.0**	**5.0**	✓	ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	19	**5.3**	**5.0**	✓	ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	19	**5.3**	**5.0**	✓	ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	18	**5.6**	**5.0**	✓	ALS QCS3 requirement

Brief Method Summaries

The analytical procedures used by the Environmental Division 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 in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055-103	SOIL	A gravimetric procedure based on weight loss over a 12 hour drying period at 103-105 degrees C. This method is compliant with NEPM (2010 Draft) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Asbestos Identification in bulk solids	EA200	SOIL	AS 4964 - 2004 Method for the qualitative identification of asbestos in bulk samples
Total Metals by ICP-AES	EG005T	SOIL	(APHA 21st ed., 3120; USEPA SW 846 - 6010) (ICPAES) Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (1999) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	AS 3550, APHA 21st ed., 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3)
Pesticides by GCMS	EP068	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (1999) Schedule B(3) (Method 504,505)
TPH - Semivolatile Fraction	EP071	SOIL	(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)
PAH/Phenols (SIM)	EP075(SIM)	SOIL	(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)
TPH Volatiles/BTEX	EP080	SOIL	(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)

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	USEPA 200.2 Mod. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (1999) Schedule B(3) (Method 202)
Methanolic Extraction of Soils for Purge and Trap	* ORG16	SOIL	(USEPA SW 846 - 5030A) 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids (Option A - Concentrating)	ORG17A	SOIL	In-house, Mechanical agitation (tumbler). 20g of sample, Na2SO4 and surrogate are extracted with 150mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Tumbler Extraction of Solids (Option B - Non-concentrating)	ORG17B	SOIL	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.

Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW 846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

- **For all matrices, no Method Blank value outliers occur.**
- **For all matrices, no Duplicate outliers occur.**
- **For all matrices, no Laboratory Control outliers occur.**
- **For all matrices, no Matrix Spike outliers occur.**

Regular Sample Surrogates

- **For all regular sample matrices, no surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

- **No Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

- **No Quality Control Sample Frequency Outliers exist.**

Wael Saleh

From: Hayley Worthington
Sent: Monday, 7 May 2012 9:52 AM
To: Wael Saleh; Samples Sydney; Fadi Soro; Hitesh Patel
Cc: Lucy.Stuart@aecom.com
Subject: FW: Your Reference : 60266102. COC/SRN/COC for ALSE Workorder : ES1210707
Attachments: ES1210707_COC.pdf; ES1210707_0_SRN.pdf

Importance: High

Morning,

Please see additional analysis request as per below.

Regards

How was your customer experience? Please send us your feedback

Hayley Worthington

CLIENT SERVICES OFFICER

ALS | Environmental

Address
5 Rosegum Road, Warabrook, NSW, 2304
PHONE +61 2 4968 9433

FAX +61 2 4968 0349

www.alsglobal.com

-----Original Message-----
From: Stuart, Lucy [mailto:Lucy.Stuart@aecom.com]
Sent: Sunday, 6 May 2012 7:08 PM
To: Hayley Worthington
Subject: FW: Your Reference : 60266102. COC/SRN/COC for ALSE Workorder : ES1210707

Hi Hayley,

Can you please schedule Grab 08 in work order ES1210707 for S-12 and S-27.

Thanks,

Lucy

Lucy Stuart
Senior Environmental Scientist
D +61 2 4911 4963 M +61 488 114 972
mailto:Lucy.Stuart@aecom.com

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17 Warabrook Boulevard, Warabrook, NSW 2304 P.O. Box PO Box 73 Hunter Region MC NSW 2310 T +61 2 4911 4900 F +61 2 4911 4999 http://www.aecom.com

Please consider the environment before printing this email.
.-. -.. -

-----Original Message-----
From: alse.sydney.aus@alsglobal.com [mailto:alse.sydney.aus@alsglobal.com]
Sent: Friday, 4 May 2012 4:01 PM
To: Stuart, Lucy
Subject: Your Reference : 60266102. COC/SRN/COC for ALSE Workorder : ES1210707

This e-mail has been automatically generated.
-- PLEASE DO NOT REPLY --

ALS acknowledges the risks associated with supplying electronic media reports based on client requirements. This type of format has the ability to embed viruses within the code and, as such, ALS has introduced a three tier layer of protection throughout their company resources. However, ALS cannot guarantee any attachment is virus free and will not be held liable for any disruption to business. It is highly recommended that all attachments received are scanned prior to opening.

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **ES1211388**	Page	: 1 of 35
Client	: **AECOM Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: MS LUCY STUART	Contact	: Client Services
Address	: 17 WARABROOK BOULEVARDE PO BOX 73, HUNTER REGION MC NSW 2310 WARABROOK NSW, AUSTRALIA 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: lucy.stuart@aecom.com	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 4911 4900	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 4911 4999	Facsimile	: +61-2-8784 8500
Project	: 60266102-HUNTLEE	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: 153296-153300, 154953-154954	Date Samples Received	: 09-MAY-2012
Sampler	: JD	Issue Date	: 17-MAY-2012
Site	: ----		
		No. of samples received	: 71
Quote number	: EN/004/11	No. of samples analysed	: 36

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Edwandy Fadjar	Organic Coordinator	Sydney Organics
Evie.Sidarta	Inorganic Chemist	Sydney Inorganics
Peter Rennie	Team Leader - Asbestos	Newcastle
Phalak Inthaksone	Laboratory Manager - Organics	Sydney Organics
Raymond Commodor	Instrument Chemist	Sydney Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **EA200 Legend for Asbestos Type:**
- **EA200 'Am' Amosite (brown asbestos)**
- **EA200 'Ch' Chrysotile (white asbestos)**
- **EA200 'Cr' Crocidolite (blue asbestos)**
- **EA200 't' Trace levels**
- **EA200 'UMF' Unknown mineral fibres**
- **EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.**
- **EA200: Confirmation by alternative techniques is recommended for samples where unknown mineral fibres are detected. Negative results for vinyl tiles should be confirmed by an independent analytical technique.**
- **EG-005T:LCS recovery for some elements falls outside ALS Dynamic Control Limit. However, they are within the acceptance criteria based on ALS DQO. No further action is required.**
- **EG020: LCS recoveries for some elements fall outside ALS Dynamic Control Limit. However, they are within the acceptance criteria based on ALS DQO. No further action is required.**
- **EP068; Particular samples BH03_0.02-0.12 required dilution due to sample matrix interferences. LOR values have been adjusted accordingly.**
- **EP080:The trip spike and its control have been analysed for volatile TPH and BTEX only. 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.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH01_0-0.1	BH01_5.5-5.7	BH02_0.4-0.5	BH02_3.5-3.6	BH03_0.02-0.12
				Client sampling date / time: 08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00
				ES1211388-001	ES1211388-002	ES1211388-003	ES1211388-004	ES1211388-005
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**9.1**	**7.4**	**15.0**	**9.1**	**10.6**
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	**7**	**6**	**8**	**5**
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**9**	**54**	**23**	**17**	**19**
Copper	7440-50-8	5	mg/kg	<5	**7**	<5	**11**	<5
Lead	7439-92-1	5	mg/kg	**8**	**10**	**12**	**12**	**14**
Nickel	7440-02-0	2	mg/kg	**4**	**14**	**9**	**33**	**7**
Zinc	7440-66-6	5	mg/kg	**23**	**44**	**42**	**87**	**67**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Endrin	72-20-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.25

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH01_0-0.1	BH01_5.5-5.7	BH02_0.4-0.5	BH02_3.5-3.6	BH03_0.02-0.12
				Client sampling date / time: 08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00
				ES1211388-001	ES1211388-002	ES1211388-003	ES1211388-004	ES1211388-005
EP068B: Organophosphorus Pesticides (OP) - Continued								
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	<0.2	----	<0.3
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Parathion	56-38-2	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Ethion	563-12-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	<0.05	----	<0.25
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<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	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	<1.0	<1.0	<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	<0.5	<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	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH01_0-0.1	BH01_5.5-5.7	BH02_0.4-0.5	BH02_3.5-3.6	BH03_0.02-0.12
				Client sampling date / time: 08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00
				ES1211388-001	ES1211388-002	ES1211388-003	ES1211388-004	ES1211388-005
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5	<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	<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	<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
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	**14400**
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	**13000**
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	<50	<50	<50	<50	**27400**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	----	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	**25200**
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	**5990**
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg	<50	<50	<50	<50	**31200**
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	**1.6**
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	**0.6**
EP080: BTEXN								
^ **Sum of BTEX**	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	**2.2**
^ **Total Xylenes**	1330-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	**2.2**
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP068S: Organochlorine Pesticide Surrogate								

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH01_0-0.1	BH01_5.5-5.7	BH02_0.4-0.5	BH02_3.5-3.6	BH03_0.02-0.12
				Client sampling date / time: 08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00
				ES1211388-001	ES1211388-002	ES1211388-003	ES1211388-004	ES1211388-005
EP068S: Organochlorine Pesticide Surrogate - Continued								
Dibromo-DDE	21655-73-2	0.1	%	**87.3**	----	**84.8**	----	**76.6**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	**112**	----	**84.1**	----	**114**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**108**	**90.0**	**108**	**104**	**104**
2-Chlorophenol-D4	93951-73-6	0.1	%	**107**	**86.7**	**109**	**100**	**99.9**
2.4.6-Tribromophenol	118-79-6	0.1	%	**112**	**103**	**114**	**104**	**117**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**112**	**89.7**	**113**	**112**	**110**
Anthracene-d10	1719-06-8	0.1	%	**106**	**119**	**106**	**104**	**105**
4-Terphenyl-d14	1718-51-0	0.1	%	**112**	**112**	**112**	**104**	**79.8**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**119**	**130**	**123**	**126**	**132**
Toluene-D8	2037-26-5	0.1	%	**101**	**109**	**105**	**108**	**109**
4-Bromofluorobenzene	460-00-4	0.1	%	**103**	**95.8**	**97.2**	**102**	**106**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH03_0.8-0.9	BH03_4.1-4.3	BH04_0.0-0.1	BH04_2.9-3.0	BH05_0-0.05
				Client sampling date / time: 08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00	09-MAY-2012 15:00
				ES1211388-006	ES1211388-007	ES1211388-008	ES1211388-009	ES1211388-010
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**8.8**	**8.2**	**16.0**	**6.0**	**20.7**
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**8**	**9**	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**13**	**17**	**16**	**13**	**11**
Copper	7440-50-8	5	mg/kg	<5	**13**	**20**	**13**	**23**
Lead	7439-92-1	5	mg/kg	**5**	**14**	**7**	<5	**40**
Nickel	7440-02-0	2	mg/kg	**5**	**31**	**58**	**24**	**8**
Zinc	7440-66-6	5	mg/kg	**26**	**85**	**43**	**20**	**49**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	<0.05	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	<0.05	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg	----	----	<0.05	----	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	----	----	<0.05	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg	----	----	<0.05	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg	----	----	<0.05	----	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	----	<0.05	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	<0.05	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	<0.05	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	<0.05	----	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	<0.05	----	<0.05
Dieldrin	60-57-1	0.05	mg/kg	----	----	<0.05	----	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	----	----	<0.05	----	<0.05
Endrin	72-20-8	0.05	mg/kg	----	----	<0.05	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	<0.05	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	----	----	<0.05	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	<0.05	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	<0.05	----	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	----	----	<0.2	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	<0.05	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	----	----	<0.2	----	<0.2
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	----	<0.05	----	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	----	<0.05	----	<0.05

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH03_0.8-0.9	BH03_4.1-4.3	BH04_0.0-0.1	BH04_2.9-3.0	BH05_0-0.05
				Client sampling date / time: 08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00	09-MAY-2012 15:00
				ES1211388-006	ES1211388-007	ES1211388-008	ES1211388-009	ES1211388-010
EP068B: Organophosphorus Pesticides (OP) - Continued								
Monocrotophos	6923-22-4	0.2	mg/kg	----	----	<0.2	----	<0.2
Dimethoate	60-51-5	0.05	mg/kg	----	----	<0.05	----	<0.05
Diazinon	333-41-5	0.05	mg/kg	----	----	<0.05	----	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	----	<0.05	----	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	----	----	<0.2	----	<0.2
Malathion	121-75-5	0.05	mg/kg	----	----	<0.05	----	<0.05
Fenthion	55-38-9	0.05	mg/kg	----	----	<0.05	----	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	----	<0.05	----	<0.05
Parathion	56-38-2	0.2	mg/kg	----	----	<0.2	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	----	<0.05	----	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	----	<0.05	----	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	----	<0.05	----	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	----	----	<0.05	----	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	----	----	<0.05	----	<0.05
Ethion	563-12-2	0.05	mg/kg	----	----	<0.05	----	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	----	----	<0.05	----	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	----	----	<0.05	----	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<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	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	<1.0	<1.0	<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	<0.5	<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	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH03_0.8-0.9	BH03_4.1-4.3	BH04_0.0-0.1	BH04_2.9-3.0	BH05_0-0.05
				Client sampling date / time: 08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00	09-MAY-2012 15:00
				ES1211388-006	ES1211388-007	ES1211388-008	ES1211388-009	ES1211388-010
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5	<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	<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	<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
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	**60**
C15 - C28 Fraction	----	100	mg/kg	<100	<100	**220**	<100	**370**
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	**340**
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	**220**	<50	**770**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	**80**
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	**280**	<100	**520**
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	**400**
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	**280**	<50	**1000**
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP080: BTEXN								
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP068S: Organochlorine Pesticide Surrogate								

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	BH03_0.8-0.9	BH03_4.1-4.3	BH04_0.0-0.1	BH04_2.9-3.0	BH05_0-0.05
				Client sampling date / time	08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00	09-MAY-2012 15:00
					ES1211388-006	ES1211388-007	ES1211388-008	ES1211388-009	ES1211388-010
EP068S: Organochlorine Pesticide Surrogate - Continued									
Dibromo-DDE	21655-73-2	0.1	%		----	----	**88.5**	----	**95.6**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		----	----	**85.4**	----	**117**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**111**	**112**	**98.7**	**108**	**102**
2-Chlorophenol-D4	93951-73-6	0.1	%		**108**	**108**	**91.9**	**96.4**	**99.0**
2.4.6-Tribromophenol	118-79-6	0.1	%		**111**	**120**	**108**	**113**	**123**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**110**	**117**	**109**	**112**	**111**
Anthracene-d10	1719-06-8	0.1	%		**106**	**113**	**103**	**109**	**106**
4-Terphenyl-d14	1718-51-0	0.1	%		**103**	**116**	**113**	**114**	**101**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**134**	**130**	**128**	**126**	**130**
Toluene-D8	2037-26-5	0.1	%		**114**	**106**	**90.4**	**102**	**112**
4-Bromofluorobenzene	460-00-4	0.1	%		**102**	**90.5**	**87.1**	**95.0**	**100**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH05_2.1-2.2	BH06_0-0.05	BH06_1.9-2.0	BH07_0.05-0.15	BH07_0.4-0.5
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00
				ES1211388-011	ES1211388-012	ES1211388-013	ES1211388-014	ES1211388-015
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**10.1**	**14.5**	**11.6**	**10.0**	**19.1**
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**8**	<5	<5	<5	**6**
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**16**	**9**	**10**	**9**	**25**
Copper	7440-50-8	5	mg/kg	**9**	<5	<5	**6**	<5
Lead	7439-92-1	5	mg/kg	**14**	**36**	**5**	**56**	**9**
Nickel	7440-02-0	2	mg/kg	**13**	**6**	**5**	**5**	**8**
Zinc	7440-66-6	5	mg/kg	**62**	**49**	**26**	**41**	**18**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH05_2.1-2.2	BH06_0-0.05	BH06_1.9-2.0	BH07_0.05-0.15	BH07_0.4-0.5
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00
				ES1211388-011	ES1211388-012	ES1211388-013	ES1211388-014	ES1211388-015
EP068B: Organophosphorus Pesticides (OP) - Continued								
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<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	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	<1.0	<1.0	<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	<0.5	<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	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH05_2.1-2.2	BH06_0-0.05	BH06_1.9-2.0	BH07_0.05-0.15	BH07_0.4-0.5
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00
				ES1211388-011	ES1211388-012	ES1211388-013	ES1211388-014	ES1211388-015
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5	<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	<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	<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
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	**150**	<100	**140**	<100
C29 - C36 Fraction	----	100	mg/kg	<100	**160**	<100	**170**	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	<50	**310**	<50	**310**	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	----	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	**220**	<100	**200**	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	**230**	<100	**260**	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg	<50	**450**	<50	**460**	<50
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP080: BTEXN								
^ **Sum of BTEX**	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ **Total Xylenes**	1330-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP068S: Organochlorine Pesticide Surrogate								

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH05_2.1-2.2	BH06_0-0.05	BH06_1.9-2.0	BH07_0.05-0.15	BH07_0.4-0.5
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00
				ES1211388-011	ES1211388-012	ES1211388-013	ES1211388-014	ES1211388-015
EP068S: Organochlorine Pesticide Surrogate - Continued								
Dibromo-DDE	21655-73-2	0.1	%	**82.6**	**85.0**	----	**88.0**	**90.7**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	**63.3**	**101**	----	**102**	**88.3**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**111**	**105**	**100**	**104**	**113**
2-Chlorophenol-D4	93951-73-6	0.1	%	**103**	**97.7**	**96.7**	**111**	**107**
2.4.6-Tribromophenol	118-79-6	0.1	%	**118**	**124**	**119**	**122**	**118**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**108**	**110**	**103**	**111**	**116**
Anthracene-d10	1719-06-8	0.1	%	**106**	**106**	**102**	**108**	**113**
4-Terphenyl-d14	1718-51-0	0.1	%	**111**	**109**	**103**	**114**	**117**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**94.8**	**101**	**123**	**115**	**105**
Toluene-D8	2037-26-5	0.1	%	**107**	**104**	**131**	**94.7**	**94.2**
4-Bromofluorobenzene	460-00-4	0.1	%	**105**	**96.0**	**114**	**81.1**	**99.0**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH07_1.9-2.0	BH08_0-0.05	BH08_0.4-0.5	BH08_1.9-2.0	BH09_0-0.05
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00
				ES1211388-016	ES1211388-017	ES1211388-018	ES1211388-019	ES1211388-020
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**15.9**	**13.5**	**16.0**	**12.8**	**7.3**
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples								
Asbestos Detected	1332-21-4	0.1	g/kg	----	**Yes**	----	----	----
Asbestos Type	1332-21-4	0.1	--	----	**Ch**	----	----	----
Sample weight (dry)	----	0.01	g	----	**65.7**	----	----	----
APPROVED IDENTIFIER:	----	-	--	----	**P.RENNIE**	----	----	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	**5**	**5**	**7**	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**8**	**13**	**22**	**14**	**6**
Copper	7440-50-8	5	mg/kg	<5	**8**	<5	<5	<5
Lead	7439-92-1	5	mg/kg	<5	**21**	**6**	**5**	**9**
Nickel	7440-02-0	2	mg/kg	**3**	**5**	**4**	**7**	**2**
Zinc	7440-66-6	5	mg/kg	**21**	**90**	**11**	**23**	**28**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Endrin	72-20-8	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	----	<0.2	<0.2	----	<0.2

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH07_1.9-2.0	BH08_0-0.05	BH08_0.4-0.5	BH08_1.9-2.0	BH09_0-0.05
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00
				ES1211388-016	ES1211388-017	ES1211388-018	ES1211388-019	ES1211388-020
EP068A: Organochlorine Pesticides (OC) - Continued								
Endrin ketone	53494-70-5	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	----	<0.2	<0.2	----	<0.2
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	<0.2	----	<0.2
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	<0.2	----	<0.2
Malathion	121-75-5	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Parathion	56-38-2	0.2	mg/kg	----	<0.2	<0.2	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Ethion	563-12-2	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<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	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	<1.0	<1.0	<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	<0.5	<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								

