

Sample Receipt Advice

Company name: **Douglas Partners (Syd)**
Contact name: **Peter Oitmaa**
Client job number: **PARKES 72466.01**
COC number: **Not provided**
Turn around time: **5 Day**
Date/Time received: **Aug 26, 2013 12:45 PM**
Eurofins | mgt reference: **390522**

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

Client verbally confirmed total phenols analysis 26/8/13

Contact notes

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

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: JeanHeng@eurofins.com.au

Results will be delivered electronically via e.mail to Peter Oitmaa - peter.oitmaa@douglaspartners.com.au.

Eurofins | mgt Sample Receipt

ELS: 96196

#390522

CHAIN OF CUSTODY

Project Name: PARKES
Project No: 72466.01 Sampler: AG
Project Mgr: Peter Oitmaa Mob. Phone: 0412 574 518
Email: peter.oitmaa@douglaspartners.com.au
Date Required: 5th Lab Quote No.

To: Envirolab Services
12 Ashley Street, Chatswood NSW 2067
Attn: Tania Notaras
Phone: 02 9910 6200 Fax: 02 9910 6201
Email: tnotaras@envirolabservices.com.au

Sample ID	Sample Depth	Lab ID	Sampling Date	Sample Type S - soil W - water	Container type	Analytes								Notes	
						8 Metals As, Cd, Cr, Cu, Ni, Hg, Pb, Zn	BTEX TRH	PAH	OC/OPP	PCB	Phenol	Asbestos	PH CEC		
P612	0.5-0.6	61	15/8	S	Jar									8	
TS2A	N/A	62	14/8											8	
TS2B	"	63	"											8	Send to LABMARK
TS5A	" 63	64	15/8											8	Send to LABMARK
TS5B	"	65												8	Send to LABMARK
TS7A	" 64	66												8	Send to LABMARK
TS7B	"	67												8	Send to LABMARK
Blank	" 65	68	9/8												
Spike	" 66	69	"												
R1	" 67	70	13/8	W	Bottle										
R2	" 68	71	14/8												
R3	" 69	72	15/8												

RECEIVED
26 AUG 2013
BY: [Signature]

Lab Report No. [Blank]
Run 23/58

Lab Report No. FW 23/08

Send Results to: Douglas Partners Address: 96 Hermitage Road, West Ryde 2114

Relinquished by: P. Oitmaa Signed: FW Date & Time: 23/8 1200h

Relinquished by: Relinquished Signed: JA Date & Time: 26/8/13 1100

Phone: (02) 9809 0666

Fax: (02) 9809 4095

Date & Time: 26/8/13 1100

Received By: JA

RECEIVED
26 AUG 2013
BY: JA 1245

Douglas Partners (Syd)
96 Hermitage Road
West Ryde
NSW 2114

Attention: Peter Oitmaa

Report 390699-S
Client Reference PARKES 72466.01
Received Date Aug 27, 2013



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.

Client Sample ID			TS9B Soil	TS12B Soil	TS13B Soil	TS17B Soil
Sample Matrix			S13-Au21265	S13-Au21267	S13-Au21268	S13-Au21269
Eurofins mgt Sample No.			Aug 19, 2013	Aug 19, 2013	Aug 19, 2013	Aug 19, 2013
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	30	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	130	62	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	160	62	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	114	112	114	114
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	120	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TS9B	TS12B	TS13B	TS17B
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S13-Au21265	S13-Au21267	S13-Au21268	S13-Au21269
Date Sampled			Aug 19, 2013	Aug 19, 2013	Aug 19, 2013	Aug 19, 2013
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	1	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ*	0.5	mg/kg	0.6	0.6	0.6	0.6
2-Fluorobiphenyl (surr.)	1	%	82	87	90	90
p-Terphenyl-d14 (surr.)	1	%	95	92	95	96
Organochlorine Pesticides						
Chlordane	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloredate (surr.)	1	%	88	92	90	88
Tetrachloro-m-xylene (surr.)	1	%	87	81	86	93
Polychlorinated Biphenyls (PCB)						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PCB	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibutylchloredate (surr.)	1	%	88	92	90	90
Speciated Phenols						
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2,4,6-Trichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
3&4-Methylphenol (m&p-Cresol)	1	mg/kg	< 1	< 1	< 1	< 1
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID Sample Matrix Eurofins mgt Sample No. Date Sampled Test/Reference	LOR	Unit	TS9B Soil S13-Au21265 Aug 19, 2013	TS12B Soil S13-Au21267 Aug 19, 2013	TS13B Soil S13-Au21268 Aug 19, 2013	TS17B Soil S13-Au21269 Aug 19, 2013
Speciated Phenols						
2-Nitrophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Phenol-d5 (surr.)	1	%	91	82	95	93
Organophosphorus Pesticides (OP)						
Chlorpyrifos	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Coumaphos	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Demeton (total)	1	mg/kg	< 1	< 1	< 1	< 1
Diazinon	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorvos	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethoate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Disulfoton	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethoprop	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fenitrothion	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fensulfothion	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fenthion	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Methyl azinphos	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Malathion	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Methyl parathion	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Mevinphos	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Monocrotophos	10	mg/kg	< 10	< 10	< 10	< 10
Parathion	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phorate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Profenofos	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Prothiofos	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ronnel	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Stirophos	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloronate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Triphenylphosphate (surr.)	1	%	86	87	88	87
Heavy Metals						
Arsenic	2	mg/kg	12	11	13	14
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	34	29	33	12
Copper	5	mg/kg	18	27	35	89
Lead	5	mg/kg	9.0	5.9	9.3	6.9
Mercury	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	5	mg/kg	11	10.0	19	11
Zinc	5	mg/kg	22	15	35	10
% Moisture	0.1	%	14	16	10	14

