APPENDIX B LABORATORY TRANSCRIPTS

S224 WIE105140

ENVIRONMENTAL EARTH SCIENCES
THE KNOW AND THE HOW

CHAIN OF CUSTODY - ANALYSIS REQUEST FORM

Job #: 210074 Site Location: Albert Park Sampler: DJ

Date: 21/01/2011 Laboratory: SGS Report To: djames@eesi.biz

	Sample ID	pH	Sample Description: SOIL	WATER	SEDIMENT	Analysis Required: TPH/BTEX/PAH	Phenols	Total CN	Sulfate	sulphides							ANTICIPATED RESULTS/ TURNAROUND TIME
1	Split1		X			X	X	x									
2	Split2		X			x	x	x	x	x							
3	Split3		X			x	x	x									
4	Split4		X			x	x										
5	Split5		X			x	x										
6	Split6		X														HOLD
7	Split7		X			x	x										
	TOTAL			7		6	6	3	1	1							

21/1/11

Turn Around: NORMAL / 3 DAYS / 48 HRS / 24 HRS Sheet: 1 of 1

Comments:

	Time	Date
Left EES Site:	11am	24-Jan-11
Transported By:	Hunter Express	24-Jan-11
Received Lab:		
Fax Results Rec'd		
Typed Results Rec'd		

Lab Supervisor:

We can be contacted on:

Phone: (03) 9687 1666

Fax: (03) 9687 1844

ME105371

CHAIN OF CUSTODY - ANALYSIS REQUEST FORM

ENVIRONMENTAL EARTH SCIENCES
THE KNOW AND THE HOW

Job #: 210074 Site Location: Albert Park Sampler: DJ

Date: 15/02/2011 Laboratory: SGS Report To: djames@eesi.biz

Sample ID	pH	Sample Description			Analysis Required											ANTICIPATED RESULTS/ TURNAROUND TIME
		SOIL	WATER	SEDIMENT	TPH/BTEX/PAH	Phenols	Total CN	Sulfate	sulphides							
Split8		X			X											
TOTAL		1			1											

Turn Around: NORMAL / 3 DAYS / 48 HRS / 24 HRS Sheet: 1 of 1

Comments:

	Time	Date	Lab Supervisor:
Left EES Site:	11am	10-Feb-11	
Transported By:	Hunter Express	10-Feb-11	
Received Lab:	JayJay	11-02-11	
Fax Results Rec'd			
Typed Results Rec'd			

We can be contacted on:

Phone: (03) 9687 1666

Fax: (03) 9687 1844

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **EM1100639**	Page	: 1 of 20
Amendment	: **1**		
Client	: **ENVIRONMENTAL EARTH SCIENCES**	Laboratory	: Environmental Division Melbourne
Contact	: MR DAVID JAMES	Contact	: Carol Walsh
Address	: P.O.BOX 2253 FOOTSCRAY VIC, AUSTRALIA 3011	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: djames@eesi.biz	E-mail	: carol.walsh@alsenviro.com
Telephone	: +61 96871666	Telephone	: +61-3-8549 9608
Facsimile	: +61 03 96871844	Facsimile	: +61-3-8549 9601
Project	: ALBERT PARK GAS WORKS	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: 210074		
C-O-C number	: ----	Date Samples Received	: 21-JAN-2011
Sampler	: ----	Issue Date	: 03-NOV-2011
Site	: ----		
		No. of samples received	: 36
Quote number	: ME/015/11 V3	No. of samples analysed	: 33

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

This document is issued in accordance with NATA accreditation requirements.