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH07_1.9-2.0	BH08_0-0.05	BH08_0.4-0.5	BH08_1.9-2.0	BH09_0-0.05
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00
				ES1211388-016	ES1211388-017	ES1211388-018	ES1211388-019	ES1211388-020
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5	<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	<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	<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
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
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
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	**140**	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	**140**	<50	<50	<50
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH07_1.9-2.0	BH08_0-0.05	BH08_0.4-0.5	BH08_1.9-2.0	BH09_0-0.05
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00
				ES1211388-016	ES1211388-017	ES1211388-018	ES1211388-019	ES1211388-020
EP080: BTEXN								
^ **Sum of BTEX**	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ **Total Xylenes**	1330-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	----	**85.4**	**83.4**	----	**76.7**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	----	**107**	**67.0**	----	**60.2**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**98.4**	**113**	**98.8**	**92.1**	**107**
2-Chlorophenol-D4	93951-73-6	0.1	%	**89.7**	**104**	**95.9**	**82.7**	**103**
2.4.6-Tribromophenol	118-79-6	0.1	%	**101**	**124**	**122**	**123**	**123**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**94.8**	**119**	**112**	**111**	**113**
Anthracene-d10	1719-06-8	0.1	%	**90.6**	**110**	**109**	**110**	**110**
4-Terphenyl-d14	1718-51-0	0.1	%	**96.2**	**116**	**118**	**117**	**120**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**106**	**97.7**	**98.8**	**102**	**104**
Toluene-D8	2037-26-5	0.1	%	**101**	**106**	**104**	**103**	**110**
4-Bromofluorobenzene	460-00-4	0.1	%	**107**	**98.1**	**94.7**	**98.6**	**103**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH09_1.9-2.0	BH10_0-0.05	BH10_1.7-1.8	BH11_0.03-0.13	BH11_1.9-2.0
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00
				ES1211388-021	ES1211388-022	ES1211388-023	ES1211388-024	ES1211388-025
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**17.8**	**8.5**	**9.2**	**14.4**	**12.3**
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples								
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	----	**No**	----
Asbestos Type	1332-21-4	0.1	--	----	----	----	**-**	----
Sample weight (dry)	----	0.01	g	----	----	----	**49.4**	----
APPROVED IDENTIFIER:	----	-	--	----	----	----	**P.RENNIE**	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**9**	**5**	**7**	<5	**14**
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**11**	**9**	**8**	**6**	**20**
Copper	7440-50-8	5	mg/kg	**6**	**22**	<5	<5	**14**
Lead	7439-92-1	5	mg/kg	**6**	**38**	<5	**11**	**20**
Nickel	7440-02-0	2	mg/kg	**9**	**6**	**5**	**4**	**138**
Zinc	7440-66-6	5	mg/kg	**39**	**170**	**24**	**46**	**246**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	<0.05	----	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg	----	<0.05	----	<0.05	----
gamma-BHC	58-89-9	0.05	mg/kg	----	<0.05	----	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Heptachlor	76-44-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Aldrin	309-00-2	0.05	mg/kg	----	<0.05	----	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	<0.05	----	<0.05	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	<0.05	----	<0.05	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	<0.05	----	<0.05	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	<0.05	----	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	----	<0.05	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	<0.05	----	<0.05	----
Endrin	72-20-8	0.05	mg/kg	----	<0.05	----	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	----	<0.05	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	<0.05	----	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	<0.05	----	<0.05	----
4.4`-DDT	50-29-3	0.2	mg/kg	----	<0.2	----	<0.2	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH09_1.9-2.0	BH10_0-0.05	BH10_1.7-1.8	BH11_0.03-0.13	BH11_1.9-2.0
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00
				ES1211388-021	ES1211388-022	ES1211388-023	ES1211388-024	ES1211388-025
EP068A: Organochlorine Pesticides (OC) - Continued								
Endrin ketone	53494-70-5	0.05	mg/kg	----	<0.05	----	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg	----	<0.2	----	<0.2	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	----	<0.05	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	----	<0.2	----
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	----	<0.05	----
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	----	<0.05	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	----	<0.05	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	----	<0.2	----
Malathion	121-75-5	0.05	mg/kg	----	<0.05	----	<0.05	----
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	----	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	----	<0.05	----
Parathion	56-38-2	0.2	mg/kg	----	<0.2	----	<0.2	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	----	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	----	<0.05	----
Ethion	563-12-2	0.05	mg/kg	----	<0.05	----	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	----	<0.05	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<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	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	<1.0	<1.0	<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	<0.5	<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								

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH09_1.9-2.0	BH10_0-0.05	BH10_1.7-1.8	BH11_0.03-0.13	BH11_1.9-2.0
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00
				ES1211388-021	ES1211388-022	ES1211388-023	ES1211388-024	ES1211388-025
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5	<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	<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	<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
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	**150**	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	**150**	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	<50	<50	<50	**300**	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	----	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	**240**	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg	<50	<50	<50	**240**	<50
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH09_1.9-2.0	BH10_0-0.05	BH10_1.7-1.8	BH11_0.03-0.13	BH11_1.9-2.0
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00
				ES1211388-021	ES1211388-022	ES1211388-023	ES1211388-024	ES1211388-025
EP080: BTEXN								
^ **Sum of BTEX**	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ **Total Xylenes**	1330-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	----	**84.3**	----	**75.8**	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	----	**83.3**	----	**95.5**	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**79.4**	**78.7**	**77.5**	**101**	**76.1**
2-Chlorophenol-D4	93951-73-6	0.1	%	**77.4**	**79.2**	**76.2**	**97.3**	**78.7**
2.4.6-Tribromophenol	118-79-6	0.1	%	**66.0**	**72.4**	**70.1**	**103**	**67.7**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**71.4**	**74.0**	**75.6**	**101**	**71.0**
Anthracene-d10	1719-06-8	0.1	%	**73.2**	**75.6**	**75.1**	**106**	**77.6**
4-Terphenyl-d14	1718-51-0	0.1	%	**81.0**	**80.3**	**86.1**	**109**	**78.6**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**86.4**	**118**	**112**	**116**	**118**
Toluene-D8	2037-26-5	0.1	%	**97.0**	**119**	**131**	**108**	**116**
4-Bromofluorobenzene	460-00-4	0.1	%	**96.2**	**113**	**109**	**97.8**	**106**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SP01	SP02	QC03	QC05	QC07
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	08-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00
				ES1211388-026	ES1211388-027	ES1211388-028	ES1211388-029	ES1211388-030
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	----	----	**10.1**	**17.4**	**16.3**
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples								
Asbestos Detected	1332-21-4	0.1	g/kg	**No**	**No**	----	----	----
Asbestos Type	1332-21-4	0.1	--	**-**	**-**	----	----	----
Sample weight (dry)	----	0.01	g	**144**	**251**	----	----	----
APPROVED IDENTIFIER:	----	-	--	**P.RENNIE**	**P.RENNIE**	----	----	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	----	**5**	<5	<5
Cadmium	7440-43-9	1	mg/kg	----	----	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	----	----	**15**	**10**	**8**
Copper	7440-50-8	5	mg/kg	----	----	<5	**6**	<5
Lead	7439-92-1	5	mg/kg	----	----	**22**	**36**	<5
Nickel	7440-02-0	2	mg/kg	----	----	**6**	**6**	**3**
Zinc	7440-66-6	5	mg/kg	----	----	**67**	**32**	**19**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	----	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	----	----	<0.2	<0.2	<0.2

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SP01	SP02	QC03	QC05	QC07
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	08-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00
				ES1211388-026	ES1211388-027	ES1211388-028	ES1211388-029	ES1211388-030
EP068A: Organochlorine Pesticides (OC) - Continued								
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	----	----	<0.2	<0.2	<0.2
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	----	----	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	----	----	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	----	----	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
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								

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SP01	SP02	QC03	QC05	QC07
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	08-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00
				ES1211388-026	ES1211388-027	ES1211388-028	ES1211388-029	ES1211388-030
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
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
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	----	----	<50	**60**	<50
C15 - C28 Fraction	----	100	mg/kg	----	----	**17800**	**310**	<100
C29 - C36 Fraction	----	100	mg/kg	----	----	**13900**	**460**	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	----	----	**31700**	**830**	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	----	----	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	----	10	mg/kg	----	----	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	----	----	<50	**80**	<50
>C16 - C34 Fraction	----	100	mg/kg	----	----	**2970**	**460**	<100
>C34 - C40 Fraction	----	100	mg/kg	----	----	**5430**	**450**	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg	----	----	**8400**	**990**	<50
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	----	----	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	----	**1.0**	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	----	----	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SP01	SP02	QC03	QC05	QC07
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	08-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00
				ES1211388-026	ES1211388-027	ES1211388-028	ES1211388-029	ES1211388-030
EP080: BTEXN								
^ **Sum of BTEX**	----	0.2	mg/kg	----	----	**1.0**	<0.2	<0.2
^ **Total Xylenes**	1330-20-7	0.5	mg/kg	----	----	**1.0**	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	----	----	<1	<1	<1
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	----	----	**65.8**	**84.9**	**96.4**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	----	----	**81.9**	**108**	**73.0**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	----	----	**75.4**	**75.8**	**75.9**
2-Chlorophenol-D4	93951-73-6	0.1	%	----	----	**74.4**	**76.6**	**80.4**
2.4.6-Tribromophenol	118-79-6	0.1	%	----	----	**84.9**	**79.3**	**77.6**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	----	----	**79.9**	**72.8**	**72.5**
Anthracene-d10	1719-06-8	0.1	%	----	----	**75.4**	**78.1**	**75.5**
4-Terphenyl-d14	1718-51-0	0.1	%	----	----	**77.8**	**77.0**	**79.9**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	----	----	**110**	**110**	**113**
Toluene-D8	2037-26-5	0.1	%	----	----	**112**	**117**	**112**
4-Bromofluorobenzene	460-00-4	0.1	%	----	----	**98.2**	**96.7**	**103**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: QC08	TRIP BLANK	TRIP SPIKE	TSC	----
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	----
				ES1211388-031	ES1211388-034	ES1211388-035	ES1211388-036	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**11.2**	----	----	----	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	**7**	----	----	----	----
Copper	7440-50-8	5	mg/kg	<5	----	----	----	----
Lead	7439-92-1	5	mg/kg	**6**	----	----	----	----
Nickel	7440-02-0	2	mg/kg	**2**	----	----	----	----
Zinc	7440-66-6	5	mg/kg	**27**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: QC08	TRIP BLANK	TRIP SPIKE	TSC	----
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	----
				ES1211388-031	ES1211388-034	ES1211388-035	ES1211388-036	----
EP068B: Organophosphorus Pesticides (OP) - Continued								
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	----	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	----	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	----	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	----	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	----	----	----	----
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	----	----	----	----
Pentachlorophenol	87-86-5	2.0	mg/kg	<2.0	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: QC08	TRIP BLANK	TRIP SPIKE	TSC	----
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	----
				ES1211388-031	ES1211388-034	ES1211388-035	ES1211388-036	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	----	----	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg	<0.5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	**41**	**40**	----
C10 - C14 Fraction	----	50	mg/kg	<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	**44**	**44**	----
^ **C6 - C10 Fraction minus BTEX (F1)**	----	10	mg/kg	<10	<10	**21**	**22**	----
>C10 - C16 Fraction	----	50	mg/kg	<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg	<50	----	----	----	----
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	**0.2**	**0.3**	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	**12.3**	**11.7**	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	**1.2**	**1.1**	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	**6.7**	**6.2**	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	**2.9**	**2.2**	----
EP080: BTEXN								
^ **Sum of BTEX**	----	0.2	mg/kg	<0.2	<0.2	**23.3**	**21.5**	----
^ **Total Xylenes**	1330-20-7	0.5	mg/kg	<0.5	<0.5	**9.6**	**8.4**	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	----
EP068S: Organochlorine Pesticide Surrogate								

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: QC08	TRIP BLANK	TRIP SPIKE	TSC	----
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	----
				ES1211388-031	ES1211388-034	ES1211388-035	ES1211388-036	----
EP068S: Organochlorine Pesticide Surrogate - Continued								
Dibromo-DDE	21655-73-2	0.1	%	**99.9**	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	**94.6**	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**74.8**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	**77.3**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%	**76.3**	----	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**76.2**	----	----	----	----
Anthracene-d10	1719-06-8	0.1	%	**77.2**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	**80.3**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**112**	**113**	**89.8**	**90.5**	----
Toluene-D8	2037-26-5	0.1	%	**106**	**106**	**111**	**102**	----
4-Bromofluorobenzene	460-00-4	0.1	%	**99.1**	**95.9**	**106**	**97.6**	----

Analytical Results

Sub-Matrix: **WATER**

Compound	CAS Number	LOR	Unit	Client sample ID	RINSATE 01	RINSATE 02	----	----	----
				Client sampling date / time	08-MAY-2012 15:00	09-MAY-2012 15:00	----	----	----
					ES1211388-032	ES1211388-033	----	----	----
EG020T: Total Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	----	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	----	----	----
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	----	----	----
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.5	µg/L		<0.5	<0.5	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L		<0.5	<0.5	----	----	----
beta-BHC	319-85-7	0.5	µg/L		<0.5	<0.5	----	----	----
gamma-BHC	58-89-9	0.5	µg/L		<0.5	<0.5	----	----	----
delta-BHC	319-86-8	0.5	µg/L		<0.5	<0.5	----	----	----
Heptachlor	76-44-8	0.5	µg/L		<0.5	<0.5	----	----	----
Aldrin	309-00-2	0.5	µg/L		<0.5	<0.5	----	----	----
Heptachlor epoxide	1024-57-3	0.5	µg/L		<0.5	<0.5	----	----	----
trans-Chlordane	5103-74-2	0.5	µg/L		<0.5	<0.5	----	----	----
alpha-Endosulfan	959-98-8	0.5	µg/L		<0.5	<0.5	----	----	----
cis-Chlordane	5103-71-9	0.5	µg/L		<0.5	<0.5	----	----	----
Dieldrin	60-57-1	0.5	µg/L		<0.5	<0.5	----	----	----
4.4`-DDE	72-55-9	0.5	µg/L		<0.5	<0.5	----	----	----
Endrin	72-20-8	0.5	µg/L		<0.5	<0.5	----	----	----
beta-Endosulfan	33213-65-9	0.5	µg/L		<0.5	<0.5	----	----	----
4.4`-DDD	72-54-8	0.5	µg/L		<0.5	<0.5	----	----	----
Endrin aldehyde	7421-93-4	0.5	µg/L		<0.5	<0.5	----	----	----
Endosulfan sulfate	1031-07-8	0.5	µg/L		<0.5	<0.5	----	----	----
4.4`-DDT	50-29-3	2	µg/L		<2	<2	----	----	----
Endrin ketone	53494-70-5	0.5	µg/L		<0.5	<0.5	----	----	----
Methoxychlor	72-43-5	2	µg/L		<2	<2	----	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.5	µg/L		<0.5	<0.5	----	----	----
Demeton-S-methyl	919-86-8	0.5	µg/L		<0.5	<0.5	----	----	----
Monocrotophos	6923-22-4	2	µg/L		<2	<2	----	----	----
Dimethoate	60-51-5	0.5	µg/L		<0.5	<0.5	----	----	----

Analytical Results

Sub-Matrix: **WATER**

Compound	CAS Number	LOR	Unit	Client sample ID: RINSATE 01 Client sampling date / time: 08-MAY-2012 15:00 ES1211388-032	Client sample ID: RINSATE 02 Client sampling date / time: 09-MAY-2012 15:00 ES1211388-033	----	----	----
EP068B: Organophosphorus Pesticides (OP) - Continued								
Diazinon	333-41-5	0.5	µg/L	<0.5	<0.5	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	<0.5	----	----	----
Parathion-methyl	298-00-0	2	µg/L	<2	<2	----	----	----
Malathion	121-75-5	0.5	µg/L	<0.5	<0.5	----	----	----
Fenthion	55-38-9	0.5	µg/L	<0.5	<0.5	----	----	----
Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	<0.5	----	----	----
Parathion	56-38-2	2	µg/L	<2	<2	----	----	----
Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	<0.5	----	----	----
Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	<0.5	----	----	----
Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	<0.5	----	----	----
Fenamiphos	22224-92-6	0.5	µg/L	<0.5	<0.5	----	----	----
Prothiofos	34643-46-4	0.5	µg/L	<0.5	<0.5	----	----	----
Ethion	563-12-2	0.5	µg/L	<0.5	<0.5	----	----	----
Carbophenothion	786-19-6	0.5	µg/L	<0.5	<0.5	----	----	----
Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	<0.5	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	1.0	µg/L	<1.0	<1.0	----	----	----
2-Chlorophenol	95-57-8	1.0	µg/L	<1.0	<1.0	----	----	----
2-Methylphenol	95-48-7	1.0	µg/L	<1.0	<1.0	----	----	----
3- & 4-Methylphenol	1319-77-3	2.0	µg/L	<2.0	<2.0	----	----	----
2-Nitrophenol	88-75-5	1.0	µg/L	<1.0	<1.0	----	----	----
2.4-Dimethylphenol	105-67-9	1.0	µg/L	<1.0	<1.0	----	----	----
2.4-Dichlorophenol	120-83-2	1.0	µg/L	<1.0	<1.0	----	----	----
2.6-Dichlorophenol	87-65-0	1.0	µg/L	<1.0	<1.0	----	----	----
4-Chloro-3-Methylphenol	59-50-7	1.0	µg/L	<1.0	<1.0	----	----	----
2.4.6-Trichlorophenol	88-06-2	1.0	µg/L	<1.0	<1.0	----	----	----
2.4.5-Trichlorophenol	95-95-4	1.0	µg/L	<1.0	<1.0	----	----	----
Pentachlorophenol	87-86-5	2.0	µg/L	<2.0	<2.0	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	<1.0	<1.0	----	----	----
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	<1.0	----	----	----
Acenaphthene	83-32-9	1.0	µg/L	<1.0	<1.0	----	----	----
Fluorene	86-73-7	1.0	µg/L	<1.0	<1.0	----	----	----
Phenanthrene	85-01-8	1.0	µg/L	<1.0	<1.0	----	----	----
Anthracene	120-12-7	1.0	µg/L	<1.0	<1.0	----	----	----
Fluoranthene	206-44-0	1.0	µg/L	<1.0	<1.0	----	----	----

Analytical Results

Sub-Matrix: **WATER**

Compound	CAS Number	LOR	Unit	Client sample ID: RINSATE 01	RINSATE 02	----	----	----
				Client sampling date / time: 08-MAY-2012 15:00	09-MAY-2012 15:00	----	----	----
				ES1211388-032	ES1211388-033	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Pyrene	129-00-0	1.0	µg/L	<1.0	<1.0	----	----	----
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	<1.0	----	----	----
Chrysene	218-01-9	1.0	µg/L	<1.0	<1.0	----	----	----
Benzo(b)fluoranthene	205-99-2	1.0	µg/L	<1.0	<1.0	----	----	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	<1.0	----	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	<1.0	<1.0	----	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L	<1.0	<1.0	----	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L	<1.0	<1.0	----	----	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	µg/L	<0.5	<0.5	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	----	----	----
C10 - C14 Fraction	----	50	µg/L	<50	<50	----	----	----
C15 - C28 Fraction	----	100	µg/L	<100	<100	----	----	----
C29 - C36 Fraction	----	50	µg/L	<50	<50	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	µg/L	<50	<50	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	20	µg/L	<20	<20	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	----	20	µg/L	<20	<20	----	----	----
>C10 - C16 Fraction	----	100	µg/L	<100	<100	----	----	----
>C16 - C34 Fraction	----	100	µg/L	<100	<100	----	----	----
>C34 - C40 Fraction	----	100	µg/L	<100	<100	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L	<100	<100	----	----	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	<1	----	----	----
Toluene	108-88-3	2	µg/L	<2	<2	----	----	----
Ethylbenzene	100-41-4	2	µg/L	<2	<2	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	----	----	----
ortho-Xylene	95-47-6	2	µg/L	<2	<2	----	----	----
^ **Total Xylenes**	1330-20-7	2	µg/L	<2	<2	----	----	----
^ **Sum of BTEX**	----	1	µg/L	<1	<1	----	----	----
Naphthalene	91-20-3	5	µg/L	<5	<5	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	**108**	**78.3**	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	**103**	**85.0**	----	----	----