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: E004 Petroleum Hydrocarbons (TPH)	Sydney	Sep 03, 2013	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LM-LTM-ORG2010	Sydney	Sep 03, 2013	14 Day
BTEX - Method: E029/E016 BTEX	Sydney	Aug 31, 2013	14 Day
Polycyclic Aromatic Hydrocarbons - Method: E007 Polyaromatic Hydrocarbons (PAH)	Sydney	Sep 03, 2013	14 Day
Organochlorine Pesticides - Method: E013 Organochlorine Pesticides (OC)	Sydney	Sep 03, 2013	0 Day
Polychlorinated Biphenyls (PCB) - Method: E013 Polychlorinated Biphenyls (PCB)	Sydney	Sep 03, 2013	28 Day
Speciated Phenols - Method: E008 Speciated Phenols	Sydney	Sep 03, 2013	14 Day
Organophosphorus Pesticides (OP) - Method: E014 Organophosphorus Pesticides (OP)	Sydney	Sep 03, 2013	14 Day
Metals M8 - Method: E022 Acid Extractable metals in Soils & E026 Mercury	Sydney	Aug 31, 2013	28 Day
% Moisture - Method: E005 Moisture Content	Sydney	Aug 31, 2013	28 Day

Company Name: Douglas Partners (Syd)
Address: 96 Hermitage Road
West Ryde
NSW 2114
Client Job No.: PARKES 72466.01

Order No.:
Report #: 390699
Phone: 02 9809 0666
Fax:

Received: Aug 27, 2013 2:15 PM
Due: Sep 3, 2013
Priority: 5 Day
Contact Name: Peter Oitmaa

Eurofins | mgt Client Manager: Jean Heng

Sample Detail				Total Recoverable Hydrocarbons	Organophosphorus Pesticides (OP)	Speciated Phenols	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	% Moisture
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271							X					
Sydney Laboratory - NATA Site # 18217				X								
Brisbane Laboratory - NATA Site # 20794												
External Laboratory												
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID								
TS9B	Aug 19, 2013		Soil	S13-Au21265	X	X	X	X	X	X	X	X
TS12B	Aug 19, 2013		Soil	S13-Au21267	X	X	X	X	X	X	X	X
TS13B	Aug 19, 2013		Soil	S13-Au21268	X	X	X	X	X	X	X	X
TS17B	Aug 19, 2013		Soil	S13-Au21269	X	X	X	X	X	X	X	X

Eurofins | mgt Internal Quality Control Review and Glossary

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 RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

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

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 clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environment Protection Authority
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 performed on samples not pertaining to this report, 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.

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	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX E029/E016 BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 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							
Organochlorine Pesticides 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	< 0.05			0.05	Pass	
a-BHC	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	
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							
Polychlorinated Biphenyls (PCB) E013 Polychlorinated Biphenyls (PCB)							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
Metals M8 E022 Acid Extractable metals in Soils & E026 Mercury							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.05			0.05	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							
TRH C6-C9	%	83			70-130	Pass	
TRH C10-C14	%	99			70-130	Pass	
LCS - % Recovery							
BTEX E029/E016 BTEX							
Benzene	%	92			70-130	Pass	
Toluene	%	97			70-130	Pass	
Ethylbenzene	%	98			70-130	Pass	
m&p-Xylenes	%	98			70-130	Pass	
o-Xylene	%	97			70-130	Pass	
Xylenes - Total	%	97			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions LM-LTM-ORG2010							
Naphthalene	%	81			70-130	Pass	
TRH C6-C10	%	91			70-130	Pass	
TRH >C10-C16	%	104			70-130	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Polycyclic Aromatic Hydrocarbons E007 Polyaromatic Hydrocarbons (PAH)							
Acenaphthene	%	109			70-130	Pass	
Acenaphthylene	%	106			70-130	Pass	
Anthracene	%	97			70-130	Pass	
Benz(a)anthracene	%	98			70-130	Pass	
Benzo(a)pyrene	%	105			70-130	Pass	
Benzo(b&j)fluoranthene	%	121			70-130	Pass	
Benzo(g,h,i)perylene	%	102			70-130	Pass	
Benzo(k)fluoranthene	%	105			70-130	Pass	
Chrysene	%	115			70-130	Pass	
Dibenz(a,h)anthracene	%	102			70-130	Pass	
Fluoranthene	%	110			70-130	Pass	
Fluorene	%	107			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	103			70-130	Pass	
Naphthalene	%	107			70-130	Pass	
Phenanthrene	%	107			70-130	Pass	
Pyrene	%	108			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides E013 Organochlorine Pesticides (OC)							
4,4'-DDD	%	96			70-130	Pass	
4,4'-DDE	%	99			70-130	Pass	
4,4'-DDT	%	104			70-130	Pass	
a-BHC	%	93			70-130	Pass	
Aldrin	%	101			70-130	Pass	
b-BHC	%	83			70-130	Pass	
d-BHC	%	89			70-130	Pass	
Dieldrin	%	97			70-130	Pass	
Endosulfan I	%	101			70-130	Pass	
Endosulfan II	%	93			70-130	Pass	
Endosulfan sulphate	%	95			70-130	Pass	
Endrin	%	106			70-130	Pass	
Endrin aldehyde	%	70			70-130	Pass	
Endrin ketone	%	88			70-130	Pass	
g-BHC (Lindane)	%	98			70-130	Pass	
Heptachlor	%	103			70-130	Pass	
Heptachlor epoxide	%	97			70-130	Pass	
Hexachlorobenzene	%	93			70-130	Pass	
Methoxychlor	%	84			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls (PCB) E013 Polychlorinated Biphenyls (PCB)							
Aroclor-1260	%	81			70-130	Pass	
LCS - % Recovery							
Speciated Phenols E008 Speciated Phenols							
2,4-Dichlorophenol	%	109			70-130	Pass	
2,4-Dimethylphenol	%	102			70-130	Pass	
2,4,5-Trichlorophenol	%	105			70-130	Pass	
2,4,6-Trichlorophenol	%	108			70-130	Pass	
Phenol	%	114			70-130	Pass	
2-Methylphenol (o-Cresol)	%	102			70-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	100			70-130	Pass	
2-Chlorophenol	%	115			70-130	Pass	
2-Nitrophenol	%	110			70-130	Pass	
4-Chloro-3-methylphenol	%	110			70-130	Pass	