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*
Herman Lin	Laboratory Coordinator	Melbourne Inorganics
Kim McCabe	Senior Inorganic Chemist	Stafford Minerals - AY
Xingbin Lin	Senior Organic Chemist	Melbourne Inorganics
Xingbin Lin	Senior Organic Chemist	Melbourne Organics

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 insuffient 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

- **3/11/11 - This report has been amended and re-released to allow the reporting of additional analytical data.**
- **EP071: LOR raised x10 for sample EM1100639-024, DUP. Poor sample heterogeneity due to matrix interference.**
- **EP071: Particular samples LOR raised for >C10->C40 band due to instrument back ground.**
- **EP080: EM1100639-024 surrogate recoveries confirmed by re-analysis.**
- **EP080: Particular sample (EM-1100639-024) shows poor surrogates recovery due to the matrix interferrence.**
- **This is a split batch of EM1100640 & EM1100641.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP1 (0-0.1)	TP1 (0.35-0.4)	TP1 (0.3-0.35)	TP2 (0-0.1)	TP2 (0.95-1.0)
				Client sampling date / time	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00
					EM1100639-001	EM1100639-002	EM1100639-003	EM1100639-004	EM1100639-005
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**7.9**	**10.8**	**9.0**	**10.1**	**9.7**
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	**10**	<5	**16**	**18**
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**5**	**17**	**18**	**12**	**8**
Copper	7440-50-8	5	mg/kg		**5**	**21**	**30**	**18**	**20**
Lead	7439-92-1	5	mg/kg		**5**	**11**	**8**	**56**	**45**
Nickel	7440-02-0	2	mg/kg		**17**	**36**	**96**	**10**	**5**
Zinc	7440-66-6	5	mg/kg		**17**	**20**	**38**	**108**	**141**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		----	----	<1	**3**	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<5.0
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<5.0
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<5.0
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg		<1.0	<1.0	<1.0	<1.0	<10.0
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<5.0
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<5.0
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<5.0
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<5.0
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<5.0
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<5.0
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<5.0
Pentachlorophenol	87-86-5	2.0	mg/kg		<2.0	<2.0	<2.0	<2.0	<20.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	**0.7**	**9.7**
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	**2.5**	**18.4**
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<5.0
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	**8.0**
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	**9.4**	**111**
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	**4.0**	**37.4**
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	**0.7**	<0.5	**26.0**	**225**
Pyrene	129-00-0	0.5	mg/kg		<0.5	**0.7**	<0.5	**25.0**	**214**
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	**13.4**	**99.9**
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	**11.2**	**82.6**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP1 (0-0.1)	TP1 (0.35-0.4)	TP1 (0.3-0.35)	TP2 (0-0.1)	TP2 (0.95-1.0)
				Client sampling date / time: 18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00
				EM1100639-001	EM1100639-002	EM1100639-003	EM1100639-004	EM1100639-005
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5	**11.1**	**79.7**
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	**9.8**	**66.9**
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	**14.2**	**103**
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	**6.4**	**46.4**
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	**1.5**	**11.9**
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	**7.7**	**57.6**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	**13**
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	**280**	**2260**
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	**240**	**1480**
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	**520**	**3740**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10	<10	**12**
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	**130**
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	**130**	**570**	**3490**
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	**170**	**860**
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	**5.5**
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	**2.1**
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	**0.8**
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**82.0**	**83.9**	**80.4**	**76.0**	**59.6**
2-Chlorophenol-D4	93951-73-6	0.1	%	**96.0**	**98.8**	**96.5**	**91.8**	**87.4**
2.4.6-Tribromophenol	118-79-6	0.1	%	**74.6**	**73.9**	**62.3**	**74.1**	**49.0**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**101**	**102**	**103**	**98.0**	**95.9**
Anthracene-d10	1719-06-8	0.1	%	**107**	**90.4**	**114**	**106**	**119**
4-Terphenyl-d14	1718-51-0	0.1	%	**96.4**	**101**	**100**	**104**	**112**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**107**	**105**	**103**	**110**	**118**