Analytical Results

Sub-Matrix: **WATER**

Compound	CAS Number	LOR	Unit	Client sample ID: RINSATE 01 Client sampling date / time: 08-MAY-2012 15:00 ES1211388-032	Client sample ID: RINSATE 02 Client sampling date / time: 09-MAY-2012 15:00 ES1211388-033	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**36.7**	**31.0**	----	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	**59.4**	**56.2**	----	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%	**61.6**	**50.6**	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**71.5**	**73.0**	----	----	----
Anthracene-d10	1719-06-8	0.1	%	**75.3**	**79.8**	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	**118**	**102**	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**102**	**110**	----	----	----
Toluene-D8	2037-26-5	0.1	%	**116**	**103**	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	**103**	**97.6**	----	----	----

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Client sample ID - Client sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples		
EA200: Description	BH08_0-0.05 - 09-MAY-2012 15:00	Brown soil with some vegetation and small red-brown rocks and several medium sized concrete pieces and one small piece of degraded asbestos fibreboard 5 x 3 x 1mm
EA200: Description	BH11_0.03-0.13 - 09-MAY-2012 15:00	Dark brown sandy soil with large quantity vegetation and small coal pieces
EA200: Description	SP01 - 09-MAY-2012 15:00	Dark grey soil with some vegetation and comprising mainly charcoal pieces and SMF
EA200: Description	SP02 - 09-MAY-2012 15:00	Brown soil with some vegetation and small dark brown rocks and coal pieces

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	19.5	167.0
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	22.7	163.5
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	56.3	133.3
2-Chlorophenol-D4	93951-73-6	53.8	133.8
2.4.6-Tribromophenol	118-79-6	23.1	134.9
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	58.9	132.7
Anthracene-d10	1719-06-8	55.0	137.6
4-Terphenyl-d14	1718-51-0	54.0	147.8
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	72.8	133.2
Toluene-D8	2037-26-5	73.9	132.1
4-Bromofluorobenzene	460-00-4	71.6	130.0

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	33.6	142.5
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	28.1	147.7
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10.0	64.1
2-Chlorophenol-D4	93951-73-6	11.3	122.9
2.4.6-Tribromophenol	118-79-6	11.7	144.0
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	19.9	122.8
Anthracene-d10	1719-06-8	23.3	125.8
4-Terphenyl-d14	1718-51-0	20.3	134.5
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128

Environmental Division

QUALITY CONTROL REPORT

Work Order	: **ES1211388**	Page	: 1 of 26
Client	: **AECOM Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: MS LUCY STUART	Contact	: Client Services
Address	: 17 WARABROOK BOULEVARDE PO BOX 73, HUNTER REGION MC NSW 2310 WARABROOK NSW, AUSTRALIA 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
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Telephone	: +61 02 4911 4900	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 4911 4999	Facsimile	: +61-2-8784 8500
Project	: 60266102-HUNTLEE	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: 153296-153300, 154953-154954	Date Samples Received	: 09-MAY-2012
Sampler	: JD	Issue Date	: 17-MAY-2012
Order number	: ----		
		No. of samples received	: 71
Quote number	: EN/004/11	No. of samples analysed	: 36

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Edwandy Fadjar	Organic Coordinator	Sydney Organics
Evie.Sidarta	Inorganic Chemist	Sydney Inorganics
Peter Rennie	Team Leader - Asbestos	Newcastle
Phalak Inthaksone	Laboratory Manager - Organics	Sydney Organics
Raymond Commodor	Instrument Chemist	Sydney Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates 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%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA055: Moisture Content (QC Lot: 2301641)									
ES1211388-003	BH02_0.4-0.5	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	15.0	14.6	2.0	0% - 50%
ES1211388-014	BH07_0.05-0.15	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	10.0	13.2	28.2	0% - 50%
EA055: Moisture Content (QC Lot: 2301642)									
ES1211388-023	BH10_1.7-1.8	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	9.2	6.7	31.6	No Limit
ES1211735-004	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	50.0	50.0	0.0	0% - 20%
EG005T: Total Metals by ICP-AES (QC Lot: 2304517)									
ES1211235-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	17	17	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	5	5	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	11	11	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	22	32	35.1	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	56	54	3.3	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	110	128	15.1	0% - 20%
ES1211388-009	BH04_2.9-3.0	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	13	14	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	24	26	6.6	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	13	14	7.5	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	20	21	5.0	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 2304519)									
ES1211388-010	BH05_0-0.05	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	11	10	14.4	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	8	10	24.1	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	23	24	5.5	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	40	50	23.5	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	49	69	33.2	0% - 50%
ES1211388-020	BH09_0-0.05	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	6	4	29.1	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	9	<5	59.9	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	28	22	26.6	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2304518)									
ES1211235-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1211388-009	BH04_2.9-3.0	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2304520)									
ES1211388-010	BH05_0-0.05	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1211388-020	BH09_0-0.05	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2301633)									
ES1211388-001	BH01_0-0.1	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES1211388-018	BH08_0.4-0.5	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2301633) - continued									
ES1211388-018	BH08_0.4-0.5	EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 2301633)									
ES1211388-001	BH01_0-0.1	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES1211388-018	BH08_0.4-0.5	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 2301633) - continued									
ES1211388-018	BH08_0.4-0.5	EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 2301430)									
ES1211388-001	BH01_0-0.1	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2.0	mg/kg	<2.0	<2.0	0.0	No Limit
ES1211388-011	BH05_2.1-2.2	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2.0	mg/kg	<2.0	<2.0	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 2301711)									
ES1211817-001	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075(SIM)A: Phenolic Compounds (QC Lot: 2301711) - continued									
ES1211817-001	Anonymous	EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2.0	mg/kg	<2.0	<2.0	0.0	No Limit
ES1211388-030	QC07	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2.0	mg/kg	<2.0	<2.0	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2301430)									
ES1211388-001	BH01_0-0.1	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES1211388-011	BH05_2.1-2.2	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2301430) - continued									
ES1211388-011	BH05_2.1-2.2	EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2301711)									
ES1211817-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	0.5	<0.5	0.0	No Limit
ES1211388-030	QC07	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2301711) - continued									
ES1211388-030	QC07	EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2301428)									
ES1211388-001	BH01_0-0.1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES1211388-011	BH05_2.1-2.2	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2301429)									
ES1211388-001	BH01_0-0.1	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES1211388-011	BH05_2.1-2.2	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2301573)									
ES1211388-021	BH09_1.9-2.0	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES1211476-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2301710)									
ES1211817-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	360	380	4.4	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	280	230	22.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES1211388-030	QC07	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2301428)									
ES1211388-001	BH01_0-0.1	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES1211388-011	BH05_2.1-2.2	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2301429)									
ES1211388-001	BH01_0-0.1	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES1211388-011	BH05_2.1-2.2	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2301429) - continued									
ES1211388-011	BH05_2.1-2.2	EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2301573)									
ES1211388-021	BH09_1.9-2.0	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES1211476-001	Anonymous	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2301710)									
ES1211817-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	580	550	5.2	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	190	150	25.5	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES1211388-030	QC07	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080: BTEXN (QC Lot: 2301428)									
ES1211388-001	BH01_0-0.1	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES1211388-011	BH05_2.1-2.2	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP080: BTEXN (QC Lot: 2301573)									
ES1211388-021	BH09_1.9-2.0	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES1211476-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP080: BTEXN (QC Lot: 2301573) - continued									
ES1211476-001	Anonymous	EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG020T: Total Metals by ICP-MS (QC Lot: 2303628)									
ES1211388-032	RINSATE 01	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.002	0.0	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2302575)									
ES1211388-032	RINSATE 01	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES1211753-003	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2305777)									
ES1211293-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
ES1211320-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2305777)									
ES1211293-001	Anonymous	EP080: C6 - C10 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
ES1211320-001	Anonymous	EP080: C6 - C10 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 2305777)									
ES1211293-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES1211320-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit

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

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 parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2304517)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	101	70	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	95.5	83.3	111
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	103	89.2	117
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	105	90.1	114
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	98.0	85.2	111
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.23 mg/kg	105	88.3	116
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	106	88.9	112
EG005T: Total Metals by ICP-AES (QCLot: 2304519)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	112	70	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	105	83.3	111
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	116	89.2	117
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	# 114	90.1	114
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	107	85.2	111
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.23 mg/kg	115	88.3	116
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	# 114	88.9	112
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2304518)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	90.6	67	118
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2304520)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	86.4	67	118
EP068A: Organochlorine Pesticides (OC) (QCLot: 2301633)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	88.1	60.8	116
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	98.1	59.4	115
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	94.8	59.8	117
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.0	59.8	118
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.3	65.8	114
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	102	65.6	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	90.7	67	113
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	95.6	65.6	113
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	91.1	60.7	113
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	103	65.8	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.4	57.3	120
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	71.7	67.4	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	99.6	67.5	114
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	100	63	121

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 2301633) - continued								
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	107	66.1	117
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	104	65.3	116
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	85.9	57.3	115
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	102	63.6	119
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	109	58.4	127
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	90.0	63.6	117
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	110	50.4	132
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2301633)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	101	25.5	124
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	103	10.1	159
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	102	2.88	149
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	103	48.6	126
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	99.0	64.9	111
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	99.5	65.1	111
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	92.6	61.4	113
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	112	60.4	127
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	103	64.7	110
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	101	64.2	111
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	102	60	116
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	89.9	64.8	111
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	107	61.4	123
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	96.8	64.3	114
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	107	45.5	128
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	90.4	65.4	111
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	95.5	62	116
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	104	59.5	119
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	102	29.8	137
EP075(SIM)A: Phenolic Compounds (QCLot: 2301430)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	4 mg/kg	81.1	73.9	115
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	4 mg/kg	83.1	80.2	115
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	4 mg/kg	80.8	76.8	114
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	8 mg/kg	72.3	72	119
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	4 mg/kg	62.2	60.3	117
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	4 mg/kg	78.4	74.5	119
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	4 mg/kg	73.9	71.6	113
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	4 mg/kg	83.4	74.8	115
EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	4 mg/kg	83.4	76.4	114
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	4 mg/kg	74.2	62.2	115
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	4 mg/kg	78.7	68.9	112

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)A: Phenolic Compounds (QCLot: 2301430) - continued								
EP075(SIM): Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	8 mg/kg	19.0	1.23	91.6
EP075(SIM)A: Phenolic Compounds (QCLot: 2301711)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	4 mg/kg	79.1	73.9	115
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	4 mg/kg	84.9	80.2	115
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	4 mg/kg	80.2	76.8	114
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	8 mg/kg	81.6	72	119
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	4 mg/kg	67.4	60.3	117
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	4 mg/kg	87.4	74.5	119
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	4 mg/kg	82.9	71.6	113
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	4 mg/kg	92.8	74.8	115
EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	4 mg/kg	93.8	76.4	114
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	4 mg/kg	68.7	62.2	115
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	4 mg/kg	82.9	68.9	112
EP075(SIM): Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	8 mg/kg	15.0	1.23	91.6
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2301430)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	4 mg/kg	82.5	81.9	113
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	4 mg/kg	81.8	79.6	113
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	4 mg/kg	82.5	81.5	112
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	4 mg/kg	80.5	79.9	112
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	4 mg/kg	86.0	79.4	114
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	4 mg/kg	83.4	81.1	112
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	4 mg/kg	84.0	78.8	113
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	4 mg/kg	80.0	78.9	113
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	4 mg/kg	78.8	77.2	112
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	4 mg/kg	80.3	79.8	114
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	4 mg/kg	73.3	71.8	118
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	4 mg/kg	78.9	74.2	117
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	4 mg/kg	82.6	76.4	113
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	4 mg/kg	72.8	71	113
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	4 mg/kg	74.6	71.7	113
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	4 mg/kg	81.1	72.4	114
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2301711)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	4 mg/kg	88.2	81.9	113
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	4 mg/kg	82.8	79.6	113
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	4 mg/kg	89.0	81.5	112
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	4 mg/kg	84.2	79.9	112
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	4 mg/kg	83.3	79.4	114
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	4 mg/kg	83.2	81.1	112
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	4 mg/kg	94.0	78.8	113

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2301711) - continued								
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	4 mg/kg	85.6	78.9	113
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	4 mg/kg	82.6	77.2	112
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	4 mg/kg	80.3	79.8	114
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	4 mg/kg	91.8	71.8	118
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	4 mg/kg	89.1	74.2	117
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	4 mg/kg	86.7	76.4	113
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	4 mg/kg	86.9	71	113
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	4 mg/kg	88.8	71.7	113
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	4 mg/kg	85.6	72.4	114
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2301428)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	93.2	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2301429)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	98.0	59	131
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	98.7	74	138
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	110	63	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2301573)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	90.6	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2301710)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	87.2	59	131
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	108	74	138
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	100	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2301428)								
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	31 mg/kg	93.0	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2301429)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	250 mg/kg	100	59	131
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	120	74	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
		50	mg/kg	----	150 mg/kg	81.3	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2301573)								
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	31 mg/kg	95.0	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2301710)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	250 mg/kg	88.8	59	131
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	112	74	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
		50	mg/kg	----	150 mg/kg	92.0	63	131
EP080: BTEXN (QCLot: 2301428)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	95.1	62	120
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	88.4	62	128

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP080: BTEXN (QCLot: 2301428) - continued								
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	85.9	58	118
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	89.2	60	120
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	86.6	60	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	77.3	62	138
EP080: BTEXN (QCLot: 2301573)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	95.2	62	120
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	81.5	62	128
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	84.5	58	118
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	89.7	60	120
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	91.0	60	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	84.7	62	138

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EG020T: Total Metals by ICP-MS (QCLot: 2303628)								
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	91.4	85	111
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	99.7	88	108
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	# 91.3	92	114
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	90.6	89	115
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	95.1	91	113
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	# 89.1	91	113
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	95.5	78	116
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2302575)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.010 mg/L	94.1	81	119
EP068A: Organochlorine Pesticides (OC) (QCLot: 2304024)								
EP068: alpha-BHC	319-84-6	0.5	µg/L	<0.5	5 µg/L	68.5	61	117
EP068: Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	5 µg/L	64.0	56	116
EP068: beta-BHC	319-85-7	0.5	µg/L	<0.5	5 µg/L	99.2	60	118
EP068: gamma-BHC	58-89-9	0.5	µg/L	<0.5	5 µg/L	74.9	62	118
EP068: delta-BHC	319-86-8	0.5	µg/L	<0.5	5 µg/L	99.4	64	116
EP068: Heptachlor	76-44-8	0.5	µg/L	<0.5	5 µg/L	75.5	63	117
EP068: Aldrin	309-00-2	0.5	µg/L	<0.5	5 µg/L	72.4	65	121
EP068: Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	5 µg/L	79.0	63	117
EP068: trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	5 µg/L	89.3	64	120
EP068: alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	5 µg/L	101	67	119
EP068: cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	5 µg/L	88.7	63	123

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 2304024) - continued								
EP068: Dieldrin	60-57-1	0.5	µg/L	<0.5	5 µg/L	106	64	122
EP068: 4.4`-DDE	72-55-9	0.5	µg/L	<0.5	5 µg/L	100	64	118
EP068: Endrin	72-20-8	0.5	µg/L	<0.5	5 µg/L	86.0	64	126
EP068: beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	5 µg/L	98.8	68	122
EP068: 4.4`-DDD	72-54-8	0.5	µg/L	<0.5	5 µg/L	74.0	66	122
EP068: Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	5 µg/L	68.6	62	112
EP068: Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	5 µg/L	89.6	60	124
EP068: 4.4`-DDT	50-29-3	2.0	µg/L	<2	5 µg/L	91.1	54	126
EP068: Endrin ketone	53494-70-5	0.5	µg/L	<0.5	5 µg/L	82.4	55	119
EP068: Methoxychlor	72-43-5	2.0	µg/L	<2	5 µg/L	106	53	127
EP068A: Organochlorine Pesticides (OC) (QCLot: 2304034)								
EP068: alpha-BHC	319-84-6	0.5	µg/L	<0.5	5 µg/L	66.6	61	117
EP068: Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	5 µg/L	68.5	56	116
EP068: beta-BHC	319-85-7	0.5	µg/L	<0.5	5 µg/L	89.2	60	118
EP068: gamma-BHC	58-89-9	0.5	µg/L	<0.5	5 µg/L	73.3	62	118
EP068: delta-BHC	319-86-8	0.5	µg/L	<0.5	5 µg/L	89.3	64	116
EP068: Heptachlor	76-44-8	0.5	µg/L	<0.5	5 µg/L	72.8	63	117
EP068: Aldrin	309-00-2	0.5	µg/L	<0.5	5 µg/L	67.2	65	121
EP068: Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	5 µg/L	73.5	63	117
EP068: trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	5 µg/L	81.6	64	120
EP068: alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	5 µg/L	88.2	67	119
EP068: cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	5 µg/L	79.6	63	123
EP068: Dieldrin	60-57-1	0.5	µg/L	<0.5	5 µg/L	91.1	64	122
EP068: 4.4`-DDE	72-55-9	0.5	µg/L	<0.5	5 µg/L	108	64	118
EP068: Endrin	72-20-8	0.5	µg/L	<0.5	5 µg/L	86.1	64	126
EP068: beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	5 µg/L	98.9	68	122
EP068: 4.4`-DDD	72-54-8	0.5	µg/L	<0.5	5 µg/L	100	66	122
EP068: Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	5 µg/L	67.4	62	112
EP068: Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	5 µg/L	74.2	60	124
EP068: 4.4`-DDT	50-29-3	2.0	µg/L	<2	5 µg/L	79.8	54	126
EP068: Endrin ketone	53494-70-5	0.5	µg/L	<0.5	5 µg/L	69.8	55	119
EP068: Methoxychlor	72-43-5	2.0	µg/L	<2	5 µg/L	86.2	53	127
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2304024)								
EP068: Dichlorvos	62-73-7	0.5	µg/L	<0.5	5 µg/L	97.8	52	128
EP068: Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	5 µg/L	107	28.4	150
EP068: Monocrotophos	6923-22-4	0.5	µg/L	----	5 µg/L	33.4	10	89.1
		2.0	µg/L	<2	----	----	----	----
EP068: Dimethoate	60-51-5	0.5	µg/L	<0.5	5 µg/L	84.9	61	117
EP068: Diazinon	333-41-5	0.5	µg/L	<0.5	5 µg/L	78.4	64	122

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2304024) - continued								
EP068: Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	5 µg/L	93.0	67	121
EP068: Parathion-methyl	298-00-0	2.0	µg/L	<2	5 µg/L	105	59	123
EP068: Malathion	121-75-5	0.5	µg/L	<0.5	5 µg/L	103	57	123
EP068: Fenthion	55-38-9	0.5	µg/L	<0.5	5 µg/L	108	67	119
EP068: Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	5 µg/L	100	67	121
EP068: Parathion	56-38-2	2.0	µg/L	<2	5 µg/L	103	64	118
EP068: Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	5 µg/L	95.2	64	118
EP068: Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	5 µg/L	111	59	123
EP068: Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	5 µg/L	107	62	122
EP068: Fenamiphos	22224-92-6	0.5	µg/L	<0.5	5 µg/L	79.4	59	131
EP068: Prothiofos	34643-46-4	0.5	µg/L	<0.5	5 µg/L	108	64	116
EP068: Ethion	563-12-2	0.5	µg/L	<0.5	5 µg/L	97.8	68	120
EP068: Carbophenothion	786-19-6	0.5	µg/L	<0.5	5 µg/L	89.6	62	120
EP068: Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	5 µg/L	105	39	131
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2304034)								
EP068: Dichlorvos	62-73-7	0.5	µg/L	<0.5	5 µg/L	90.4	52	128
EP068: Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	5 µg/L	92.4	28.4	150
EP068: Monocrotophos	6923-22-4	0.5	µg/L	----	5 µg/L	35.3	10	89.1
		2.0	µg/L	<2	----	----	----	----
EP068: Dimethoate	60-51-5	0.5	µg/L	<0.5	5 µg/L	96.1	61	117
EP068: Diazinon	333-41-5	0.5	µg/L	<0.5	5 µg/L	66.8	64	122
EP068: Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	5 µg/L	83.5	67	121
EP068: Parathion-methyl	298-00-0	2.0	µg/L	<2	5 µg/L	94.3	59	123
EP068: Malathion	121-75-5	0.5	µg/L	<0.5	5 µg/L	88.6	57	123
EP068: Fenthion	55-38-9	0.5	µg/L	<0.5	5 µg/L	94.3	67	119
EP068: Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	5 µg/L	86.4	67	121
EP068: Parathion	56-38-2	2.0	µg/L	<2	5 µg/L	91.7	64	118
EP068: Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	5 µg/L	78.6	64	118
EP068: Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	5 µg/L	99.8	59	123
EP068: Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	5 µg/L	96.9	62	122
EP068: Fenamiphos	22224-92-6	0.5	µg/L	<0.5	5 µg/L	82.7	59	131
EP068: Prothiofos	34643-46-4	0.5	µg/L	<0.5	5 µg/L	101	64	116
EP068: Ethion	563-12-2	0.5	µg/L	<0.5	5 µg/L	102	68	120
EP068: Carbophenothion	786-19-6	0.5	µg/L	<0.5	5 µg/L	77.2	62	120
EP068: Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	5 µg/L	83.9	39	131
EP075(SIM)A: Phenolic Compounds (QCLot: 2304026)								
EP075(SIM): Phenol	108-95-2	0.2	µg/L	----	5 µg/L	41.1	24.5	61.9
		1	µg/L	<1.0	----	----	----	----