Test				Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pentachlorophenol				%	86			70-130	Pass	
LCS - % Recovery										
Organophosphorus Pesticides (OP) E014 Organophosphorus Pesticides (OP)										
Chlorpyrifos				%	94			70-130	Pass	
Coumaphos				%	71			70-130	Pass	
Diazinon				%	94			70-130	Pass	
Dichlorvos				%	110			70-130	Pass	
Dimethoate				%	82			70-130	Pass	
Disulfoton				%	95			70-130	Pass	
Ethoprop				%	97			70-130	Pass	
Fenitrothion				%	90			70-130	Pass	
Fensulfothion				%	74			70-130	Pass	
Fenthion				%	96			70-130	Pass	
Methyl azinphos				%	71			70-130	Pass	
Malathion				%	87			70-130	Pass	
Methyl parathion				%	92			70-130	Pass	
Mevinphos				%	101			70-130	Pass	
Monocrotophos				%	92			70-130	Pass	
Parathion				%	98			70-130	Pass	
Phorate				%	100			70-130	Pass	
Profenofos				%	93			70-130	Pass	
Prothiofos				%	96			70-130	Pass	
Ronnell				%	92			70-130	Pass	
Stirophos				%	76			70-130	Pass	
Trichloronate				%	100			70-130	Pass	
LCS - % Recovery										
Metals M8 E022 Acid Extractable metals in Soils & E026 Mercury										
Arsenic				%	81			70-130	Pass	
Cadmium				%	97			70-130	Pass	
Chromium				%	81			70-130	Pass	
Copper				%	80			70-130	Pass	
Lead				%	80			70-130	Pass	
Mercury				%	107			70-130	Pass	
Nickel				%	82			70-130	Pass	
Zinc				%	95			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	S13-Au21254	NCP	%	82				70-130	Pass	
TRH C10-C14	S13-Au18853	NCP	%	89				70-130	Pass	
Spike - % Recovery										
BTEX					Result 1					
Benzene	S13-Au21254	NCP	%	92				70-130	Pass	
Toluene	S13-Au21254	NCP	%	97				70-130	Pass	
Ethylbenzene	S13-Au21254	NCP	%	97				70-130	Pass	
m&p-Xylenes	S13-Au21254	NCP	%	96				70-130	Pass	
o-Xylene	S13-Au21254	NCP	%	96				70-130	Pass	
Xylenes - Total	S13-Au21254	NCP	%	96				70-130	Pass	
Spike - % Recovery										
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					Result 1					
Naphthalene	S13-Au21254	NCP	%	73				70-130	Pass	
TRH C6-C10	S13-Au21254	NCP	%	91				70-130	Pass	
TRH >C10-C16	S13-Au18853	NCP	%	97				70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S13-Au22060	NCP	%	107			70-130	Pass	
Acenaphthylene	S13-Au22060	NCP	%	105			70-130	Pass	
Anthracene	S13-Au22060	NCP	%	102			70-130	Pass	
Benz(a)anthracene	S13-Au22060	NCP	%	113			70-130	Pass	
Benzo(a)pyrene	S13-Au22060	NCP	%	99			70-130	Pass	
Benzo(b&j)fluoranthene	S13-Au22060	NCP	%	110			70-130	Pass	
Benzo(g,h,i)perylene	S13-Au22060	NCP	%	98			70-130	Pass	
Benzo(k)fluoranthene	S13-Au22060	NCP	%	107			70-130	Pass	
Chrysene	S13-Au22060	NCP	%	105			70-130	Pass	
Dibenz(a,h)anthracene	S13-Au22060	NCP	%	107			70-130	Pass	
Fluoranthene	S13-Au22060	NCP	%	114			70-130	Pass	
Fluorene	S13-Au22060	NCP	%	107			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S13-Au22060	NCP	%	103			70-130	Pass	
Naphthalene	S13-Au22060	NCP	%	105			70-130	Pass	
Phenanthrene	S13-Au22060	NCP	%	104			70-130	Pass	
Pyrene	S13-Au22060	NCP	%	112			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4,4'-DDD	S13-Au23063	NCP	%	103			70-130	Pass	
4,4'-DDE	S13-Au23063	NCP	%	105			70-130	Pass	
4,4'-DDT	S13-Au23063	NCP	%	70			70-130	Pass	
a-BHC	S13-Au23063	NCP	%	88			70-130	Pass	
Aldrin	S13-Au23063	NCP	%	96			70-130	Pass	
b-BHC	S13-Au23063	NCP	%	75			70-130	Pass	
d-BHC	S13-Au23063	NCP	%	87			70-130	Pass	
Dieldrin	S13-Au23063	NCP	%	94			70-130	Pass	
Endosulfan I	S13-Au23063	NCP	%	104			70-130	Pass	
Endosulfan II	S13-Au23063	NCP	%	86			70-130	Pass	
Endosulfan sulphate	S13-Au23063	NCP	%	77			70-130	Pass	
Endrin	S13-Au23063	NCP	%	102			70-130	Pass	
Endrin aldehyde	S13-Au23063	NCP	%	76			70-130	Pass	
Endrin ketone	S13-Au23063	NCP	%	76			70-130	Pass	
g-BHC (Lindane)	S13-Au23063	NCP	%	90			70-130	Pass	
Heptachlor	S13-Au23063	NCP	%	92			70-130	Pass	
Heptachlor epoxide	S13-Au23063	NCP	%	109			70-130	Pass	
Hexachlorobenzene	S13-Au23063	NCP	%	88			70-130	Pass	
Methoxychlor	S13-Au23063	NCP	%	78			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls (PCB)				Result 1					
Aroclor-1260	S13-Au23063	NCP	%	76			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides (OP)				Result 1					
Chlorpyrifos	S13-Au21252	NCP	%	108			70-130	Pass	
Coumaphos	S13-Au21252	NCP	%	89			70-130	Pass	
Diazinon	S13-Au21252	NCP	%	114			70-130	Pass	
Dichlorvos	S13-Au21252	NCP	%	98			70-130	Pass	
Dimethoate	S13-Au21252	NCP	%	71			70-130	Pass	
Disulfoton	S13-Au21252	NCP	%	115			70-130	Pass	
Ethoprop	S13-Au21252	NCP	%	121			70-130	Pass	
Fenitrothion	S13-Au21252	NCP	%	101			70-130	Pass	
Fensulfthion	S13-Au21252	NCP	%	84			70-130	Pass	
Fenthion	S13-Au21252	NCP	%	108			70-130	Pass	
Methyl azinphos	S13-Au21252	NCP	%	73			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Malathion	S13-Au21252	NCP	%	71			70-130	Pass	
Methyl parathion	S13-Au21252	NCP	%	99			70-130	Pass	
Mevinphos	S13-Au21252	NCP	%	75			70-130	Pass	
Monocrotophos	S13-Au21252	NCP	%	70			70-130	Pass	
Parathion	S13-Au21252	NCP	%	116			70-130	Pass	
Phorate	S13-Au21252	NCP	%	122			70-130	Pass	
Profenofos	S13-Au21252	NCP	%	76			70-130	Pass	
Prothiofos	S13-Au21252	NCP	%	113			70-130	Pass	
Ronnel	S13-Au21252	NCP	%	108			70-130	Pass	
Stirophos	S13-Au21252	NCP	%	82			70-130	Pass	
Trichloronate	S13-Au21252	NCP	%	117			70-130	Pass	
Spike - % Recovery									
Metals M8									
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Arsenic	S13-Au21254	NCP	%	87			70-130	Pass	