Toluene-D8	2037-26-5	0.1	%	**88.1**	**94.8**	**88.5**	**93.5**	**97.8**
4-Bromofluorobenzene	460-00-4	0.1	%	**89.8**	**100**	**90.7**	**91.4**	**97.6**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP2 (1.5-1.6)	TP3 (0-0.1)	TP3 (0.3)	TP3 (1.4)	TP4 (0-0.1)
				Client sampling date / time: 18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00
				EM1100639-006	EM1100639-007	EM1100639-008	EM1100639-009	EM1100639-011
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**14.9**	**19.0**	**13.4**	**3.1**	**14.3**
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**5**	<5	<5	<5	**9**
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	<2	**22**	**8**	<2	**11**
Copper	7440-50-8	5	mg/kg	<5	**14**	**6**	<5	**8**
Lead	7439-92-1	5	mg/kg	<5	**18**	**16**	<5	**23**
Nickel	7440-02-0	2	mg/kg	<2	**17**	**4**	<2	**8**
Zinc	7440-66-6	5	mg/kg	<5	**54**	**17**	<5	**38**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	----	----	**2**	----	----
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	**0.6**	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	**0.6**	<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	**1.7**	<0.5	**2.9**
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	**0.6**	<0.5	**1.0**
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	**1.4**	<0.5	**5.5**
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	**1.2**	<0.5	**5.5**
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	**0.5**	<0.5	**2.4**
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	**2.3**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP2 (1.5-1.6)	TP3 (0-0.1)	TP3 (0.3)	TP3 (1.4)	TP4 (0-0.1)
				Client sampling date / time: 18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00
				EM1100639-006	EM1100639-007	EM1100639-008	EM1100639-009	EM1100639-011
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	**2.0**
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	**1.8**
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	**2.5**
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	**1.2**
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	**1.5**
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
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<150	<250	<200	<100	**200**
>C34 - C40 Fraction	----	100	mg/kg	<150	<250	<150	<100	<100
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
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**80.6**	**90.0**	**86.1**	**80.2**	**92.6**
2-Chlorophenol-D4	93951-73-6	0.1	%	**94.9**	**92.5**	**101**	**92.8**	**107**
2.4.6-Tribromophenol	118-79-6	0.1	%	**68.8**	**66.7**	**87.5**	**47.1**	**69.2**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**102**	**96.3**	**99.6**	**102**	**114**
Anthracene-d10	1719-06-8	0.1	%	**92.6**	**109**	**97.5**	**97.2**	**101**
4-Terphenyl-d14	1718-51-0	0.1	%	**102**	**98.7**	**104**	**95.9**	**117**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**102**	**108**	**98.5**	**105**	**103**
Toluene-D8	2037-26-5	0.1	%	**90.8**	**96.5**	**87.4**	**91.7**	**90.9**
4-Bromofluorobenzene	460-00-4	0.1	%	**95.1**	**99.9**	**90.1**	**95.6**	**94.8**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP4 (0.25-0.3)	TP4 (0.5)	TP5 (0-0.1)	TP5 (0.8)	TP5 (1.8)
				Client sampling date / time: 18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00
				EM1100639-012	EM1100639-013	EM1100639-014	EM1100639-015	EM1100639-017
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**12.4**	**11.4**	**11.1**	**7.8**	**10.2**
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**43**	**14**	**9**	----	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	----	<1
Chromium	7440-47-3	2	mg/kg	**12**	**9**	**7**	----	**4**
Copper	7440-50-8	5	mg/kg	<5	**31**	**6**	----	<5
Lead	7439-92-1	5	mg/kg	**12**	**446**	**26**	----	<5
Nickel	7440-02-0	2	mg/kg	**4**	**21**	**5**	----	<2
Zinc	7440-66-6	5	mg/kg	**17**	**257**	**28**	----	**15**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.1**	**0.6**	<0.1	----	<0.1
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	<1	----	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<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
2-Methylphenol	95-48-7	0.5	mg/kg	<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
2-Nitrophenol	88-75-5	0.5	mg/kg	<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
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<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
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<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
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
Pentachlorophenol	87-86-5	2.0	mg/kg	<2.0	<2.0	<2.0	----	<2.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	**0.7**	**6.5**	<0.5	<5.0	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	**9.6**	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	<5.0	----
Acenaphthylene	208-96-8	0.5	mg/kg	**0.7**	**4.3**	<0.5	----	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
Fluorene	86-73-7	0.5	mg/kg	----	----	----	<5.0	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	**2.0**	<0.5	----	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	**16.9**	----
Anthracene	120-12-7	0.5	mg/kg	----	----	----	**11.0**	----
Phenanthrene	85-01-8	0.5	mg/kg	**3.5**	**27.7**	**1.8**	----	<0.5