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)A: Phenolic Compounds (QCLot: 2304026) - continued								
EP075(SIM): 2-Chlorophenol	95-57-8	0.2	µg/L	----	5 µg/L	66.8	63.8	110
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): 2-Methylphenol	95-48-7	0.2	µg/L	----	5 µg/L	64.3	55.9	112
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	0.4	µg/L	----	10 µg/L	60.4	42.5	114
		2	µg/L	<2.0	----	----	----	----
EP075(SIM): 2-Nitrophenol	88-75-5	0.2	µg/L	----	5 µg/L	81.3	62.7	117
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.2	µg/L	----	5 µg/L	69.4	59.9	112
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.2	µg/L	----	5 µg/L	71.3	59.3	122
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.2	µg/L	----	5 µg/L	72.5	64.3	118
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.2	µg/L	----	5 µg/L	68.6	63	119
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.2	µg/L	----	5 µg/L	63.5	58.7	118
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.2	µg/L	----	5 µg/L	65.9	51.2	118
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Pentachlorophenol	87-86-5	0.4	µg/L	----	10 µg/L	69.2	6.85	95.6
		2	µg/L	<2.0	----	----	----	----
EP075(SIM)A: Phenolic Compounds (QCLot: 2304035)								
EP075(SIM): Phenol	108-95-2	0.2	µg/L	----	5 µg/L	48.3	24.5	61.9
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): 2-Chlorophenol	95-57-8	0.2	µg/L	----	5 µg/L	74.9	63.8	110
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): 2-Methylphenol	95-48-7	0.2	µg/L	----	5 µg/L	67.1	55.9	112
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	0.4	µg/L	----	10 µg/L	63.5	42.5	114
		2	µg/L	<2.0	----	----	----	----
EP075(SIM): 2-Nitrophenol	88-75-5	0.2	µg/L	----	5 µg/L	83.4	62.7	117
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.2	µg/L	----	5 µg/L	74.8	59.9	112
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.2	µg/L	----	5 µg/L	76.5	59.3	122
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.2	µg/L	----	5 µg/L	77.7	64.3	118
		1	µg/L	<1.0	----	----	----	----

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report		
					Spike	Spike Recovery (%)	Recovery Limits (%)
				Result	Concentration	LCS	Low	High
EP075(SIM)A: Phenolic Compounds (QCLot: 2304035) - continued								
EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.2	µg/L	----	5 µg/L	65.0	63	119
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.2	µg/L	----	5 µg/L	73.8	58.7	118
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.2	µg/L	----	5 µg/L	76.0	51.2	118
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Pentachlorophenol	87-86-5	0.4	µg/L	----	10 µg/L	56.2	6.85	95.6
		2	µg/L	<2.0	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2304026)								
EP075(SIM): Naphthalene	91-20-3	0.2	µg/L	----	5 µg/L	76.4	58.6	119
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Acenaphthylene	208-96-8	0.2	µg/L	----	5 µg/L	78.8	63.6	114
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Acenaphthene	83-32-9	0.2	µg/L	----	5 µg/L	74.9	62.2	113
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Fluorene	86-73-7	0.2	µg/L	----	5 µg/L	64.0	63.9	115
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Phenanthrene	85-01-8	0.2	µg/L	----	5 µg/L	83.1	62.6	116
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Anthracene	120-12-7	0.2	µg/L	----	5 µg/L	83.6	64.3	116
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Fluoranthene	206-44-0	0.2	µg/L	----	5 µg/L	90.0	63.6	118
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Pyrene	129-00-0	0.2	µg/L	----	5 µg/L	88.6	63.1	118
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Benz(a)anthracene	56-55-3	0.2	µg/L	----	5 µg/L	78.7	64.1	117
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Chrysene	218-01-9	0.2	µg/L	----	5 µg/L	83.2	62.5	116
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.2	µg/L	----	5 µg/L	106	61.7	119
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.2	µg/L	----	5 µg/L	98.6	61.7	117
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Benzo(a)pyrene	50-32-8	0.2	µg/L	----	5 µg/L	90.1	63.3	117
		0.5	µg/L	<0.5	----	----	----	----
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	----	5 µg/L	67.8	59.9	118
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	----	5 µg/L	71.2	61.2	117
		1	µg/L	<1.0	----	----	----	----

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2304026) - continued								
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	----	5 µg/L	69.5	59.1	118
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	1	µg/L	<1.0	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2304035)								
EP075(SIM): Naphthalene	91-20-3	0.2	µg/L	----	5 µg/L	75.0	58.6	119
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Acenaphthylene	208-96-8	0.2	µg/L	----	5 µg/L	89.4	63.6	114
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Acenaphthene	83-32-9	0.2	µg/L	----	5 µg/L	76.4	62.2	113
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Fluorene	86-73-7	0.2	µg/L	----	5 µg/L	67.3	63.9	115
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Phenanthrene	85-01-8	0.2	µg/L	----	5 µg/L	72.6	62.6	116
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Anthracene	120-12-7	0.2	µg/L	----	5 µg/L	85.8	64.3	116
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Fluoranthene	206-44-0	0.2	µg/L	----	5 µg/L	89.9	63.6	118
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Pyrene	129-00-0	0.2	µg/L	----	5 µg/L	74.3	63.1	118
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Benz(a)anthracene	56-55-3	0.2	µg/L	----	5 µg/L	80.0	64.1	117
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Chrysene	218-01-9	0.2	µg/L	----	5 µg/L	109	62.5	116
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.2	µg/L	----	5 µg/L	110	61.7	119
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.2	µg/L	----	5 µg/L	88.5	61.7	117
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Benzo(a)pyrene	50-32-8	0.2	µg/L	----	5 µg/L	98.2	63.3	117
		0.5	µg/L	<0.5	----	----	----	----
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.2	µg/L	----	5 µg/L	75.7	59.9	118
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.2	µg/L	----	5 µg/L	81.6	61.2	117
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.2	µg/L	----	5 µg/L	93.2	59.1	118
		1	µg/L	<1.0	----	----	----	----
EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	1	µg/L	<1.0	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2304025)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	200 µg/L	79.7	58.9	131
EP071: C15 - C28 Fraction	----	100	µg/L	<100	250 µg/L	125	73.9	138

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2304025) - continued								
EP071: C29 - C36 Fraction	----	50	µg/L	<50	200 µg/L	99.2	62.7	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2304033)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	200 µg/L	84.7	58.9	131
EP071: C15 - C28 Fraction	----	100	µg/L	<100	250 µg/L	123	73.9	138
EP071: C29 - C36 Fraction	----	50	µg/L	<50	200 µg/L	93.7	62.7	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2305777)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	95.3	75	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2304025)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	250 µg/L	76.5	58.9	131
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	350 µg/L	83.7	73.9	138
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	----	----	----	----
		50	µg/L	----	150 µg/L	108	62.7	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2304033)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	250 µg/L	71.6	58.9	131
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	350 µg/L	83.4	73.9	138
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	----	----	----	----
		50	µg/L	----	150 µg/L	106	62.7	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2305777)								
EP080: C6 - C10 Fraction	----	20	µg/L	<20	310 µg/L	96.7	75	127
EP080: BTEXN (QCLot: 2305777)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	90.8	70	124
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	109	66	132
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	87.7	70	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	95.6	69	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	79.3	72	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	119	70	124

Matrix Spike (MS) Report

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 parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2304517)							
ES1211235-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	102	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	99.2	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	102	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	105	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	94.0	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	100	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	93.8	70	130
EG005T: Total Metals by ICP-AES (QCLot: 2304519)							
ES1211388-010	BH05_0-0.05	EG005T: Arsenic	7440-38-2	50 mg/kg	102	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	100	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	102	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	105	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	101	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	102	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	101	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2304518)							
ES1211235-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	97.3	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2304520)							
ES1211388-010	BH05_0-0.05	EG035T: Mercury	7439-97-6	5 mg/kg	92.0	70	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 2301633)							
ES1211388-001	BH01_0-0.1	EP068: gamma-BHC	58-89-9	0.5 mg/kg	104	70	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	81.0	70	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	93.6	70	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	98.0	70	130
		EP068: Endrin	72-20-8	2 mg/kg	105	70	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	76.7	70	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2301633)							
ES1211388-001	BH01_0-0.1	EP068: Diazinon	333-41-5	0.5 mg/kg	108	70	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	100	70	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	86.3	70	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	84.6	70	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	99.6	70	130
EP075(SIM)A: Phenolic Compounds (QCLot: 2301430)							
ES1211388-001	BH01_0-0.1	EP075(SIM): Phenol	108-95-2	10 mg/kg	79.4	70	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	74.1	70	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP075(SIM)A: Phenolic Compounds (QCLot: 2301430) - continued							
ES1211388-001	BH01_0-0.1	EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	68.4	60	130
		EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	10 mg/kg	86.7	70	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	52.3	20	130
EP075(SIM)A: Phenolic Compounds (QCLot: 2301711)							
ES1211817-001	Anonymous	EP075(SIM): Phenol	108-95-2	10 mg/kg	76.4	70	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	70.7	70	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	64.7	60	130
		EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	10 mg/kg	72.0	70	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	30.9	20	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2301430)							
ES1211388-001	BH01_0-0.1	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	72.0	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	70.5	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2301711)							
ES1211817-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	71.4	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	71.7	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2301428)							
ES1211388-001	BH01_0-0.1	EP080: C6 - C9 Fraction	----	32.5 mg/kg	74.8	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2301429)							
ES1211388-001	BH01_0-0.1	EP071: C10 - C14 Fraction	----	640 mg/kg	94.1	73	137
		EP071: C15 - C28 Fraction	----	3140 mg/kg	90.0	53	131
		EP071: C29 - C36 Fraction	----	2860 mg/kg	63.8	52	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2301573)							
ES1211388-021	BH09_1.9-2.0	EP080: C6 - C9 Fraction	----	32.5 mg/kg	94.2	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2301710)							
ES1211817-001	Anonymous	EP071: C10 - C14 Fraction	----	640 mg/kg	105	73	137
		EP071: C15 - C28 Fraction	----	3140 mg/kg	126	53	131
		EP071: C29 - C36 Fraction	----	2860 mg/kg	101	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2301428)							
ES1211388-001	BH01_0-0.1	EP080: C6 - C10 Fraction	----	37.5 mg/kg	77.6	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2301429)							
ES1211388-001	BH01_0-0.1	EP071: >C10 - C16 Fraction	----	850 mg/kg	119	73	137
		EP071: >C16 - C34 Fraction	----	4800 mg/kg	74.2	53	131
		EP071: >C34 - C40 Fraction	----	2400 mg/kg	68.7	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2301573)							
ES1211388-021	BH09_1.9-2.0	EP080: C6 - C10 Fraction	----	37.5 mg/kg	99.4	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2301710)							
ES1211817-001	Anonymous	EP071: >C10 - C16 Fraction	----	850 mg/kg	125	73	137

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Spike Recovery (%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2301710) - continued							
ES1211817-001	Anonymous	EP071: >C16 - C34 Fraction	----	4800 mg/kg	116	53	131
		EP071: >C34 - C40 Fraction	----	2400 mg/kg	89.2	52	132
EP080: BTEXN (QCLot: 2301428)							
ES1211388-001	BH01_0-0.1	EP080: Benzene	71-43-2	2.5 mg/kg	78.5	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	74.6	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	76.4	70	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	74.7	70	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	79.3	70	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	70.7	70	130
EP080: BTEXN (QCLot: 2301573)							
ES1211388-021	BH09_1.9-2.0	EP080: Benzene	71-43-2	2.5 mg/kg	90.1	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	82.7	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	86.2	70	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	87.4	70	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	88.9	70	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	86.2	70	130

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Spike Recovery (%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EG020T: Total Metals by ICP-MS (QCLot: 2303628)							
ES1211388-033	RINSATE 02	EG020A-T: Arsenic	7440-38-2	1 mg/L	83.0	70	130
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	89.5	70	130
		EG020A-T: Chromium	7440-47-3	1 mg/L	87.3	70	130
		EG020A-T: Copper	7440-50-8	1 mg/L	83.2	70	130
		EG020A-T: Lead	7439-92-1	1 mg/L	92.4	70	130
		EG020A-T: Nickel	7440-02-0	1 mg/L	80.1	70	130
		EG020A-T: Zinc	7440-66-6	1 mg/L	81.9	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2302575)							
ES1211388-033	RINSATE 02	EG035T: Mercury	7439-97-6	0.010 mg/L	86.1	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2305777)							
ES1211293-001	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	81.0	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2305777)							
ES1211293-001	Anonymous	EP080: C6 - C10 Fraction	----	375 µg/L	84.3	70	130
EP080: BTEXN (QCLot: 2305777)							
ES1211293-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	88.7	70	130
		EP080: Toluene	108-88-3	25 µg/L	84.0	70	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080: BTEXN (QCLot: 2305777) - continued							
ES1211293-001	Anonymous	EP080: Ethylbenzene	100-41-4	25 µg/L	87.2	70	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	84.6	70	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	88.9	70	130
		EP080: Naphthalene	91-20-3	25 µg/L	88.6	70	130

Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **ES1211388**	Page	: 1 of 13
Client	: AECOM Australia Pty Ltd	Laboratory	: Environmental Division Sydney
Contact	: MS LUCY STUART	Contact	: Client Services
Address	: 17 WARABROOK BOULEVARDE PO BOX 73, HUNTER REGION MC NSW 2310 WARABROOK NSW, AUSTRALIA 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: lucy.stuart@aecom.com	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 4911 4900	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 4911 4999	Facsimile	: +61-2-8784 8500
Project	: 60266102-HUNTLEE	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: 153296-153300, 154953-154954	Date Samples Received	: 09-MAY-2012
Sampler	: JD	Issue Date	: 17-MAY-2012
Order number	: ----		
		No. of samples received	: 71
Quote number	: EN/004/11	No. of samples analysed	: 36