Cadmium	S13-Au21254	NCP	%	101			70-130	Pass	
Chromium	S13-Au21254	NCP	%	86			70-130	Pass	
Copper	S13-Au21254	NCP	%	103			70-130	Pass	
Lead	S13-Au21239	NCP	%	93			70-130	Pass	
Mercury	S13-Au21357	NCP	%	93			70-130	Pass	
Nickel	S13-Au21254	NCP	%	87			70-130	Pass	
Zinc	S13-Au21254	NCP	%	95			70-130	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S13-Au21254	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S13-Au18853	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S13-Au18853	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S13-Au18853	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S13-Au21254	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S13-Au21254	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S13-Au21254	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S13-Au21254	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S13-Au21254	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S13-Au21254	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S13-Au21254	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S13-Au21254	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S13-Au21254	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S13-Au18853	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S13-Au18853	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S13-Au18853	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S13-Au22060	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S13-Au22060	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S13-Au22060	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S13-Au22060	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S13-Au22060	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S13-Au22060	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	S13-Au22060	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S13-Au22060	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Chrysene	S13-Au22060	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S13-Au22060	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S13-Au22060	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S13-Au22060	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1.2.3-cd)pyrene	S13-Au22060	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S13-Au22060	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S13-Au22060	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S13-Au22060	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
4,4'-DDD	S13-Au23063	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	S13-Au23063	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	S13-Au23063	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-BHC	S13-Au23063	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	S13-Au23063	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-BHC	S13-Au23063	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-BHC	S13-Au23063	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	S13-Au23063	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	S13-Au23063	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	S13-Au23063	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	S13-Au23063	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	S13-Au23063	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	S13-Au23063	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	S13-Au23063	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-BHC (Lindane)	S13-Au23063	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	S13-Au23063	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	S13-Au23063	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	S13-Au23063	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	S13-Au23063	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls (PCB)				Result 1	Result 2	RPD		
Aroclor-1016	S13-Au23063	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1232	S13-Au23063	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1242	S13-Au23063	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1248	S13-Au23063	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1254	S13-Au23063	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aroclor-1260	S13-Au23063	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organophosphorus Pesticides (OP)				Result 1	Result 2	RPD		
Chlorpyrifos	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Coumaphos	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Diazinon	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorvos	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dimethoate	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Disulfoton	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ethoprop	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fenitrothion	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fensulfthion	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fenthion	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Methyl azinphos	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Malathion	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Methyl parathion	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Mevinphos	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Monocrotophos	S13-Au21252	NCP	mg/kg	< 10	< 10	<1	30%	Pass