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers

Analysis Holding Time Compliance

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 precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content								
Soil Glass Jar - Unpreserved (EA055-103)								
BH01_0-0.1,	BH01_5.5-5.7,	**08-MAY-2012**	**----**	----	----	**14-MAY-2012**	22-MAY-2012	✓
BH02_0.4-0.5,	BH02_3.5-3.6,							
BH03_0.02-0.12,	BH03_0.8-0.9,							
BH03_4.1-4.3,	BH04_0.0-0.1,							
BH04_2.9-3.0,	QC03							
Soil Glass Jar - Unpreserved (EA055-103)								
BH05_0-0.05,	BH05_2.1-2.2,	**09-MAY-2012**	**----**	----	----	**14-MAY-2012**	23-MAY-2012	✓
BH06_0-0.05,	BH06_1.9-2.0,							
BH07_0.05-0.15,	BH07_0.4-0.5,							
BH07_1.9-2.0,	BH08_0-0.05,							
BH08_0.4-0.5,	BH08_1.9-2.0,							
BH09_0-0.05,	BH09_1.9-2.0,							
BH10_0-0.05,	BH10_1.7-1.8,							
BH11_0.03-0.13,	BH11_1.9-2.0,							
QC05,	QC07,							
QC08								
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples								
Snap Lock Bag (EA200)								
BH08_0-0.05,	BH11_0.03-0.13	**09-MAY-2012**	**---**	05-NOV-2012	----	**17-MAY-2012**	13-NOV-2012	✓
Soil Glass Jar - Unpreserved (EA200)								
SP01,	SP02	**09-MAY-2012**	**---**	05-NOV-2012	----	**17-MAY-2012**	13-NOV-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG005T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
BH01_0-0.1, BH01_5.5-5.7, BH02_0.4-0.5, BH02_3.5-3.6, BH03_0.02-0.12, BH03_0.8-0.9, BH03_4.1-4.3, BH04_0.0-0.1, BH04_2.9-3.0, QC03	**08-MAY-2012**	**15-MAY-2012**	04-NOV-2012	✓	**15-MAY-2012**	04-NOV-2012	✓
Soil Glass Jar - Unpreserved (EG005T)							
BH05_0-0.05, BH05_2.1-2.2, BH06_0-0.05, BH06_1.9-2.0, BH07_0.05-0.15, BH07_0.4-0.5, BH07_1.9-2.0, BH08_0-0.05, BH08_0.4-0.5, BH08_1.9-2.0, BH09_0-0.05, BH09_1.9-2.0, BH10_0-0.05, BH10_1.7-1.8, BH11_0.03-0.13, BH11_1.9-2.0, QC05, QC07, QC08	**09-MAY-2012**	**15-MAY-2012**	05-NOV-2012	✓	**15-MAY-2012**	05-NOV-2012	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
BH01_0-0.1, BH01_5.5-5.7, BH02_0.4-0.5, BH02_3.5-3.6, BH03_0.02-0.12, BH03_0.8-0.9, BH03_4.1-4.3, BH04_0.0-0.1, BH04_2.9-3.0, QC03	**08-MAY-2012**	**15-MAY-2012**	05-JUN-2012	✓	**16-MAY-2012**	05-JUN-2012	✓
Soil Glass Jar - Unpreserved (EG035T)							
BH05_0-0.05, BH05_2.1-2.2, BH06_0-0.05, BH06_1.9-2.0, BH07_0.05-0.15, BH07_0.4-0.5, BH07_1.9-2.0, BH08_0-0.05, BH08_0.4-0.5, BH08_1.9-2.0, BH09_0-0.05, BH09_1.9-2.0, BH10_0-0.05, BH10_1.7-1.8, BH11_0.03-0.13, BH11_1.9-2.0, QC05, QC07, QC08	**09-MAY-2012**	**15-MAY-2012**	06-JUN-2012	✓	**16-MAY-2012**	06-JUN-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068) BH01_0-0.1, BH02_0.4-0.5, BH03_0.02-0.12, BH04_0.0-0.1, QC03	**08-MAY-2012**	**14-MAY-2012**	22-MAY-2012	✓	**15-MAY-2012**	23-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP068) BH05_0-0.05, BH05_2.1-2.2, BH06_0-0.05, BH07_0.05-0.15, BH07_0.4-0.5, BH08_0-0.05, BH08_0.4-0.5, BH09_0-0.05, BH10_0-0.05, BH11_0.03-0.13, QC05, QC07, QC08	**09-MAY-2012**	**14-MAY-2012**	23-MAY-2012	✓	**15-MAY-2012**	23-JUN-2012	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068) BH01_0-0.1, BH02_0.4-0.5, BH03_0.02-0.12, BH04_0.0-0.1, QC03	**08-MAY-2012**	**14-MAY-2012**	22-MAY-2012	✓	**15-MAY-2012**	23-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP068) BH05_0-0.05, BH05_2.1-2.2, BH06_0-0.05, BH07_0.05-0.15, BH07_0.4-0.5, BH08_0-0.05, BH08_0.4-0.5, BH09_0-0.05, BH10_0-0.05, BH11_0.03-0.13, QC05, QC07, QC08	**09-MAY-2012**	**14-MAY-2012**	23-MAY-2012	✓	**15-MAY-2012**	23-JUN-2012	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft							
Soil Glass Jar - Unpreserved (EP071) QC03	**08-MAY-2012**	**14-MAY-2012**	22-MAY-2012	✓	**14-MAY-2012**	23-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP071) BH01_0-0.1, BH01_5.5-5.7, BH02_0.4-0.5, BH02_3.5-3.6, BH03_0.02-0.12, BH03_0.8-0.9, BH03_4.1-4.3, BH04_0.0-0.1, BH04_2.9-3.0	**08-MAY-2012**	**14-MAY-2012**	22-MAY-2012	✓	**15-MAY-2012**	23-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP071) BH09_1.9-2.0, BH10_0-0.05, BH10_1.7-1.8, BH11_0.03-0.13, BH11_1.9-2.0, QC05, QC07, QC08	**09-MAY-2012**	**14-MAY-2012**	23-MAY-2012	✓	**14-MAY-2012**	23-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP071) BH05_0-0.05, BH05_2.1-2.2, BH06_0-0.05, BH06_1.9-2.0, BH07_0.05-0.15, BH07_0.4-0.5, BH07_1.9-2.0, BH08_0-0.05, BH08_0.4-0.5, BH08_1.9-2.0, BH09_0-0.05	**09-MAY-2012**	**14-MAY-2012**	23-MAY-2012	✓	**15-MAY-2012**	23-JUN-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075(SIM)) QC03	**08-MAY-2012**	**14-MAY-2012**	22-MAY-2012	✓	**14-MAY-2012**	23-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) BH01_0-0.1, BH01_5.5-5.7, BH02_0.4-0.5, BH02_3.5-3.6, BH03_0.02-0.12, BH03_0.8-0.9, BH03_4.1-4.3, BH04_0.0-0.1, BH04_2.9-3.0	**08-MAY-2012**	**14-MAY-2012**	22-MAY-2012	✓	**16-MAY-2012**	23-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) BH09_1.9-2.0, BH10_0-0.05, BH10_1.7-1.8, BH11_0.03-0.13, BH11_1.9-2.0, QC05, QC07, QC08	**09-MAY-2012**	**14-MAY-2012**	23-MAY-2012	✓	**14-MAY-2012**	23-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) BH05_0-0.05, BH05_2.1-2.2, BH06_0-0.05, BH06_1.9-2.0, BH07_0.05-0.15, BH07_0.4-0.5, BH07_1.9-2.0, BH08_0-0.05, BH08_0.4-0.5, BH08_1.9-2.0, BH09_0-0.05	**09-MAY-2012**	**14-MAY-2012**	23-MAY-2012	✓	**16-MAY-2012**	23-JUN-2012	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) QC03	**08-MAY-2012**	**14-MAY-2012**	22-MAY-2012	✓	**14-MAY-2012**	23-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) BH01_0-0.1, BH01_5.5-5.7, BH02_0.4-0.5, BH02_3.5-3.6, BH03_0.02-0.12, BH03_0.8-0.9, BH03_4.1-4.3, BH04_0.0-0.1, BH04_2.9-3.0	**08-MAY-2012**	**14-MAY-2012**	22-MAY-2012	✓	**16-MAY-2012**	23-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) BH09_1.9-2.0, BH10_0-0.05, BH10_1.7-1.8, BH11_0.03-0.13, BH11_1.9-2.0, QC05, QC07, QC08	**09-MAY-2012**	**14-MAY-2012**	23-MAY-2012	✓	**14-MAY-2012**	23-JUN-2012	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) BH05_0-0.05, BH05_2.1-2.2, BH06_0-0.05, BH06_1.9-2.0, BH07_0.05-0.15, BH07_0.4-0.5, BH07_1.9-2.0, BH08_0-0.05, BH08_0.4-0.5, BH08_1.9-2.0, BH09_0-0.05	**09-MAY-2012**	**14-MAY-2012**	23-MAY-2012	✓	**16-MAY-2012**	23-JUN-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEX							
Soil Glass Jar - Unpreserved (EP080) QC03	**08-MAY-2012**	**14-MAY-2012**	22-MAY-2012	✓	**14-MAY-2012**	22-MAY-2012	✓
Soil Glass Jar - Unpreserved (EP080) BH01_0-0.1, BH01_5.5-5.7, BH02_0.4-0.5, BH02_3.5-3.6, BH03_0.02-0.12, BH03_0.8-0.9, BH03_4.1-4.3, BH04_0.0-0.1, BH04_2.9-3.0	**08-MAY-2012**	**14-MAY-2012**	22-MAY-2012	✓	**16-MAY-2012**	22-MAY-2012	✓
Soil Glass Jar - Unpreserved (EP080) BH09_1.9-2.0, BH10_0-0.05, BH10_1.7-1.8, BH11_0.03-0.13, BH11_1.9-2.0, QC05, QC07, QC08, TRIP BLANK, TRIP SPIKE, TSC	**09-MAY-2012**	**14-MAY-2012**	23-MAY-2012	✓	**14-MAY-2012**	23-MAY-2012	✓
Soil Glass Jar - Unpreserved (EP080) BH05_0-0.05, BH05_2.1-2.2, BH06_0-0.05, BH06_1.9-2.0, BH07_0.05-0.15, BH07_0.4-0.5, BH07_1.9-2.0, BH08_0-0.05, BH08_0.4-0.5, BH08_1.9-2.0, BH09_0-0.05	**09-MAY-2012**	**14-MAY-2012**	23-MAY-2012	✓	**16-MAY-2012**	23-MAY-2012	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) QC03	**08-MAY-2012**	**14-MAY-2012**	22-MAY-2012	✓	**14-MAY-2012**	22-MAY-2012	✓
Soil Glass Jar - Unpreserved (EP080) BH01_0-0.1, BH01_5.5-5.7, BH02_0.4-0.5, BH02_3.5-3.6, BH03_0.02-0.12, BH03_0.8-0.9, BH03_4.1-4.3, BH04_0.0-0.1, BH04_2.9-3.0	**08-MAY-2012**	**14-MAY-2012**	22-MAY-2012	✓	**16-MAY-2012**	22-MAY-2012	✓
Soil Glass Jar - Unpreserved (EP080) BH09_1.9-2.0, BH10_0-0.05, BH10_1.7-1.8, BH11_0.03-0.13, BH11_1.9-2.0, QC05, QC07, QC08, TRIP BLANK, TRIP SPIKE, TSC	**09-MAY-2012**	**14-MAY-2012**	23-MAY-2012	✓	**14-MAY-2012**	23-MAY-2012	✓
Soil Glass Jar - Unpreserved (EP080) BH05_0-0.05, BH05_2.1-2.2, BH06_0-0.05, BH06_1.9-2.0, BH07_0.05-0.15, BH07_0.4-0.5, BH07_1.9-2.0, BH08_0-0.05, BH08_0.4-0.5, BH08_1.9-2.0, BH09_0-0.05	**09-MAY-2012**	**14-MAY-2012**	23-MAY-2012	✓	**16-MAY-2012**	23-MAY-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft							
Soil Glass Jar - Unpreserved (EP080)							
QC03	**08-MAY-2012**	**14-MAY-2012**	22-MAY-2012	✓	**14-MAY-2012**	22-MAY-2012	✓
Soil Glass Jar - Unpreserved (EP080)							
BH01_0-0.1, BH01_5.5-5.7, BH02_0.4-0.5, BH02_3.5-3.6, BH03_0.02-0.12, BH03_0.8-0.9, BH03_4.1-4.3, BH04_0.0-0.1, BH04_2.9-3.0	**08-MAY-2012**	**14-MAY-2012**	22-MAY-2012	✓	**16-MAY-2012**	22-MAY-2012	✓
Soil Glass Jar - Unpreserved (EP080)							
BH09_1.9-2.0, BH10_0-0.05, BH10_1.7-1.8, BH11_0.03-0.13, BH11_1.9-2.0, QC05, QC07, QC08, TRIP BLANK, TRIP SPIKE, TSC	**09-MAY-2012**	**14-MAY-2012**	23-MAY-2012	✓	**14-MAY-2012**	23-MAY-2012	✓
Soil Glass Jar - Unpreserved (EP080)							
BH05_0-0.05, BH05_2.1-2.2, BH06_0-0.05, BH06_1.9-2.0, BH07_0.05-0.15, BH07_0.4-0.5, BH07_1.9-2.0, BH08_0-0.05, BH08_0.4-0.5, BH08_1.9-2.0, BH09_0-0.05	**09-MAY-2012**	**14-MAY-2012**	23-MAY-2012	✓	**16-MAY-2012**	23-MAY-2012	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020T: Total Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T)							
RINSATE 01	**08-MAY-2012**	**15-MAY-2012**	04-NOV-2012	✓	**15-MAY-2012**	04-NOV-2012	✓
Clear Plastic Bottle - Nitric Acid; Unspecified (EG020A-T)							
RINSATE 02	**09-MAY-2012**	**15-MAY-2012**	05-NOV-2012	✓	**15-MAY-2012**	05-NOV-2012	✓
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)							
RINSATE 01	**08-MAY-2012**	**----**	----	----	**15-MAY-2012**	05-JUN-2012	✓
Clear Plastic Bottle - Nitric Acid; Unspecified (EG035T)							
RINSATE 02	**09-MAY-2012**	**----**	----	----	**15-MAY-2012**	06-JUN-2012	✓
EP068A: Organochlorine Pesticides (OC)							
Amber Glass Bottle - Unpreserved (EP068)							
RINSATE 01	**08-MAY-2012**	**15-MAY-2012**	15-MAY-2012	✓	**16-MAY-2012**	24-JUN-2012	✓
Amber Glass Bottle - Unpreserved (EP068)							
RINSATE 02	**09-MAY-2012**	**15-MAY-2012**	16-MAY-2012	✓	**16-MAY-2012**	24-JUN-2012	✓
EP068B: Organophosphorus Pesticides (OP)							
Amber Glass Bottle - Unpreserved (EP068)							
RINSATE 01	**08-MAY-2012**	**15-MAY-2012**	15-MAY-2012	✓	**16-MAY-2012**	24-JUN-2012	✓
Amber Glass Bottle - Unpreserved (EP068)							
RINSATE 02	**09-MAY-2012**	**15-MAY-2012**	16-MAY-2012	✓	**16-MAY-2012**	24-JUN-2012	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071) RINSATE 01	**08-MAY-2012**	**15-MAY-2012**	15-MAY-2012	✓	**16-MAY-2012**	24-JUN-2012	✓
Amber Glass Bottle - Unpreserved (EP071) RINSATE 02	**09-MAY-2012**	**15-MAY-2012**	16-MAY-2012	✓	**16-MAY-2012**	24-JUN-2012	✓
EP075(SIM)A: Phenolic Compounds							
Amber Glass Bottle - Unpreserved (EP075(SIM)) RINSATE 01	**08-MAY-2012**	**15-MAY-2012**	15-MAY-2012	✓	**16-MAY-2012**	24-JUN-2012	✓
Amber Glass Bottle - Unpreserved (EP075(SIM)) RINSATE 02	**09-MAY-2012**	**15-MAY-2012**	16-MAY-2012	✓	**16-MAY-2012**	24-JUN-2012	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM)) RINSATE 01	**08-MAY-2012**	**15-MAY-2012**	15-MAY-2012	✓	**16-MAY-2012**	24-JUN-2012	✓
Amber Glass Bottle - Unpreserved (EP075(SIM)) RINSATE 02	**09-MAY-2012**	**15-MAY-2012**	16-MAY-2012	✓	**16-MAY-2012**	24-JUN-2012	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080) RINSATE 01	**08-MAY-2012**	**16-MAY-2012**	22-MAY-2012	✓	**16-MAY-2012**	22-MAY-2012	✓
Amber VOC Vial - Sulfuric Acid (EP080) RINSATE 02	**09-MAY-2012**	**16-MAY-2012**	23-MAY-2012	✓	**16-MAY-2012**	23-MAY-2012	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber VOC Vial - Sulfuric Acid (EP080) RINSATE 01	**08-MAY-2012**	**16-MAY-2012**	22-MAY-2012	✓	**16-MAY-2012**	22-MAY-2012	✓
Amber VOC Vial - Sulfuric Acid (EP080) RINSATE 02	**09-MAY-2012**	**16-MAY-2012**	23-MAY-2012	✓	**16-MAY-2012**	23-MAY-2012	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055-103	4	39	10.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	4	32	12.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	2	19	10.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	4	31	12.9	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	4	40	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	4	34	11.8	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	4	40	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	2	32	6.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	19	5.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	31	6.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	2	40	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	2	34	5.9	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	40	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	2	32	6.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	19	5.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	31	6.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	2	40	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	2	34	5.9	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	40	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	2	32	6.3	5.0	✓	ALS QCS3 requirement
Pesticides by GCMS	EP068	1	19	5.3	5.0	✓	ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	31	6.5	5.0	✓	ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	2	40	5.0	5.0	✓	ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	2	34	5.9	5.0	✓	ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	40	5.0	5.0	✓	ALS QCS3 requirement

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Total Mercury by FIMS	EG035T	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite A	EG020A-T	1	5	20.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	19	10.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	2	17	11.8	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	2	12	16.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Control Samples (LCS) - Continued							
Total Mercury by FIMS	EG035T	1	20	**5.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite A	EG020A-T	1	5	**20.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	2	36	**5.6**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	19	**5.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	2	17	**11.8**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	2	12	**16.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	**5.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite A	EG020A-T	1	5	**20.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	2	36	**5.6**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	19	**5.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Total Mercury by FIMS	EG035T	1	20	**5.0**	**5.0**	✓	ALS QCS3 requirement
Total Metals by ICP-MS - Suite A	EG020A-T	1	5	**20.0**	**5.0**	✓	ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	19	**5.3**	**5.0**	✓	ALS QCS3 requirement

Brief Method Summaries

The analytical procedures used by the Environmental Division 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 in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055-103	SOIL	A gravimetric procedure based on weight loss over a 12 hour drying period at 103-105 degrees C. This method is compliant with NEPM (2010 Draft) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Asbestos Identification in bulk solids	EA200	SOIL	AS 4964 - 2004 Method for the qualitative identification of asbestos in bulk samples
Total Metals by ICP-AES	EG005T	SOIL	(APHA 21st ed., 3120; USEPA SW 846 - 6010) (ICPAES) Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (1999) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	AS 3550, APHA 21st ed., 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3)
Pesticides by GCMS	EP068	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (1999) Schedule B(3) (Method 504,505)
TPH - Semivolatile Fraction	EP071	SOIL	(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)
PAH/Phenols (SIM)	EP075(SIM)	SOIL	(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)
TPH Volatiles/BTEX	EP080	SOIL	(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)
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	(APHA 21st ed., 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020): The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG035T	WATER	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Pesticides by GCMS	EP068	WATER	USEPA SW 846 - 8270D Sample extracts are analysed 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)
TPH - Semivolatile Fraction	EP071	WATER	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)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	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)

Analytical Methods	Method	Matrix	Method Descriptions
TPH Volatiles/BTEX	EP080	WATER	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. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	USEPA 200.2 Mod. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (1999) Schedule B(3) (Method 202)
Methanolic Extraction of Soils for Purge and Trap	* ORG16	SOIL	(USEPA SW 846 - 5030A) 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids (Option A - Concentrating)	ORG17A	SOIL	In-house, Mechanical agitation (tumbler). 20g of sample, Na2SO4 and surrogate are extracted with 150mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Tumbler Extraction of Solids (Option B - Non-concentrating)	ORG17B	SOIL	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.
Digestion for Total Recoverable Metals	EN25	WATER	USEPA SW846-3005 Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Separatory Funnel Extraction of Liquids	ORG14	WATER	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.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for sparging.

Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Laboratory Control Spike (LCS) Recoveries							
EG005T: Total Metals by ICP-AES	2729235-032	----	**Copper**	7440-50-8	114 %	90.1-114%	**Recovery greater than upper control limit**
EG005T: Total Metals by ICP-AES	2729235-032	----	**Zinc**	7440-66-6	114 %	88.9-112%	**Recovery greater than upper control limit**

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Laboratory Control Spike (LCS) Recoveries							
EG020T: Total Metals by ICP-MS	2728482-003	----	**Chromium**	7440-47-3	91.3 %	92-114%	**Recovery less than lower control limit**
EG020T: Total Metals by ICP-MS	2728482-003	----	**Nickel**	7440-02-0	89.1 %	91-113%	**Recovery less than lower control limit**

- **For all matrices, no Method Blank value outliers occur.**
- **For all matrices, no Duplicate outliers occur.**
- **For all matrices, no Matrix Spike outliers occur.**

Regular Sample Surrogates

Sub-Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP080S: TPH(V)/BTEX Surrogates	ES1211388-006	BH03_0.8-0.9	**1.2-Dichloroethane-D4**	17060-07-0	134 %	72.8-133.2 %	**Recovery greater than upper data quality objective**

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

- **No Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

- **No Quality Control Sample Frequency Outliers exist.**

Hayley Worthington

Fadi
23/5/12

From: Wael Saleh
Sent: Tuesday, 22 May 2012 4:23 PM
To: Hayley Worthington; Dianne Blane; Jennifer Flint
Subject: FW: ES1211388

Hi Ladies,

Can you please send down samples SP01 and SP02 in this WO. Client wants to add analysis.

Regards

How was your customer experience? Please send us your feedback

Wael Saleh
CREATION/COMMITTAL COORDINATOR

ALS Environmental

277 Woodpark Road, Smithfield, NSW, 2164

P: +61 2 8784 8555
F: +61 2 8784 8500
E: wael.saleh@alsglobal.com

Winner of the inaugural CARE Award 2011 – Sustainable Technology & Innovation:
Reduction in Sample Volumes – Improving quality, safety, efficiency and sustainability in environmental practices

www.alsglobal.com

Environmental Division
Sydney
Work Order
ES1212728

Telephone : +61-2-8784 8555

From: Fadi Soro
Sent: Tuesday, 22 May 2012 4:09 PM
To: Wael Saleh
Subject: RE: ES1211388

These 2 samples only required asbestos. So they would be in Newcastle.

Regards

Fadi

From: Wael Saleh
Sent: Tuesday, 22 May 2012 3:53 PM
To: Fadi Soro
Subject: FW: ES1211388
Importance: High

Hi Fadi,

Hayley Worthington

FADI
23/5/12

From: Wael Saleh
Sent: Tuesday, 22 May 2012 4:23 PM
To: Hayley Worthington; Dianne Blane; Jennifer Flint
Subject: FW: ES1211388

Hi Ladies,

Can you please send down samples SP01 and SP02 in this WO. Client wants to add analysis.

Regards

Wael Saleh
CREATION/COMMITTAL COORDINATOR

ALS Environmental

277 Woodpark Road, Smithfield, NSW, 2164

P: +61 2 8784 8555
F: +61 2 8784 8500
E: wael.saleh@alsglobal.com

Environmental Division
Sydney
Work Order
ES1212728

Telephone : +61-2-8784 8555

From: Fadi Soro
Sent: Tuesday, 22 May 2012 4:09 PM
To: Wael Saleh
Subject: RE: ES1211388

These 2 samples only required asbestos. So they would be in Newcastle.

Regards

Fadi

From: Wael Saleh
Sent: Tuesday, 22 May 2012 3:53 PM
To: Fadi Soro
Subject: FW: ES1211388
Importance: High

Hi Fadi,

Please rebatch this ASAP

How was your customer experience? Please send us your feedback

Wael Saleh
CREATION/COMMITTAL COORDINATOR

ALS Environmental

277 Woodpark Road, Smithfield, NSW, 2164

P: +61 2 8784 8555
F: +61 2 8784 8500
E: wael.saleh@alsglobal.com

From: Hayley Worthington
Sent: Tuesday, 22 May 2012 3:43 PM
To: Wael Saleh; Samples Sydney; Fadi Soro; Hitesh Patel; Lucy.Stuart@aecom.com
Cc: Barbara Hanna; Jennifer Flint
Subject: FW: ES1211388
Importance: High

HI Wael,

Please see additional analysis request for ES1211388 below.

Lucy – do you want this rebatched on a separate COA, or would you prefer for the original WO to be amended and these analytes added?

Regards,

How was your customer experience? Please send us your feedback

Hayley Worthington

CLIENT SERVICES OFFICER

ALS | Environmental

Address
5 Rosegum Road, Warabrook, NSW, 2304
PHONE +61 2 4968 9433

FAX +61 2 4968 0349

www.alsglobal.com

From: Stuart, Lucy [mailto:Lucy.Stuart@aecom.com]
Sent: Tuesday, 22 May 2012 3:40 PM
To: Hayley Worthington
Subject: ES1211388

Hi Hayley,

Can you please schedule SP01 and SP02 for suite numbers S27 and S12 on ES1211388?

Thanks,

Lucy

Lucy Stuart
Senior Environmental Scientist
D +61 2 4911 4963 M +61 488 114 972
Lucy.Stuart@aecom.com

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www.aecom.com

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **ES1212728**	Page	: 1 of 7
Client	: **AECOM Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: MS LUCY STUART	Contact	: Client Services
Address	: 17 WARABROOK BOULEVARDE PO BOX 73, HUNTER REGION MC NSW 2310 WARABROOK NSW, AUSTRALIA 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: lucy.stuart@aecom.com	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 4911 4900	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 4911 4999	Facsimile	: +61-2-8784 8500
Project	: 60266102-HUNTLEE	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: Rebatch of ES1212728		
C-O-C number	: ----	Date Samples Received	: 23-MAY-2012
Sampler	: ----	Issue Date	: 31-MAY-2012
Site	: ----		
		No. of samples received	: 2
Quote number	: EN/004/11	No. of samples analysed	: 2

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Edwandy Fadjar	Organic Coordinator	Sydney Organics
Ramal Ganeshan		Sydney Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SP01	SP02	----	----	----
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	----	----	----
				ES1212728-001	ES1212728-002	----	----	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**8.6**	**6.1**	----	----	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**26**	**6**	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	----	----
Chromium	7440-47-3	2	mg/kg	**12**	**19**	----	----	----
Copper	7440-50-8	5	mg/kg	**457**	<5	----	----	----
Lead	7439-92-1	5	mg/kg	**1580**	**12**	----	----	----
Nickel	7440-02-0	2	mg/kg	**18**	**5**	----	----	----
Zinc	7440-66-6	5	mg/kg	**280**	**15**	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SP01	SP02	----	----	----
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	----	----	----
				ES1212728-001	ES1212728-002	----	----	----
EP068B: Organophosphorus Pesticides (OP) - Continued								
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	----	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	----	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	----	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	----	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	----	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	----	----	----
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	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: SP01	SP02	----	----	----
				Client sampling date / time: 09-MAY-2012 15:00	09-MAY-2012 15:00	----	----	----
				ES1212728-001	ES1212728-002	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
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	----	----	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg	<0.5	<0.5	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	----	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	----	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	----	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	<50	<50	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	----	10	mg/kg	<10	<10	----	----	----
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	----	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	----	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg	<50	<50	----	----	----
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	----	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	----	----	----
EP080: BTEXN								
^ **Sum of BTEX**	----	0.2	mg/kg	<0.2	<0.2	----	----	----
^ **Total Xylenes**	1330-20-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	----	----	----
EP068S: Organochlorine Pesticide Surrogate								

Analytical Results

Sub-Matrix: SOIL				Client sample ID	SP01	SP02	----	----	----
				Client sampling date / time	09-MAY-2012 15:00	09-MAY-2012 15:00	----	----	----
Compound	CAS Number	LOR	Unit		ES1212728-001	ES1212728-002	----	----	----
EP068S: Organochlorine Pesticide Surrogate - Continued									
Dibromo-DDE	21655-73-2	0.1	%		82.0	82.8	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		91.3	68.7	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		96.9	88.9	----	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%		95.6	91.5	----	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%		93.7	80.2	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		98.2	92.8	----	----	----
Anthracene-d10	1719-06-8	0.1	%		103	102	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%		98.4	93.7	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		98.6	94.2	----	----	----
Toluene-D8	2037-26-5	0.1	%		106	96.3	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%		92.7	86.8	----	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	19.5	167.0
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	22.7	163.5
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	56.3	133.3
2-Chlorophenol-D4	93951-73-6	53.8	133.8
2.4.6-Tribromophenol	118-79-6	23.1	134.9
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	58.9	132.7
Anthracene-d10	1719-06-8	55.0	137.6
4-Terphenyl-d14	1718-51-0	54.0	147.8
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	72.8	133.2
Toluene-D8	2037-26-5	73.9	132.1
4-Bromofluorobenzene	460-00-4	71.6	130.0

Environmental Division

QUALITY CONTROL REPORT

Work Order	: **ES1212728**	Page	: 1 of 11
Client	: **AECOM Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: MS LUCY STUART	Contact	: Client Services
Address	: 17 WARABROOK BOULEVARDE PO BOX 73, HUNTER REGION MC NSW 2310 WARABROOK NSW, AUSTRALIA 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: lucy.stuart@aecom.com	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 4911 4900	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 4911 4999	Facsimile	: +61-2-8784 8500
Project	: 60266102-HUNTLEE	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 23-MAY-2012
Sampler	: ----	Issue Date	: 31-MAY-2012
Order number	: Rebatch of ES1212728		
		No. of samples received	: 2
Quote number	: EN/004/11	No. of samples analysed	: 2

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Edwandy Fadjar	Organic Coordinator	Sydney Organics
Ramal Ganeshan		Sydney Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates 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%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EA055: Moisture Content (QC Lot: 2319874)									
ES1212728-002	SP02	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	6.1	6.1	0.0	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 2327543)									
ES1212629-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	14	14	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	23	23	0.0	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	17	18	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	7	7	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	73	75	2.7	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2327544)									
ES1212629-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2319809)									
ES1212728-001	SP01	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 2319809)									
ES1212728-001	SP01	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 2319809) - continued									
ES1212728-001	SP01	EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 2319812)									
ES1212728-001	SP01	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2.0	mg/kg	<2.0	<2.0	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2319812)									
ES1212728-001	SP01	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2319812) - continued									
ES1212728-001	SP01	EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2319720)									
ES1212728-001	SP01	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2319811)									
ES1212728-001	SP01	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2319720)									
ES1212728-001	SP01	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2319811)									
ES1212728-001	SP01	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080: BTEXN (QC Lot: 2319720)									
ES1212728-001	SP01	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

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

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 parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2327543)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	92.6	----	----
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	90.1	----	----
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	77.6	----	----
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	88.9	----	----
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	79.9	----	----
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.0 mg/kg	81.1	----	----
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	99.0	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2327544)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	82.6	----	----
EP068A: Organochlorine Pesticides (OC) (QCLot: 2319809)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	81.2	60.8	116
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	77.3	59.4	115
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	73.8	59.8	117
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	104	59.8	118
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	74.4	65.8	114
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	88.9	65.6	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	83.2	67	113
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	82.2	65.6	113
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	78.5	60.7	113
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	83.5	65.8	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	79.6	57.3	120
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	74.7	67.4	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	80.7	67.5	114
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.1	63	121
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	79.6	66.1	117
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	80.6	65.3	116
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	72.3	57.3	115
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	77.4	63.6	119
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	107	58.4	127
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	91.1	63.6	117
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	104	50.4	132
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2319809)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	68.4	25.5	124
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	87.2	10.1	159

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2319809) - continued								
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	76.3	2.88	149
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	83.5	48.6	126
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	87.4	64.9	111
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	77.8	65.1	111
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	105	61.4	113
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	78.6	60.4	127
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	73.6	64.7	110
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	83.4	64.2	111
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	105	60	116
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	79.1	64.8	111
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	80.8	61.4	123
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	75.5	64.3	114
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	82.2	45.5	128
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	81.2	65.4	111
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	86.0	62	116
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	103	59.5	119
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	72.6	29.8	137
EP075(SIM)A: Phenolic Compounds (QCLot: 2319812)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	4 mg/kg	95.1	73.9	115
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	4 mg/kg	81.1	80.2	115
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	4 mg/kg	80.2	76.8	114
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1.0	8 mg/kg	95.8	72	119
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	4 mg/kg	70.8	60.3	117
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	4 mg/kg	83.4	74.5	119
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	4 mg/kg	84.3	71.6	113
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	4 mg/kg	81.4	74.8	115
EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	4 mg/kg	89.2	76.4	114
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	4 mg/kg	64.4	62.2	115
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	4 mg/kg	81.6	68.9	112
EP075(SIM): Pentachlorophenol	87-86-5	1.0	mg/kg	<1.0	8 mg/kg	23.6	1.23	91.6
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2319812)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	4 mg/kg	97.3	81.9	113
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	4 mg/kg	105	79.6	113
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	4 mg/kg	88.7	81.5	112
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	4 mg/kg	99.0	79.9	112
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	4 mg/kg	97.9	79.4	114
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	4 mg/kg	95.0	81.1	112
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	4 mg/kg	108	78.8	113
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	4 mg/kg	108	78.9	113

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2319812) - continued								
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	4 mg/kg	92.6	77.2	112
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	4 mg/kg	97.1	79.8	114
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	4 mg/kg	88.9	71.8	118
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	4 mg/kg	93.5	74.2	117
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	4 mg/kg	101	76.4	113
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	4 mg/kg	80.0	71	113
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	4 mg/kg	81.9	71.7	113
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	4 mg/kg	82.2	72.4	114
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2319720)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	72.0	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2319811)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	99.0	59	131
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	75.3	74	138
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	92.0	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2319720)								
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	31 mg/kg	69.6	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2319811)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	250 mg/kg	92.8	59	131
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	90.8	74	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
		50	mg/kg	----	150 mg/kg	115	63	131
EP080: BTEXN (QCLot: 2319720)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	83.6	62	120
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	90.0	62	128
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	77.5	58	118
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	74.0	60	120
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	81.2	60	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	88.4	62	138

Matrix Spike (MS) Report

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 parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Spike Recovery (%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EG005T: Total Metals by ICP-AES (QCLot: 2327543)							

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2327543) - continued							
ES1212629-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	91.8	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	89.8	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	92.6	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	94.2	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	82.4	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	81.6	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	93.5	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2327544)							
ES1212629-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	88.0	70	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 2319809)							
ES1212728-001	SP01	EP068: gamma-BHC	58-89-9	0.5 mg/kg	99.0	70	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	95.9	70	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	93.5	70	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	102	70	130
		EP068: Endrin	72-20-8	2 mg/kg	108	70	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	73.9	70	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2319809)							
ES1212728-001	SP01	EP068: Diazinon	333-41-5	0.5 mg/kg	93.3	70	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	106	70	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	102	70	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	90.0	70	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	102	70	130
EP075(SIM)A: Phenolic Compounds (QCLot: 2319812)							
ES1212728-001	SP01	EP075(SIM): Phenol	108-95-2	10 mg/kg	99.9	70	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	82.5	70	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	85.6	60	130
		EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	10 mg/kg	91.6	70	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	79.0	20	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2319812)							
ES1212728-001	SP01	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	86.7	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	102	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2319720)							
ES1212728-001	SP01	EP080: C6 - C9 Fraction	----	32.5 mg/kg	86.3	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2319811)							
ES1212728-001	SP01	EP071: C10 - C14 Fraction	----	640 mg/kg	101	73	137
		EP071: C15 - C28 Fraction	----	3140 mg/kg	112	53	131
		EP071: C29 - C36 Fraction	----	2860 mg/kg	88.6	52	132

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Spike Recovery (%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2319720)							
ES1212728-001	SP01	EP080: C6 - C10 Fraction	----	37.5 mg/kg	84.5	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2319811)							
ES1212728-001	SP01	EP071: >C10 - C16 Fraction	----	850 mg/kg	113	73	137
		EP071: >C16 - C34 Fraction	----	4800 mg/kg	103	53	131
		EP071: >C34 - C40 Fraction	----	2400 mg/kg	94.9	52	132
EP080: BTEXN (QCLot: 2319720)							
ES1212728-001	SP01	EP080: Benzene	71-43-2	2.5 mg/kg	82.8	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	85.5	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	81.2	70	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	79.8	70	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	83.0	70	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	77.7	70	130

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

The quality control term Matrix Spike (MS) and Matrix Spike Duplicate (MSD) refers to intralaboratory split samples spiked with a representative set of target analytes. The purpose of these QC parameters are to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report: Spike Concentration	Spike Recovery (%): MS	Spike Recovery (%): MSD	Recovery Limits (%): Low	Recovery Limits (%): High	RPDs (%): Value	RPDs (%): Control Limit
EG005T: Total Metals by ICP-AES (QCLot: 2327543)										
ES1212629-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	91.8	----	70	130	----	----
		EG005T: Cadmium	7440-43-9	50 mg/kg	89.8	----	70	130	----	----
		EG005T: Chromium	7440-47-3	50 mg/kg	92.6	----	70	130	----	----
		EG005T: Copper	7440-50-8	250 mg/kg	94.2	----	70	130	----	----
		EG005T: Lead	7439-92-1	250 mg/kg	82.4	----	70	130	----	----
		EG005T: Nickel	7440-02-0	50 mg/kg	81.6	----	70	130	----	----
		EG005T: Zinc	7440-66-6	250 mg/kg	93.5	----	70	130	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2327544)										
ES1212629-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	88.0	----	70	130	----	----
EP068A: Organochlorine Pesticides (OC) (QCLot: 2319809)										
ES1212728-001	SP01	EP068: gamma-BHC	58-89-9	0.5 mg/kg	99.0	----	70	130	----	----
		EP068: Heptachlor	76-44-8	0.5 mg/kg	95.9	----	70	130	----	----
		EP068: Aldrin	309-00-2	0.5 mg/kg	93.5	----	70	130	----	----
		EP068: Dieldrin	60-57-1	0.5 mg/kg	102	----	70	130	----	----
		EP068: Endrin	72-20-8	2 mg/kg	108	----	70	130	----	----
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	73.9	----	70	130	----	----

Sub-Matrix: **SOIL**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	MSD	Low	High	Value	Control Limit
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2319809)										
ES1212728-001	SP01	EP068: Diazinon	333-41-5	0.5 mg/kg	93.3	----	70	130	----	----
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	106	----	70	130	----	----
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	102	----	70	130	----	----
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	90.0	----	70	130	----	----
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	102	----	70	130	----	----
EP075(SIM)A: Phenolic Compounds (QCLot: 2319812)										
ES1212728-001	SP01	EP075(SIM): Phenol	108-95-2	10 mg/kg	99.9	----	70	130	----	----
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	82.5	----	70	130	----	----
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	85.6	----	60	130	----	----
		EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	10 mg/kg	91.6	----	70	130	----	----
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	79.0	----	20	130	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2319812)										
ES1212728-001	SP01	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	86.7	----	70	130	----	----
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	102	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2319720)										
ES1212728-001	SP01	EP080: C6 - C9 Fraction	----	32.5 mg/kg	86.3	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2319811)										
ES1212728-001	SP01	EP071: C10 - C14 Fraction	----	640 mg/kg	101	----	73	137	----	----
		EP071: C15 - C28 Fraction	----	3140 mg/kg	112	----	53	131	----	----
		EP071: C29 - C36 Fraction	----	2860 mg/kg	88.6	----	52	132	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2319720)										
ES1212728-001	SP01	EP080: C6 - C10 Fraction	----	37.5 mg/kg	84.5	----	70	130	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2319811)										
ES1212728-001	SP01	EP071: >C10 - C16 Fraction	----	850 mg/kg	113	----	73	137	----	----
		EP071: >C16 - C34 Fraction	----	4800 mg/kg	103	----	53	131	----	----
		EP071: >C34 - C40 Fraction	----	2400 mg/kg	94.9	----	52	132	----	----
EP080: BTEXN (QCLot: 2319720)										
ES1212728-001	SP01	EP080: Benzene	71-43-2	2.5 mg/kg	82.8	----	70	130	----	----
		EP080: Toluene	108-88-3	2.5 mg/kg	85.5	----	70	130	----	----
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	81.2	----	70	130	----	----
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	79.8	----	70	130	----	----
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	83.0	----	70	130	----	----
		EP080: Naphthalene	91-20-3	2.5 mg/kg	77.7	----	70	130	----	----

Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **ES1212728**	Page	: 1 of 5
Client	: AECOM Australia Pty Ltd	Laboratory	: Environmental Division Sydney
Contact	: MS LUCY STUART	Contact	: Client Services
Address	: 17 WARABROOK BOULEVARDE PO BOX 73, HUNTER REGION MC NSW 2310 WARABROOK NSW, AUSTRALIA 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: lucy.stuart@aecom.com	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 4911 4900	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 4911 4999	Facsimile	: +61-2-8784 8500
Project	: 60266102-HUNTLEE	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 23-MAY-2012
Sampler	: ----	Issue Date	: 31-MAY-2012
Order number	: Rebatch of ES1212728		
		No. of samples received	: 2
Quote number	: EN/004/11	No. of samples analysed	: 2

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers

Analysis Holding Time Compliance

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 precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content							
Lab Split: Managed Moisture for Dry Weight Det. (EA055-103)							
SP01, SP02	**09-MAY-2012**	**----**	----	----	**23-MAY-2012**	05-NOV-2012	✓
EG005T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
SP01, SP02	**09-MAY-2012**	**29-MAY-2012**	05-NOV-2012	✓	**29-MAY-2012**	05-NOV-2012	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
SP01, SP02	**09-MAY-2012**	**29-MAY-2012**	06-JUN-2012	✓	**29-MAY-2012**	06-JUN-2012	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
SP01, SP02	**09-MAY-2012**	**23-MAY-2012**	23-MAY-2012	✓	**25-MAY-2012**	02-JUL-2012	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068)							
SP01, SP02	**09-MAY-2012**	**23-MAY-2012**	23-MAY-2012	✓	**25-MAY-2012**	02-JUL-2012	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft							
Soil Glass Jar - Unpreserved (EP071)							
SP01, SP02	**09-MAY-2012**	**23-MAY-2012**	23-MAY-2012	✓	**24-MAY-2012**	02-JUL-2012	✓
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075(SIM))							
SP01, SP02	**09-MAY-2012**	**23-MAY-2012**	23-MAY-2012	✓	**25-MAY-2012**	02-JUL-2012	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
SP01, SP02	**09-MAY-2012**	**23-MAY-2012**	23-MAY-2012	✓	**25-MAY-2012**	02-JUL-2012	✓
EP080: BTEX							
Soil Glass Jar - Unpreserved (EP080)							
SP01, SP02	**09-MAY-2012**	**23-MAY-2012**	23-MAY-2012	✓	**23-MAY-2012**	23-MAY-2012	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
SP01, SP02	**09-MAY-2012**	**23-MAY-2012**	23-MAY-2012	✓	**23-MAY-2012**	23-MAY-2012	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft							
Soil Glass Jar - Unpreserved (EP080)							
SP01, SP02	**09-MAY-2012**	**23-MAY-2012**	23-MAY-2012	✓	**23-MAY-2012**	23-MAY-2012	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055-103	1	3	**33.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	1	5	**20.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	2	**50.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	7	**14.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	7	**14.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	5	**20.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	5	**20.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	5	**20.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	2	**50.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	7	**14.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	7	**14.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	5	**20.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	5	**20.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	5	**20.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	2	**50.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	7	**14.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	7	**14.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	5	**20.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	5	**20.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	5	**20.0**	**5.0**	✓	ALS QCS3 requirement
Pesticides by GCMS	EP068	1	2	**50.0**	**5.0**	✓	ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	7	**14.3**	**5.0**	✓	ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	7	**14.3**	**5.0**	✓	ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	5	**20.0**	**5.0**	✓	ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	5	**20.0**	**5.0**	✓	ALS QCS3 requirement

Brief Method Summaries

The analytical procedures used by the Environmental Division 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 in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055-103	SOIL	A gravimetric procedure based on weight loss over a 12 hour drying period at 103-105 degrees C. This method is compliant with NEPM (2010 Draft) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Total Metals by ICP-AES	EG005T	SOIL	(APHA 21st ed., 3120; USEPA SW 846 - 6010) (ICPAES) Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (1999) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	AS 3550, APHA 21st ed., 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3)
Pesticides by GCMS	EP068	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (1999) Schedule B(3) (Method 504,505)
TPH - Semivolatile Fraction	EP071	SOIL	(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)
PAH/Phenols (SIM)	EP075(SIM)	SOIL	(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)
TPH Volatiles/BTEX	EP080	SOIL	(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)

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	USEPA 200.2 Mod. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (1999) Schedule B(3) (Method 202)
Methanolic Extraction of Soils for Purge and Trap	* ORG16	SOIL	(USEPA SW 846 - 5030A) 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids (Option A - Concentrating)	ORG17A	SOIL	In-house, Mechanical agitation (tumbler). 20g of sample, Na2SO4 and surrogate are extracted with 150mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Tumbler Extraction of Solids (Option B - Non-concentrating)	ORG17B	SOIL	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.

Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW 846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

- **For all matrices, no Method Blank value outliers occur.**
- **For all matrices, no Duplicate outliers occur.**
- **For all matrices, no Laboratory Control outliers occur.**
- **For all matrices, no Matrix Spike outliers occur.**

Regular Sample Surrogates

- **For all regular sample matrices, no surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

- **No Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

- **No Quality Control Sample Frequency Outliers exist.**

3699-702

Fadi Soro

FADI 23/5/12 4pm

From: Hayley Worthington
Sent: Wednesday, 23 May 2012 3:22 PM
To: Wael Saleh; Samples Sydney; Fadi Soro
Cc: Hitesh Patel; Stuart, Lucy; Barbara Hanna
Subject: FW: 60266102

Importance: High

HI Wael

Lucy would like the samples below DI leached an analysed for TPH & 8 metals as per below.

Can you let me know WO number when assigned, or contact Lucy if there are any issues

Thanks

Regards,

How was your customer experience? Please send us your feedback

Hayley Worthington

CLIENT SERVICES OFFICER

ALS | Environmental

Address
5 Rosegum Road, Warabrook, NSW, 2304
PHONE +61 2 4968 9433

FAX +61 2 4968 0349

Winner of the inaugural CARE Award 2011 - Sustainable Technology & Innovation:
Reduction in Sample Volumes - Improving quality, safety, efficiency and sustainability in environmental practices

www.alsglobal.com

From: Stuart, Lucy [mailto:Lucy.Stuart@aecom.com]
Sent: Wednesday, 23 May 2012 2:42 PM
To: Hayley Worthington
Subject: 60266102

Environmental Division
Sydney
Work Order
ES1212800

Telephone : +61-2-8784 8555

Hi Hayley,

Could you arrange for DI leachate preparation and analysis for TPH and Standard 8 Metals of the following samples:

ES1211388: 3699 - 707

5 BH03 0.02-0.12 (1)

6 BH03 0.8-0.9 (2)

8 BH04 0-0.1 (3)

9 BH04 2.9-3 (4)

24 BH11 0.03-0.13 (5)

25 BH11 1.9-2.0 (6)

10 BH05 0-0.05 (7)

11 BH05 2.1-2.2 (8)

ES1210707: 3614

6 Grab06 (9)

Thanks,

Lucy

Lucy Stuart
Senior Environmental Scientist
D +61 2 4911 4963 M +61 488 114 972
Lucy.Stuart@aecom.com

AECOM
17 Warabrook Boulevard, Warabrook, NSW 2304
PO Box 73 Hunter Region MC NSW 2310
T +61 2 4911 4900 F +61 2 4911 4999
www.aecom.com

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **ES1212800**	Page	: 1 of 6
Client	: **AECOM Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: MS LUCY STUART	Contact	: Jennifer Cullen
Address	: PO BOX 73 HUNTER REGION MC HRMC NSW NSW 2310	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: lucy.stuart@aecom.com	E-mail	: jennifer.cullen@alsglobal.com
Telephone	: +61 02 49114900	Telephone	: +61 2 8784 8509
Facsimile	: +61 02 49114999	Facsimile	: +61 2 8784 8500
Project	: 60266102	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: REBATCH 0F ES1211388/ES1210707		
C-O-C number	: ----	Date Samples Received	: 23-MAY-2012
Sampler	: ----	Issue Date	: 31-MAY-2012
Site	: ----		
		No. of samples received	: 9
Quote number	: EN/004/10	No. of samples analysed	: 9

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Organics
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: BH03 0.02-0.12	BH03 0.8-0.9	BH04 0-0.1	BH04 2.9-3	BH11 0.03-0.13
				Client sampling date / time: 25-MAY-2012 12:00	25-MAY-2012 12:00	25-MAY-2012 12:00	25-MAY-2012 12:00	25-MAY-2012 12:00
				ES1212800-001	ES1212800-002	ES1212800-003	ES1212800-004	ES1212800-005
EG020W: Water Leachable Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	**0.008**	**0.005**	**0.003**	**0.006**	**0.002**
Cadmium	7440-43-9	0.0001	mg/L	**0.0002**	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	**0.085**	**0.085**	**0.024**	**0.110**	**0.013**
Copper	7440-50-8	0.001	mg/L	**0.017**	**0.025**	**0.012**	**0.081**	**0.004**
Lead	7439-92-1	0.001	mg/L	**0.062**	**0.030**	**0.010**	**0.022**	**0.006**
Nickel	7440-02-0	0.001	mg/L	**0.033**	**0.028**	**0.036**	**0.188**	**0.004**
Zinc	7440-66-6	0.005	mg/L	**1.38**	**1.25**	**0.270**	**0.880**	**0.652**
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	**0.0001**	<0.0001	<0.0001	<0.0001
EP080/071: Total Petroleum Hydrocarbons								
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	50	µg/L	<50	<50	<50	<50	<50
^ **C10 - C36 Fraction (sum)**	----	50	µg/L	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
>C10 - C16 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
>C16 - C34 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L	<100	<100	<100	<100	<100

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: BH11 1.9-2.0	BH05 0-0.05	BH05 2.1-2.2	GRAB06	----
				Client sampling date / time: 25-MAY-2012 12:00	25-MAY-2012 12:00	25-MAY-2012 12:00	25-MAY-2012 12:00	----
				ES1212800-006	ES1212800-007	ES1212800-008	ES1212800-009	----
EG020W: Water Leachable Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	**0.034**	**0.003**	**0.006**	<0.001	----
Cadmium	7440-43-9	0.0001	mg/L	**0.0004**	<0.0001	<0.0001	<0.0001	----
Chromium	7440-47-3	0.001	mg/L	**0.148**	**0.014**	**0.040**	**0.002**	----
Copper	7440-50-8	0.001	mg/L	**0.063**	**0.040**	**0.026**	**0.002**	----
Lead	7439-92-1	0.001	mg/L	**0.125**	**0.023**	**0.030**	**0.001**	----
Nickel	7440-02-0	0.001	mg/L	**0.496**	**0.008**	**0.037**	**0.002**	----
Zinc	7440-66-6	0.005	mg/L	**2.79**	**0.627**	**1.98**	**0.089**	----
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	----
EP080/071: Total Petroleum Hydrocarbons								
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	**80**	----
C15 - C28 Fraction	----	100	µg/L	<100	<100	<100	**420**	----
C29 - C36 Fraction	----	50	µg/L	<50	<50	<50	**90**	----
^ **C10 - C36 Fraction (sum)**	----	50	µg/L	<50	<50	<50	**590**	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
>C10 - C16 Fraction	----	100	µg/L	<100	<100	<100	**230**	----
>C16 - C34 Fraction	----	100	µg/L	<100	<100	<100	**430**	----
>C34 - C40 Fraction	----	100	µg/L	<100	<100	<100	<100	----
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L	<100	<100	<100	**660**	----

Analytical Results

Sub-Matrix: SOIL				Client sample ID	BH03 0.02-0.12	BH03 0.8-0.9	BH04 0-0.1	BH04 2.9-3	BH11 0.03-0.13
				Client sampling date / time	08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00	08-MAY-2012 15:00	09-MAY-2012 15:00
Compound	CAS Number	LOR	Unit		ES1212800-001	ES1212800-002	ES1212800-003	ES1212800-004	ES1212800-005
EN60: Bottle Leaching Procedure									
Final pH	----	0.1	pH Unit		**6.0**	**6.4**	**8.7**	**8.9**	**6.8**

Analytical Results

Sub-Matrix: SOIL			Client sample ID	BH11 1.9-2.0	BH05 0-0.05	BH05 2.1-2.2	GRAB06	----
			Client sampling date / time	09-MAY-2012 15:00	09-MAY-2012 15:00	09-MAY-2012 15:00	03-MAY-2012 15:00	----
Compound	CAS Number	LOR	Unit	ES1212800-006	ES1212800-007	ES1212800-008	ES1212800-009	----
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**6.8**	**6.0**	**6.0**	**5.7**	----

Environmental Division

QUALITY CONTROL REPORT

Work Order	: **ES1212800**	Page	: 1 of 5
Client	: **AECOM Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: MS LUCY STUART	Contact	: Jennifer Cullen
Address	: PO BOX 73 HUNTER REGION MC HRMC NSW NSW 2310	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: lucy.stuart@aecom.com	E-mail	: jennifer.cullen@alsglobal.com
Telephone	: +61 02 49114900	Telephone	: +61 2 8784 8509
Facsimile	: +61 02 49114999	Facsimile	: +61 2 8784 8500
Project	: 60266102	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 23-MAY-2012
Sampler	: ----	Issue Date	: 31-MAY-2012
Order number	: REBATCH 0F ES1211388/ES1210707		
		No. of samples received	: 9
Quote number	: EN/004/10	No. of samples analysed	: 9

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Organics
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates 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%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG020W: Water Leachable Metals by ICP-MS (QC Lot: 2325482)									
ES1212800-001	BH03 0.02-0.12	EG020A-W: Cadmium	7440-43-9	0.0001	mg/L	0.0002	0.0002	0.0	No Limit
		EG020A-W: Arsenic	7440-38-2	0.001	mg/L	0.008	0.008	0.0	No Limit
		EG020A-W: Chromium	7440-47-3	0.001	mg/L	0.085	0.087	2.1	0% - 20%
		EG020A-W: Copper	7440-50-8	0.001	mg/L	0.017	0.016	0.0	0% - 50%
		EG020A-W: Lead	7439-92-1	0.001	mg/L	0.062	0.059	5.2	0% - 20%
		EG020A-W: Nickel	7440-02-0	0.001	mg/L	0.033	0.032	0.0	0% - 20%
		EG020A-W: Zinc	7440-66-6	0.005	mg/L	1.38	1.32	5.0	0% - 20%
EG035W: Water Leachable Mercury by FIMS (QC Lot: 2332485)									
ES1212800-001	BH03 0.02-0.12	EG035W: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit

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

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 parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG020W: Water Leachable Metals by ICP-MS (QCLot: 2325482)								
EG020A-W: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	96.4	87	111
EG020A-W: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	99.3	90	106
EG020A-W: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	98.8	94	114
EG020A-W: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	99.5	90	112
EG020A-W: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	97.0	88	120
EG020A-W: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	99.4	86	116
EG020A-W: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	94.6	82	116
EG035W: Water Leachable Mercury by FIMS (QCLot: 2332485)								
EG035W: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.010 mg/L	92.2	82	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2325062)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	200 µg/L	105	58.9	131
EP071: C15 - C28 Fraction	----	100	µg/L	<100	250 µg/L	116	73.9	138
EP071: C29 - C36 Fraction	----	50	µg/L	<50	200 µg/L	95.3	62.7	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2325062)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	250 µg/L	77.0	58.9	131
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	350 µg/L	87.6	73.9	138
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	----	----	----	----
		50	µg/L	----	150 µg/L	99.4	62.7	131

Matrix Spike (MS) Report

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 parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020W: Water Leachable Metals by ICP-MS (QCLot: 2325482)							
ES1212800-001	BH03 0.02-0.12	EG020A-W: Arsenic	7440-38-2	1 mg/L	83.2	70	130
		EG020A-W: Cadmium	7440-43-9	0.250 mg/L	103	70	130
		EG020A-W: Chromium	7440-47-3	1 mg/L	97.0	70	130
		EG020A-W: Copper	7440-50-8	1 mg/L	104	70	130
		EG020A-W: Lead	7439-92-1	1 mg/L	102	70	130
		EG020A-W: Nickel	7440-02-0	1 mg/L	98.3	70	130
		EG020A-W: Zinc	7440-66-6	1 mg/L	91.6	70	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG035W: Water Leachable Mercury by FIMS (QCLot: 2332485)							
ES1212800-002	BH03 0.8-0.9	EG035W: Mercury	7439-97-6	0.0100 mg/L	82.8	70	130

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

The quality control term Matrix Spike (MS) and Matrix Spike Duplicate (MSD) refers to intralaboratory split samples spiked with a representative set of target analytes. The purpose of these QC parameters are to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	MSD	Low	High	Value	Control Limit
EG020W: Water Leachable Metals by ICP-MS (QCLot: 2325482)										
ES1212800-001	BH03 0.02-0.12	EG020A-W: Arsenic	7440-38-2	1 mg/L	83.2	----	70	130	----	----
		EG020A-W: Cadmium	7440-43-9	0.250 mg/L	103	----	70	130	----	----
		EG020A-W: Chromium	7440-47-3	1 mg/L	97.0	----	70	130	----	----
		EG020A-W: Copper	7440-50-8	1 mg/L	104	----	70	130	----	----
		EG020A-W: Lead	7439-92-1	1 mg/L	102	----	70	130	----	----
		EG020A-W: Nickel	7440-02-0	1 mg/L	98.3	----	70	130	----	----
		EG020A-W: Zinc	7440-66-6	1 mg/L	91.6	----	70	130	----	----
EG035W: Water Leachable Mercury by FIMS (QCLot: 2332485)										
ES1212800-002	BH03 0.8-0.9	EG035W: Mercury	7439-97-6	0.0100 mg/L	82.8	----	70	130	----	----

Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **ES1212800**	Page	: 1 of 5
Client	: AECOM Australia Pty Ltd	Laboratory	: Environmental Division Sydney
Contact	: MS LUCY STUART	Contact	: Jennifer Cullen
Address	: PO BOX 73 HUNTER REGION MC HRMC NSW NSW 2310	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: lucy.stuart@aecom.com	E-mail	: jennifer.cullen@alsglobal.com
Telephone	: +61 02 49114900	Telephone	: +61 2 8784 8509
Facsimile	: +61 02 49114999	Facsimile	: +61 2 8784 8500
Project	: 60266102	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 23-MAY-2012
Sampler	: ----	Issue Date	: 31-MAY-2012
Order number	: REBATCH 0F ES1211388/ES1210707		
		No. of samples received	: 9
Quote number	: EN/004/10	No. of samples analysed	: 9

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers

Analysis Holding Time Compliance

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 precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020W: Water Leachable Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-W)							
BH03 0.02-0.12, BH03 0.8-0.9, BH04 0-0.1, BH04 2.9-3, BH11 0.03-0.13, BH11 1.9-2.0, BH05 0-0.05, BH05 2.1-2.2, GRAB06	**25-MAY-2012**	**28-MAY-2012**	21-NOV-2012	✓	**31-MAY-2012**	21-NOV-2012	✓
EG035W: Water Leachable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035W)							
BH03 0.02-0.12, BH03 0.8-0.9, BH04 0-0.1, BH04 2.9-3, BH11 0.03-0.13, BH11 1.9-2.0, BH05 0-0.05, BH05 2.1-2.2, GRAB06	**25-MAY-2012**	**----**	----	----	**31-MAY-2012**	22-JUN-2012	✓
EN60: Bottle Leaching Procedure							
LabSplit: Leach for organics and other tests (EN60-DIa)							
GRAB06	**03-MAY-2012**	**---**	17-MAY-2012	----	**25-MAY-2012**	17-MAY-2012	×
LabSplit: Leach for organics and other tests (EN60-DIa)							
BH03 0.02-0.12, BH03 0.8-0.9, BH04 0-0.1, BH04 2.9-3	**08-MAY-2012**	**---**	22-MAY-2012	----	**25-MAY-2012**	22-MAY-2012	×
LabSplit: Leach for organics and other tests (EN60-DIa)							
BH11 0.03-0.13, BH11 1.9-2.0, BH05 0-0.05, BH05 2.1-2.2	**09-MAY-2012**	**---**	23-MAY-2012	----	**25-MAY-2012**	23-MAY-2012	×
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071)							
BH03 0.02-0.12, BH03 0.8-0.9, BH04 0-0.1, BH04 2.9-3, BH11 0.03-0.13, BH11 1.9-2.0, BH05 0-0.05, BH05 2.1-2.2, GRAB06	**25-MAY-2012**	**28-MAY-2012**	01-JUN-2012	✓	**30-MAY-2012**	07-JUL-2012	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Water Leachable Mercury by FIMS	EG035W	1	9	**11.1**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Water Leachable Metals by ICP-MS - Suite A	EG020A-W	1	9	**11.1**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
TPH - Semivolatile Fraction	EP071	1	20	**5.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Water Leachable Mercury by FIMS	EG035W	1	9	**11.1**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Water Leachable Metals by ICP-MS - Suite A	EG020A-W	1	9	**11.1**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
TPH - Semivolatile Fraction	EP071	1	20	**5.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Water Leachable Mercury by FIMS	EG035W	1	9	**11.1**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Water Leachable Metals by ICP-MS - Suite A	EG020A-W	1	9	**11.1**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Water Leachable Mercury by FIMS	EG035W	1	9	**11.1**	**5.0**	✓	ALS QCS3 requirement
Water Leachable Metals by ICP-MS - Suite A	EG020A-W	1	9	**11.1**	**5.0**	✓	ALS QCS3 requirement

Brief Method Summaries

The analytical procedures used by the Environmental Division 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 in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Water Leachable Metals by ICP-MS - Suite A	EG020A-W	SOIL	(APHA 21st ed., 3125; USEPA SW846 - 6020, AS 4439.3, ALS QWI-EN/EG020): The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Water Leachable Mercury by FIMS	EG035W	SOIL	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the TCLP solution. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
TPH - Semivolatile Fraction	EP071	SOIL	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)

Preparation Methods	Method	Matrix	Method Descriptions
Digestion for Total Recoverable Metals in DI Water Leachate	EN25W	SOIL	USEPA SW846-3005 Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Deionised Water Leach	EN60-Dla	SOIL	AS4439.3 Preparation of Leachates
Separatory Funnel Extraction of Liquids	ORG14	SOIL	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.

Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

- **For all matrices, no Method Blank value outliers occur.**
- **For all matrices, no Duplicate outliers occur.**
- **For all matrices, no Laboratory Control outliers occur.**
- **For all matrices, no Matrix Spike outliers occur.**

Regular Sample Surrogates

- **For all regular sample matrices, no surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

Matrix: **SOIL**

Method		Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EN60: Bottle Leaching Procedure							
LabSplit: Leach for organics and other tests							
GRAB06		----	----	----	25-MAY-2012	17-MAY-2012	**8**
LabSplit: Leach for organics and other tests							
BH03 0.02-0.12,	BH03 0.8-0.9,	----	----	----	25-MAY-2012	22-MAY-2012	**3**
BH04 0-0.1,	BH04 2.9-3						
LabSplit: Leach for organics and other tests							
BH11 0.03-0.13,	BH11 1.9-2.0,	----	----	----	25-MAY-2012	23-MAY-2012	**2**
BH05 0-0.05,	BH05 2.1-2.2						

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

- **No Quality Control Sample Frequency Outliers exist.**

Appendix F

Data Validation

Appendix F Data Validation

1.0 Introduction

The following sections describe the components of the Quality Assurance and Control Plan that assess the achievement of the DQOs set out in the report **Section 1.6**, by consideration of the Data Quality Indicators – DQIs (precision, accuracy, reproducibility, completeness and comparability).