Duplicate								
Organophosphorus Pesticides (OP)				Result 1	Result 2	RPD		
Parathion	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phorate	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Profenofos	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Prothiofos	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ronnel	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Stirophos	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloronate	S13-Au21252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Metals M8				Result 1	Result 2	RPD		
Arsenic	S13-Au21254	NCP	mg/kg	74	74	<1	30%	Pass
Cadmium	S13-Au21254	NCP	mg/kg	2.2	1.8	21	30%	Pass
Chromium	S13-Au21254	NCP	mg/kg	7.3	8.6	15	30%	Pass
Copper	S13-Au21254	NCP	mg/kg	220	210	2.0	30%	Pass
Lead	S13-Au21254	NCP	mg/kg	220	220	1.0	30%	Pass
Mercury	S13-Au23283	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Nickel	S13-Au21254	NCP	mg/kg	44	33	27	30%	Pass
Zinc	S13-Au21254	NCP	mg/kg	150	150	4.0	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.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



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

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Company Name: Douglas Partners (Syd)
Address: 96 Hermitage Road
West Ryde
NSW 2114
Client Job No.: PARKES 72466.01

Order No.:
Report #: 390699
Phone: 02 9809 0666
Fax:

Received: Aug 27, 2013 2:15 PM
Due: Sep 3, 2013
Priority: 5 Day
Contact Name: Peter Oitmaa

Eurofins | mgt Client Manager: Jean Heng

Sample Detail				Total Recoverable Hydrocarbons	Organophosphorus Pesticides (OP)	Speciated Phenols	Polychlorinated Biphenyls (PCB)	BTEX	Metals M8	Organochlorine Pesticides	Polycyclic Aromatic Hydrocarbons	% Moisture
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271							X					
Sydney Laboratory - NATA Site # 18217				X								
Brisbane Laboratory - NATA Site # 20794												
External Laboratory												
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID								
TS9B	Aug 19, 2013		Soil	S13-Au21265	X	X	X	X	X	X	X	X
TS12B	Aug 19, 2013		Soil	S13-Au21267	X	X	X	X	X	X	X	X
TS13B	Aug 19, 2013		Soil	S13-Au21268	X	X	X	X	X	X	X	X
TS17B	Aug 19, 2013		Soil	S13-Au21269	X	X	X	X	X	X	X	X

Sample Receipt Advice

Company name: **Douglas Partners (Syd)**
Contact name: **Peter Oitmaa**
Client job number: **PARKES 72466.01**
COC number: **Not provided**
Turn around time: **5 Day**
Date/Time received: **Aug 27, 2013 2:15 PM**
Eurofins | mgt reference: **390699**

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).

Contact notes

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

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: JeanHeng@eurofins.com.au

Results will be delivered electronically via e.mail to Peter Oitmaa - peter.oitmaa@douglaspartners.com.au.

Eurofins | mgt Sample Receipt

CHAIN OF CUSTODY

Project Name: PARKES

Project No: 72466.01

Project Mgr: Peter Oitmaa

Email: peter.oitmaa@douglaspartners.com.au

Date Required: 5/10

To: Envirolab Services

12 Ashley Street, Chatswood NSW 2067

Attn: Tania Notaras

Phone: 02 9910 6200

Email: tnotaras@envirolabservices.com.au

#300000

Lab Quote No.

Sample ID	Sample Depth	Lab ID	Sampling Date	Sample Type S - soil W - water	Container type	Analytes								Notes	
						8 Metals As, Cd, Cr, Cu, Ni, Hg, Pb, Zn	BTEX TRH	PAH	OC/OPP	PCB	Phenol	Asbestos	PH		
PS10	N/A	73	21/8	S	Jar									✓	Combo
PS11A		74													8a+PH, CEC
PS12		75													8a
PS13		76													
PS14		27													
PS15		78													
TS 9A	N/A	73	19/8												8
TS 9B		73													Send to LABMEX
TS 12A		11													8
TS 12B		12													Send to LABMEX
TS 13A		13													8
TS 13B		14													Send to LABMEX

Lab Report No.

Send Results to: Douglas Partners Address: 96 Hermitage Road, West Ryde 2114

Relinquished by: P. Oitmaa Signed: P.O.

Relinquished by: J.H. (ELS) Signed: J.H.

Phone: (02) 9809 0666

Fax: (02) 9809 4095

Date & Time: 26/8 12:00h, Received By: Tania Notaras

Date & Time: 27/8/13 12:15 Received By: Tania Notaras

Date & Time: 27/8/14:15

Appendix H

QA/QC Information

Quality Assurance/Quality Control Procedures and Results

Field QA/QC for Soil Samples

The field QA/QC procedures for sampling described in the Douglas Partners *Field Procedures Manual* were followed at all times during the field work.