2.0 Data Quality Indicators

The following sections assess the achievement of the DQOs, by consideration of the DQIs. The DQIs were established to set acceptance limits on the field and laboratory data and included:

Table 1 Data Quality Indicators

DQI	Field	Laboratory	Acceptability Limits
Sensitivity	-	Appropriate Laboratory methods. Appropriate LORs below the adopted guidelines.	LOR < nominated criteria
Completeness	All critical locations sampled All samples collected (from targeted areas of concern and depth) SOPs appropriate and complied with Experienced sampler Documentation correct	All critical samples analysed and all analytes analysed according to SOPs Appropriate methods Appropriate LORs Sample documentation complete Sample holding times complied with	As per NEPC (1999) < nominated criteria As per NEPC (1999)
Comparability	Sample SOPs used on each occasion Experienced sampler Climatic conditions Same types of samples collected	Same analytical methods used Sample Level of Reporting (LORs) Same laboratories (NATA accredited) Same units	As per NEPC (1999) < nominated criteria
Representativeness	Appropriate media sampled according to SOP All media identified in SOP sampled	All samples analysed according to SOP	
Precision	SOPs appropriate and complied with Collection of blind and split duplicate samples	Analysis of: Field duplicates (1 in 10 samples) Inter-laboratory duplicates (1 in 20 samples) Laboratory duplicate samples	RPD of $\leq$ 50%

DQI	Field	Laboratory	Acceptability Limits
Accuracy	SOPs appropriate and complied with	Analysis of: Method blanks Matrix spikes Surrogate spikes Laboratory control samples Laboratory prepared spikes Reagent blanks Reference materials	Non-detect for CoPC In accordance with ALS internal dynamic limits of acceptance. Non-detect for COPC Varies

Notes: SOPs = AECOM Standard Operating Procedures. LORs = laboratory Limit of Reporting, CoPC = Contaminant of Potential Concern. RPD = Relative Percent Difference.

2.1 Field QA/QC

2.1.1 Field Staff

Soil samples were collected by Jonathon Deacon, a suitably qualified and experienced AECOM Environmental Scientist. Soil sampling was undertaken with reference to SOPs for each task that comprised the following field program.

2.1.2 Soil Sampling

A total of 81 primary soil samples (including asbestos samples) were collected from areas identified as areas of potential concern from the Site Inspection and AECOM (2011) study. Of these primary samples collected, 36 were analysed for contaminants of potential concern.

2.1.3 Sample Handling & Preservation

A new pair of disposable nitrile sampling gloves was worn for each soil sample collection event. Soil samples were placed immediately into laboratory prepared and supplied, acid washed and solvent rinsed jars with screw top Teflon-lined lids. Sample jars were filled so that no headspace remained (where practicable).

All samples were placed in chilled, insulated coolers (*i.e.* eskies) with crushed ice between sampling and analysis. Care was taken to remove any melt water collected within the esky regularly, and to keep sample jars above any melt-water within the esky. Samples were preserved for the various contaminants of concern in accordance with the requirements of NEPC (1999) as detailed in the following table:

Table 2 Analytical Schedule and Sampling Requirements

Matrix	Analyte	Container
Soil	TPH, BTEX, PAH, Phenol, OCP and OPP	250 mL Glass jar, teflon-lined plastic lids.
	Metals – As, Cd, Cr, Cu, Pb, Hg, Ni, Zn	250 mL Glass jar, teflon-lined plastic lids.
	Asbestos	250 mL Glass jar, teflon-lined plastic lids and bulk sample collected in zip lock bag.

Sample numbers, depths, preservation and analytical requirements were recorded on the Chain of Custody (CoC) documentation, which accompanied the samples to the laboratory. Signed copies of the CoCs are provided with the laboratory reports in **Appendix E.**

2.1.4 Calibration

The soil samples were screened for Volatile Organic Compounds (VOCs) with a calibrated Photo-ionisation Detector (PID). The calibration records for the Water Quality Meter (WQM), PID and interface meter were satisfactory and are presented in **Appendix D**.

2.1.5 Field Duplicates

The purpose of field duplicate samples is to estimate the variability of a given characteristic or contaminant associated with a population (*i.e.* measure the precision of the sampling, sample preparation and sample analysis process). Inter-laboratory duplicates (*i.e.* Splits) are utilised to assess the accuracy of the primary laboratory data. For this project, intra-laboratory duplicate soil samples were collected in the field at a rate of at least one in ten primary samples. Inter-laboratory duplicate soil samples were collected at a rate of at least one in twenty primary samples.

The field duplicated soil samples were obtained from similar soils of an identical depth and immediately adjacent to the primary sample by placing approximately equal portions of the primary sample into two sample jars. Duplicate samples were labelled so as to conceal their relationship to the primary sample from the laboratory and the key to the duplicate samples was recorded in the field note book.

It is common that significant variation in duplicate results is often observed (particularly for solid matrix samples, particularly fill material) due to sample heterogeneity and/or low reported concentrations near the LOR. The overall precision of field duplicates (including Splits and laboratory duplicates) is assessed by their Relative Percent Difference (RPD), given by:

$$RPD = \frac{|C1-C2|}{(C1+C2)/2} \times 100$$

(where C1 = primary sample result
C2 = duplicate sample result)

The RPDs between the primary and duplicated sample results have been compared to the acceptance criteria of less than or equal to 50 % and presented in **Table T4** (soil) of **Appendix B**. The RPD exceedances are presented on **Table 3** below.

Table 3 RPD Exceedances

Sample Pair	Matrix Type	Duplicate Type	Analytes	RPD Exceedance
BH03_0.02-0.12/QC03	Soil	Intra	Total Xylene*	75%
BH05_0-0.05/QC5	Soil	Intra	Copper*	117%
BH07_0-0.15/QC07	Soil	Intra	Lead	167%
BH07_0-0.15/QC07	Soil	Intra	Zinc*	73%
BH08_0.4-0.5/QC08	Soil	Intra	Chromium	103%
BH08_0.4-0.5/QC08	Soil	Intra	Nickel*	67%
BH08_0.4-0.5/QC08	Soil	Intra	Zinc*	84%
BH10_0-0.05/QC09	Soil	Inter	Copper*	167%
BH10_0-0.05/QC09	Soil	Inter	Lead*	137%
BH10_0-0.05/QC09	Soil	Inter	Nickel*	86%
BH10_0-0.05/QC09	Soil	Inter	Zinc	184%

* One or more of the results is less than 10 times the LOR which results in elevated RPDs.

Soil RPD exceedances were reported for some metal analytes and one xylene sample. It is noted that generally all of the RPD exceedances for metals have one or more result less than 10 times the limit of reporting, with the exception of concentrations of lead in fill materials in BH07_0-0.15 and duplicate sample QC05, which reported a RPD of 167% and chromium in BH08_0.4-0.5 and duplicate sample QC08 . The RPD exceedances are likely to be associated with the highly variable composition of the material sampled (topsoil fill and sandy clay respectively) rather than sampling or laboratory inaccuracies. Given that the concentrations of the individual analytes were considerably less than their respective acceptable criteria, AECOM does not consider that this RPD exceedance has impacted the reliability of the data for the purposes of the investigation.

AECOM considers that the rates of duplicate and split sample analyses (4 intra-laboratory duplicates and 2 inter-laboratory duplicates) are satisfactory for the purpose of this assessment and therefore AECOM concludes that the precision of the data is sufficient for the purposes of the investigation.

2.1.6 Decontamination Procedures

The only non-disposable sampling equipment used during soil sampling was the SPT sampler. The SPT sampler was also cleaned with Decon 90 followed by a double rinse with potable water prior to use and between each sampling location. The results of the rinsate analysis are presented in **Table T5** in **Appendix A.** There were no concentrations of any of the analytes reported greater than the LOR.

2.1.7 Trip Blank and Trip Spike

A trip blank sample is used to assess the potential for cross contamination of samples during sample collection and transport of volatile analytes. The trip bank was prepared by the laboratory. The results of the analysis confirmed that concentrations of volatiles were less than the laboratory level of reporting and therefore there is unlikely to be any cross contamination of samples during sample transport.

A trip spike sample is used to assess volatile loss during sample collection and sample transport and is assessed again a trip spike control sample. Both samples were prepared by the laboratory; the trip spike was issued to AECOM and the trip spike control was retained by the laboratory. Both samples were analysed for volatiles and an assessment of loss of volatiles between the two samples is undertaken by calculating the RPD. The results of the RPD calculations were less than the specified DQIs indicating that no significant volatile loss is likely to have occurred to the samples during sampling and transport.

2.2 Laboratory QA/QC

2.2.1 Laboratories

Samples were submitted to the following laboratories:

- ALS in Smithfield, NSW (Primary laboratory): ALS' NATA accreditation number is 825, and its analytical procedures are also based on established internationally-recognised procedures (refer **Table 4**).
- MGT-Labmark in Lanecove, NSW (Secondary laboratory): MGT's NATA accreditation numbers are 1261, and its analytical procedures are based on established internationally-recognised procedures (refer **Table 4**).

2.2.2 Analytical Methods

The laboratory analytical methods are provided on the laboratory certificates in **Appendix E** and summarised in the following table:

Table 4 Analytical Methods and Assessment Criteria

COPC	Matrix	Reference Method*	LOR	Assessment Criteria
Metals (8)	Soil	USEPA SW846, 6010	0.1-5 mg/kg	20 – 120,000
Mercury	Soil	AS 3550 (NEPM 1999 Schedule B(3) compliant)	0.1 mg/kg	15
TPH C6-C9	Soil	USEPA SW846-8260B	10 mg/kg	65
TPH C10-C36	Soil	USEPA SW846-8015A	50-100 mg/kg	1000
BTEX	Soil	USEPA SW846-8260B	0.2-0.5 mg/kg	1 – 130
PAH	Soil	USEPA SW846-8270B	0.5 mg/kg	1 – 20
Moisture content	Soil	NEPM (2010 Draft) B(3) Section 7.1 and Table 1	1.0%	N/A
Phenol	Soil	USEPA SW846-8270B	0.5	8500
OCP/OPP	Soil	USEPA SW 846 - 8270B	0.05-2mg/kg	10-200

Laboratory LORs were less than the NSW EPA endorsed assessment criteria.

2.2.3 Laboratory (Method) Blanks

Laboratory or control blanks consist of reagents specific to each individual analytical method and are prepared and analysed by laboratories in the same manner as regular samples. The preparation and analysis of laboratory blanks enables the measurement of potential cross contamination within the laboratory.

Laboratory blanks are typically analysed at a frequency of 1 in 20, with a minimum of one analysed per batch. Review of the laboratory reports indicated that the results for all method blanks were less than the laboratory LOR.

2.2.4 Laboratory Duplicates

Laboratory duplicate samples are prepared in the laboratory by splitting a field sample and analysing it as two independent samples. The analysis of laboratory duplicate samples provides an indication of analytical precision and may be influenced by sample heterogeneity. The laboratory duplicate RPDs are used to assess laboratory precision.

Laboratory duplicates are typically analysed at a frequency of 1 in 20, with a minimum of one analysed per batch, when the batch size exceeds five samples. Review of the laboratory reports indicated that the frequency of duplicate analyses met the required frequency, and that all RPDs for the laboratory duplicate samples met the DQI of 50%.

2.2.5 Laboratory Control Samples

Laboratory Control Samples (LCS) are prepared within the laboratory by spiking an aliquot of an appropriate clean matrix reagent with known concentrations of specific analytes. The LCS sample is then analysed and the results are used to assess the laboratory performance on sample preparation and analytical procedure. Certified reference material may also be used to assess analytical accuracy independent of the investigations. Accuracy is assessed by calculation of percent recovery (PR).

LCSs are typically analysed at a frequency of 1 in 20, with a minimum of one analysed per analytical batch. Review of the laboratory reports indicated that the frequency of LCS samples was acceptable. The laboratory's internal dynamic limits of acceptance of the LCS were breached on two instances for soil analysis and two instances for water analysis (rinsates). The exceedances are as follows:

- Copper 114% - Recovery greater than upper control limit (90.1-114%).
- Zinc 114% - Recovery greater than upper control limit (88.9-112%).
- Chromium 91.3% - Recovery less than lower control limit (92-114%).
- Nickel 89.1% - Recovery less than lower control limit (91-113%).

As these recoveries are only marginally different from the laboratory control limits and the results are not close to the SAC, they are not considered to impact the accuracy of data.

2.2.6 Matrix Spikes

Matrix spikes are samples prepared within the laboratory by adding a known concentration (i.e. a spike) of a contaminant into the sample. The sample is then analysed and the amount of spike recovered is measured to assess the effects of the sample matrix on the accuracy and precision of the analytes. Essentially, spikes are used to confirm that the laboratory method is recovering the analyte that is being tested. Accuracy is assessed by the calculation of the PR.

When the background concentrations of metals and/or organics significantly exceed the LORs and Spike concentrations, the PR of the matrix spike cannot be calculated (i.e. recovery unable to be calculated due to significant background concentrations within the sample).

Review of the laboratory reports indicates that matrix spikes were analysed at a rate of at least 1 in 20, when the batch size exceeded 5 samples, and that the recovery rates met the laboratory's internal dynamic limits of acceptance.

2.2.7 Surrogates

Surrogates are compounds which are similar to the organic analytes of interest in chemical composition, extraction, and chromatographic behaviour, but which are not normally found in field samples. Surrogates are

generally spiked into all sample aliquots prior to preparation and analysis by chromatographic methods. Essentially, surrogates are used to test the laboratory method.

PRs are calculated for each surrogate, providing an indication of analytical accuracy. US EPA methodology (SW846) requires that surrogate testing be performed whenever analysing by Gas Chromatography or HPLC (i.e. for organics).

The laboratory's internal dynamic limits of acceptance for surrogate recovery were breached for one soil sample:

- BH03_0.8-0.9 (1.2-Dichloroethane-D4 – 134%, Recovery Limit 72.8-133.2 %).

This exceedance is marginal and as the result is less than the laboratory LOR, AECOM does not consider this outlier to have an effect on the overall data quality.

2.2.8 Holding Times

NEPC (1999), APHA 20th Edition and AS2031.1-1986 provide recommended technical Holding Times (THT) for various analyses which must be met in order to consider the results valid, as presented on the following table. The holding times may vary slightly depending on the document referenced.

Table 5 Holding Time Requirements

Analyte	Matrix	Recommended Maximum Holding Time
Metals (8)	Soil / Water	6 months
Mercury	Soil / Water	28 days
TPH C6-C9	Soil / Water	14 days / 7 days
TPH C10-C36	Soil / Water	14 days / 7 days
BTEX	Soil / Water	14 days / 14 days (with HCl)
PAH	Soil / Water	14 days / 7 days
OCP/OPP	Soil / Water	14 days / 7 days
Moisture content	Soil	14 days

HCL = Hydrochloric Acid

Review of the chain-of-custody documentation and the laboratory reports indicated that the THTs have been met for all analyses with the exception of TPH analysis in the leachate samples (Grab 06 – 8 days, BH03 0.02-0.12, BH03 0.8-0.9, BH04 0-0.1 and BH04 2.9-3 - 3 days and BH11 0.03-0.13, BH11 1.9-2.0, BH05 0-0.05 and BH05 2.1-2.2 – 2 days). This occurred as the samples chosen for the leachate analyses were based on the soil sample total results so that the analysis could be targeted. The samples were submitted to laboratory and were stored in a controlled environment and therefore the integrity is unlikely to be compromised. The results of the leachate analysis are only indicative and highly conservative in comparison to leachate generation in the natural environment. The tests were undertaken to assess if there is a potential for the contaminants to leach. Grab 06 which was overdue by the greater number of days, indicated that 580 mg/L may leach out of the soils, whereas BH03 0.02-0.12 did not indicate any leaching greater than the laboratory LOR, although the primary sample had a similar soil concentration to Grab 06. The holding time exceedances are not expected to compromise the quality of data in consideration of the conservative nature of the analytical method.

3.0 Data Validation

The overall assessment of the quality of the data obtained during this investigation is discussed below in terms of the DQI's provided in Section 2:

Table 6 Description of Data Quality Indicators

DQI	Description	Compliance
Sensitivity	Appropriate Laboratory methods. Appropriate LORs less than the adopted guidelines.	The sensitivity of the data is defined as the LORs being adequately less than the assessment threshold levels to ensure the results are able to be assessed. The LORs for all contaminants were chosen based on the assessment thresholds to ensure all data allowed successful comparison. All samples collected had a suitably low LOR to allow successful comparison to threshold data.
Completeness	Completeness is a measure of the amount of usable data (expressed as %) from a data collection activity.	The completeness of data is defined as the percentage of analytical results that are considered valid. Valid chemical data are values that have been identified as acceptable or acceptable as qualified during the data validation process. The completeness is a comparison of the total number of samples accepted against the total number of samples, calculated as a percentage. The project goal for completeness is 95%. Completeness also includes checking that all entries in the data tables are correct, properly entered, and that any typographical errors are corrected and the data are re-entered properly, as required. All samples collected and analysed complied with the DQOs and DQIs except where discussed and considered to be reliable, as such the data obtained is considered to be sufficiently quantitative and complete for the purposes of this investigation (i.e. >95%).
Comparability	Comparability is the confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event.	Comparability expresses the confidence with which one data set can be compared with another. In order to assess comparability, field sampling procedures, laboratory sample preparation procedures, analytical procedures, and reporting units must be known and similar to established protocols, as was the case during this investigation. Qualitatively, data subjected to strict QA/QC procedures will be deemed more reliable, and therefore more comparable, than other data. The sampling was conducted by AECOM environmental scientists in accordance with the sampling and analytical procedures described in the SOP and field briefs prepared by the project manager. Each analyte was analysed by the same analytical laboratory using identical methods, and laboratory LORs were consistent over each laboratory batch. Additionally, a check laboratory was used to assess variability between laboratories. Based on the above, the data obtained throughout the investigation is considered to be suitably comparable.
Representativeness	Representativeness is the confidence (expressed qualitatively) that data are representative of each media present on the site.	Representativeness expresses the degree to which sample data accurately and precisely represent a characteristic of parameter variations at sampling points or environmental conditions. Sample representativeness is controlled through selecting sampling locations that exemplify site conditions and obtaining suitable samples from these sites. Sample selection and analysis was conducted in order to meet the specific objectives of the project. Analysis for the contaminants of concern was selectively conducted on soil samples as indicated in analytical tables. Based on the sampling and analytical regime undertaken by AECOM, the results obtained are considered to be sufficiently representative of the subsurface conditions at the locations tested.

DQI	Description	Compliance
Precision	Precision is a quantitative measure of the variability (or reproducibility) of data.	All work was conducted in accordance with AECOM's documented SOPs. Precision or variability of the data was assessed by determining RPDs between the original, duplicate and split samples analysed. Based on results discussed above, AECOM considers that the precision of the data is sufficient for the purposes of this investigation.
Accuracy	Accuracy is a quantitative measure of the closeness of reported data to the true value.	All work was conducted in general accordance with AECOM's documented SOPs. Accuracy of the data was mainly assessed through review of the laboratory QA/QC results. Based on results discussed above, AECOM considers that the accuracy of the data is sufficient for the purposes of this investigation.

Based on an assessment of field and laboratory QA/QC data, the reported analytical results are considered, by achievement of the DQIs, to be reliable and representative of concentrations of the chemical contaminants of concern analysed at the locations sampled.

Appendix G

Site Photographs

Appendix G Site Photographs

AECOM

T A IC		
S te ame: North Rothbury, NSW	**S te ocat on:** North Rothbury, NSW 2335	**roject o:** 60266102

late o.	ate: 3/5/2012
rect on hoto Ta en: West	
escr pt on: Building debris on ground surfaces in the western portion of LOT201	

late o	ate: 3/5/2012
rect on hoto Ta en: South east	
escr pt on: Surface staining adjacent garage of LOT201	

		T A IC
S te ame: North Rothbury, NSW	**S te ocat on:** North Rothbury, NSW 2335	**roject o:** 60266102

late o.	**ate:** 3/5/2012
rect on hoto Ta en: South	
escr pt on: Stockpiled building waste south of the house on Lot 200	

late o	**ate:** 3/5/2012
rect on hoto Ta en: East	
escr pt on: Stockpile of waste north of the house of Lot 200.	

AECOM

T A IC		
S te ame: North Rothbury, NSW	**S te ocat on:** North Rothbury, NSW 2335	**roject o:** 60266102

late o.	**ate:** 3/5/2012
rect on hoto Ta en: North east	
escr pt on: Stockpiled waste south of the house on Lot 200	

late o	**ate:** 3/5/2012
rect on hoto Ta en: North	
escr pt on: AST located north of the house of Lot 200.