Laboratory-prepared Trip Blank and Trip Spike soil samples were taken to site during the field work, stored in the same container used to store the field samples, and transported to the laboratory with the field samples selected for analysis. The purpose of the Trip Blank was to determine whether cross-contamination of the samples was likely to have occurred. The purpose of the Trip Spike was to determine whether the significant loss of volatile contaminants may have occurred.

The results for the Trip Blank and Trip Spike soil samples are provided in Table H1.

Table H1: Trip Blank and Trip Spike QA/QC Results for Hydrocarbons in Soils

Sample ID	Total Concentration (mg/kg) or % Recovery				
	Benzene	Toluene	Ethyl-benzene	Xylene	TRH C ₆ – C ₉
Blank	<0.2	<0.5	<1	<3	<25
Spike	95%	81%	71%	71%	NT

Notes: TRH = Total recoverable hydrocarbons; NT = Not tested

The concentrations of analytes in the Trip Blank were below the laboratory detection limits which indicates that cross-contamination is unlikely to have occurred. The recovery rates for the Trip Spike analytes were within an acceptable range which indicates that the significant loss of volatile contaminants is unlikely to have occurred. The field sampling protocols are therefore considered appropriate.

Rinsate samples were collected by washing demineralised water over the decontaminated sampling equipment and collecting the rinsate for analysis. The purpose of the rinsate analysis was to determine whether decontamination procedures were adequate.

Selected results for the rinsate analysis are provided in Tables H2 and H3.

Table H2: Rinsate QA/QC Results for Hydrocarbons in Water

Sample ID	Total Concentration (µg/L)				
	Benzene	Toluene	Ethylbenzene	Xylene	TRH C ₆ – C ₉
R1-13/8	<1	<1	<1	<3	<10
R2-14/8	<1	<1	<1	<3	<10
R3-15/8	<1	<1	<1	<3	<10
R1-19/8	<1	<1	<1	<3	<10
R2-20/8	<1	<1	<1	<3	<10
R3-21/8	<1	<1	<1	<3	<10

Notes: TRH = Total recoverable hydrocarbons

Table H3: Rinsate QA/QC Results for Heavy Metals in Water

Sample ID	Total Concentration (µg/L)							
	As	Cd	Cr	Cu	Pb	Hg	Ni	Zn
R1-13/8	<50	<10	<10	<10	<30	<0.5	<20	<20
R2-14/8	<50	<10	<10	<10	<30	<0.5	<20	<20
R3-15/8	<50	<10	<10	<10	<30	<0.5	<20	<20
R1-19/8	<50	<10	<10	<10	<30	<0.5	<20	<20
R2-20/8	<50	<10	<10	<10	<30	<0.5	<20	<20
R3-21/8	<50	<10	<10	<10	<30	<0.5	<20	<20

Notes: As = Arsenic; Cd = Cadmium; Cr = Chromium; Cu = Copper; Pb = Lead; Hg = Mercury; Ni = Nickel; Zn = Zinc

The concentrations of analytes in the rinsate samples were below the laboratory detection limits which indicates appropriate decontamination was undertaken during sampling. The field sampling protocols are therefore considered appropriate.

Intra-Laboratory QA/QC Analysis on Soil Samples

Intra-laboratory analysis of soil samples was conducted as an internal check of the reproducibility of the results from the primary laboratory and as a measure of consistency of sampling techniques. The 'A' series of the triplicate QA/QC samples were analysed by the primary laboratory (Envirolab). The results were compared between the primary and 'A' samples to determine the relative percentage difference (RPD) between the samples. The RPD was then used to determine whether unacceptable errors may be present in the sample data.

Selected comparative results of the analysis of the intra-laboratory soil samples are summarised in Tables H4 to H6.

Table H4: Intra-Laboratory QA/QC Results for BTEX in Soil

Sample ID	Total Concentration (mg/kg)				
	Benzene	Toluene	Ethylbenzene	m + p xylene	o xylene
PC5/0.1-0.2	<0.2	<0.5	<1	<2	<1
TS2A	<0.2	<0.5	<1	<2	<1
RPD	0%	0%	0%	0%	0%
PC79/0-0.1	<0.2	<0.5	<1	<2	<1
TS5A	<0.2	<0.5	<1	<2	<1
RPD	0%	0%	0%	0%	0%
PC35/0.1-0.2	<0.2	<0.5	<1	<2	<1
TS7A	<0.2	<0.5	<1	<2	<1
RPD	0%	0%	0%	0%	0%
PC18/0-0.1	<0.2	<0.5	<1	<2	<1
TS9A	<0.2	<0.5	<1	<2	<1
RPD	0%	0%	0%	0%	0%
PC43/0.5-0.6	<0.2	<0.5	<1	<2	<1
TS12A	<0.2	<0.5	<1	<2	<1
RPD	0%	0%	0%	0%	0%
PC58/0.5-0.6	<0.2	<0.5	<1	<2	<1
TS13A	<0.2	<0.5	<1	<2	<1
RPD	0%	0%	0%	0%	0%
PC97/0.5-0.6	<0.2	<0.5	<1	<2	<1
TS17A	<0.2	<0.5	<1	<2	<1
RPD	0%	0%	0%	0%	0%

Table H5: Intra-Laboratory QA/QC Results for TRH in Soil

Sample ID	Total Concentration (mg/kg)			
	C ₆ – C ₉	C ₁₀ – C ₁₄	C ₁₅ – C ₂₈	C ₂₉ – C ₃₆
PC5/0.1-0.2	<25	<50	<100	<100
TS2A	<25	<50	<100	<100
RPD	0%	0%	0%	0%
PC79/0-0.1	<25	<50	<100	<100
TS5A	<25	<50	<100	<100
RPD	0%	0%	0%	0%
PC35/0.1-0.2	<25	<50	<100	<100
TS7A	<25	<50	<100	<100
RPD	0%	0%	0%	0%
PC18/0-0.1	<25	<50	<100	<100
TS9A	<25	<50	<100	<100
RPD	0%	0%	0%	0%
PC43/0.5-0.6	<25	<50	<100	<100
TS12A	<25	<50	<100	<100
RPD	0%	0%	0%	0%
PC58/0.5-0.6	<25	<50	<100	<100
TS13A	<25	<50	110	<100
RPD	0%	0%	10%	0%
PC97/0.5-0.6	<25	75	510	<100
TS17A	<25	<50	<100	<100
RPD	0%	0%	134%	0%

Table H6: Intra-Laboratory QA/QC Results for Heavy Metals in Soil

Sample ID	Total Concentration (mg/kg)							
	As	Cd	Cr	Cu	Pb	Hg	Ni	Zn
PC5/0.1-0.2	6	<0.4	39	31	18	<0.1	17	34
TS2A	4	<0.4	31	22	13	<0.1	12	27
RPD	40%	0%	23%	34%	32%	0%	34%	23%
PC79/0-0.1	5	<0.4	27	25	12	0.1	14	30
TS5A	6	<0.4	30	25	11	<0.1	13	29
RPD	18%	0%	11%	0%	9%	0%	7%	3%
PC35/0.1-0.2	6	<0.4	45	24	11	<0.1	14	22
TS7A	<4	<0.4	29	22	12	<0.1	12	23
RPD	40%	0%	43%	9%	9%	0%	15%	4%
PC18/0-0.1	6	<0.4	43	23	12	0.1	15	27
TS9A	4	<0.4	33	17	9	<0.1	10	19
RPD	40%	0%	26%	30%	29%	0%	40%	35%
PC43/0.5-0.6	6	<0.4	35	28	8	<0.1	10	19
TS12A	6	<0.4	34	34	7	<0.1	14	18
RPD	0%	0%	3%	19%	13%	0%	33%	5%
PC58/0.5-0.6	7	<0.4	38	29	11	0.1	11	19
TS13A	5	<0.4	26	23	9	0.2	14	36
RPD	33%	0%	38%	23%	20%	67%	24%	62%
PC97/0.5-0.6	9	<0.4	15	88	7	0.1	11	12
TS17A	9	<0.4	16	89	8	<0.1	11	13
RPD	0%	0%	6%	1%	13%	0%	0%	8%

Notes: As = Arsenic; Cd = Cadmium; Cr = Chromium; Cu = Copper; Pb = Lead; Hg = Mercury; Ni = Nickel; Zn = Zinc

The RPD values outside the generally acceptable range of $\pm 30\%$ are indicated by yellow shading in Tables H5 and H6. These values are not considered significant due to the relatively low actual differences between the sample pairs.

It is therefore considered that the results indicate acceptable consistency between the primary and 'A' soil samples, that suitable field sampling methodology was adopted and that adequate laboratory precision was achieved.

Inter-Laboratory QA/QC Analysis on Soil Samples

Inter-laboratory analysis of soil samples was conducted as an internal check of the reproducibility of the results from the laboratories and as a measure of consistency of sampling techniques. The 'B' series of the triplicate QA/QC samples were analysed by the secondary laboratory (Eurofins). The results were compared between the primary and 'B' samples to determine the relative percentage difference (RPD) between the samples. The RPD was then used to determine whether unacceptable errors may be present in the sample data.

Selected comparative results of the analysis of the intra-laboratory soil samples are summarised in Tables H7 to H9.

Table H7: Inter-Laboratory QA/QC Results for BTEX in Soil

Sample ID	Total Concentration (mg/kg)				
	Benzene	Toluene	Ethylbenzene	m + p xylene	o xylene
PC5/0.1-0.2	<0.2	<0.5	<1	<2	<1
TS2B	<0.1	<0.1	<0.1	<0.2	<0.1
RPD	0%	0%	0%	0%	0%
PC79/0-0.1	<0.2	<0.5	<1	<2	<1
TS5B	<0.1	<0.1	<0.1	<0.2	<0.1
RPD	0%	0%	0%	0%	0%
PC35/0.1-0.2	<0.2	<0.5	<1	<2	<1
TS7B	<0.1	<0.1	<0.1	<0.2	<0.1
RPD	0%	0%	0%	0%	0%
PC18/0-0.1	<0.2	<0.5	<1	<2	<1
TS9B	<0.1	<0.1	<0.1	<0.2	<0.1
RPD	0%	0%	0%	0%	0%
PC43/0.5-0.6	<0.2	<0.5	<1	<2	<1
TS12B	<0.1	<0.1	<0.1	<0.2	<0.1
RPD	0%	0%	0%	0%	0%
PC58/0.5-0.6	<0.2	<0.5	<1	<2	<1
TS13B	<0.1	<0.1	<0.1	<0.2	<0.1
RPD	0%	0%	0%	0%	0%
PC97/0.5-0.6	<0.2	<0.5	<1	<2	<1
TS17B	<0.1	<0.1	<0.1	<0.2	<0.1
RPD	0%	0%	0%	0%	0%

Table H8: Inter-Laboratory QA/QC Results for TRH in Soil

Sample ID	Total Concentration (mg/kg)			
	C ₆ – C ₉	C ₁₀ – C ₁₄	C ₁₅ – C ₂₈	C ₂₉ – C ₃₆
PC5/0.1-0.2	<25	<50	<100	<100
TS2B	<20	25	72	80
RPD	0%	0%	0%	0%
PC79/0-0.1	<25	<50	<100	<100
TS5B	<20	<20	<50	<50
RPD	0%	0%	0%	0%
PC35/0.1-0.2	<25	<50	<100	<100
TS7B	<20	<20	<50	<50
RPD	0%	0%	0%	0%
PC18/0-0.1	<25	<50	<100	<100
TS9B	<20	<20	<50	<50
RPD	0%	0%	0%	0%
PC43/0.5-0.6	<25	<50	<100	<100
TS12B	<20	30	130	<50
RPD	0%	0%	26%	0%
PC58/0.5-0.6	<25	<50	<100	<100
TS13B	<20	<20	62	<50
RPD	0%	0%	0%	0%
PC97/0.5-0.6	<25	75	510	<100
TS17B	<20	<20	<50	<50
RPD	0%	116%	164%	0%

Table H9: Inter-Laboratory QA/QC Results for Heavy Metals in Soil

Sample ID	Total Concentration (mg/kg)							
	As	Cd	Cr	Cu	Pb	Hg	Ni	Zn
PC5/0.1-0.2	6	<0.4	39	31	18	<0.1	17	34
TS2B	6.5	0.5	41	31	14	<0.05	15	39
RPD	8%	22%	5%	0%	25%	0%	13%	14%
PC79/0-0.1	5	<0.4	27	25	12	0.1	14	30
TS5B	7.3	0.5	40	24	11	<0.05	13	26
RPD	33%	22%	39%	4%	9%	67%	7%	14%
PC35/0.1-0.2	6	<0.4	45	24	11	<0.1	14	22
TS7B	6.2	<0.4	29	29	12	<0.5	15	29
RPD	0%	0%	43%	19%	9%	0%	7%	27%
PC18/0-0.1	6	<0.4	43	23	12	0.1	15	27
TS9B	12	<0.4	34	18	9	<0.05	11	22
RPD	67%	0%	23%	24%	29%	67%	31%	20%
PC43/0.5-0.6	6	<0.4	35	28	8	<0.1	10	19
TS12B	11	<0.4	29	27	5.9	<0.05	10	15
RPD	59%	0%	19%	4%	29%	0%	0%	24%
PC58/0.5-0.6	7	<0.4	38	29	11	0.1	11	19
TS13B	13	<0.4	33	35	9.3	<0.05	19	35
RPD	60%	0%	14%	19%	20%	0%	53%	59%
PC97/0.5-0.6	9	<0.4	15	88	7	0.1	11	12
TS17B	14	<0.4	12	89	6.9	<0.05	11	10
RPD	43%	0%	22%	1%	0%	67%	0%	18%

Notes: As = Arsenic; Cd = Cadmium; Cr = Chromium; Cu = Copper; Pb = Lead; Hg = Mercury; Ni = Nickel; Zn = Zinc

The RPD values outside the generally acceptable range of $\pm 30\%$ are indicated by yellow shading in Tables H8 and H9. These values are not considered significant due to the relatively low actual differences between the sample pairs.

It is therefore considered that the results indicate acceptable consistency between the primary and 'B' soil samples, that suitable field sampling methodology was adopted and that adequate laboratory precision was achieved.

Laboratory QA/QC Procedures

Quality control procedures used during the analyses include:

Reagent Blank

A reagent blank sample is prepared and analysed at the beginning of every analytical run, following calibration of the analytical apparatus. The laboratory results for reagent blanks indicated that concentrations of all analytes were below respective laboratory practical quantitation limits.

Duplicate

This is the complete duplicate of a sample from the process batch. The results of the two samples are compared to laboratory acceptance criteria and exceedences highlighted. No exceedences were detected.

Matrix Spike

A portion of a sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and determine whether matrix interference exists. The matrix spike recovery is compared to laboratory acceptance criteria. No exceedences were noted.

Laboratory Control Sample

This is a standard reference sample or control matrix used to check the analytical process. The results were within acceptable limits.

Surrogate Spike

Surrogates are known additions of known compounds to each sample, blank, matrix spike and laboratory control sample. The surrogates are similar to the analyte of interest, however are not expected to be detected in real samples. The results were acceptable.

Appendix I

PID Calibration Details

CALIBRATION RECORD

Project: Parkes/Forbes
Project Number: 73466.01/73574.00

Calibrated Equipment

Model: MiniRAE2000 PID
Serial No.: 110003382
DP Reference: DP 400
Other: 10.6eV Lamp

Calibration

Date(s): 9 Aug 2013
Operator(s): AG
Zero Gas: ambient air
Span Gas: isobutylene
Span Gas Concentration: 100
Response Factor: 1.0

Approved: AG
Date: 9 Aug 2013