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP4 (0.25-0.3)	TP4 (0.5)	TP5 (0-0.1)	TP5 (0.8)	TP5 (1.8)
				Client sampling date / time: 18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00
				EM1100639-012	EM1100639-013	EM1100639-014	EM1100639-015	EM1100639-017
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Anthracene	120-12-7	0.5	mg/kg	**0.8**	**8.3**	**0.6**	----	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	**156**	----
Fluoranthene	206-44-0	0.5	mg/kg	**3.8**	**42.7**	**4.2**	----	<0.5
Pyrene	129-00-0	0.5	mg/kg	----	----	----	**176**	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	**88.5**	----
Pyrene	129-00-0	0.5	mg/kg	**4.6**	**39.1**	**4.0**	----	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	**1.5**	**19.4**	**1.9**	----	<0.5
Chrysene	218-01-9	0.5	mg/kg	----	----	----	**75.6**	----
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	----	----	----	**71.2**	----
Chrysene	218-01-9	0.5	mg/kg	**1.7**	**16.5**	**1.7**	----	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	**1.7**	**16.2**	**1.5**	----	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	**72.1**	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	**108**	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	**1.3**	**15.0**	**1.4**	----	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	**2.3**	**20.4**	**2.0**	----	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	**44.1**	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	----	**14.4**	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	**1.2**	**9.8**	**0.9**	----	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	----	**54.6**	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	**2.4**	<0.5	----	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	**1.8**	**11.8**	**1.1**	----	<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	**600**	<100	**2240**	<100
C29 - C36 Fraction	----	100	mg/kg	<100	**450**	<100	**1890**	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	<50	**1050**	<50	**4130**	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	**80**	**90**	<50	**130**	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	**1030**	<100	**3780**	<200
>C34 - C40 Fraction	----	100	mg/kg	<100	**310**	<100	**1140**	<250
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: TP4 (0.25-0.3)	TP4 (0.5)	TP5 (0-0.1)	TP5 (0.8)	TP5 (1.8)
				Client sampling date / time: 18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00
				EM1100639-012	EM1100639-013	EM1100639-014	EM1100639-015	EM1100639-017
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**75.1**	**78.6**	**91.2**	**55.6**	**73.7**
2-Chlorophenol-D4	93951-73-6	0.1	%	**92.6**	**95.7**	**96.1**	**78.5**	**88.0**
2.4.6-Tribromophenol	118-79-6	0.1	%	**54.5**	**78.5**	**75.9**	**50.7**	**63.4**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**97.0**	**101**	**98.0**	**86.3**	**92.4**
Anthracene-d10	1719-06-8	0.1	%	**88.0**	**102**	**94.1**	**119**	**85.7**
4-Terphenyl-d14	1718-51-0	0.1	%	**97.3**	**113**	**103**	**106**	**96.4**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**110**	**112**	**105**	**110**	**109**
Toluene-D8	2037-26-5	0.1	%	**91.4**	**95.2**	**95.1**	**92.3**	**97.2**
4-Bromofluorobenzene	460-00-4	0.1	%	**97.7**	**94.7**	**97.2**	**84.4**	**98.2**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP6 (0-0.1)	TP6 (0.25-0.3)	TP6 (1.75-1.8)	TP7 (0-0.1)	TP7 (0.3-0.4)
				Client sampling date / time	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00
					EM1100639-018	EM1100639-019	EM1100639-021	EM1100639-022	EM1100639-023
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**16.0**	**12.9**	**18.6**	**8.9**	**11.7**
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	**23**	**13**	<5	**19**
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**16**	**15**	**11**	**7**	**32**
Copper	7440-50-8	5	mg/kg		**8**	**14**	**20**	**6**	**24**
Lead	7439-92-1	5	mg/kg		**19**	**58**	**64**	**85**	**633**
Nickel	7440-02-0	2	mg/kg		**12**	**11**	**27**	**4**	**25**
Zinc	7440-66-6	5	mg/kg		**33**	**58**	**211**	**43**	**238**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	**0.8**	**0.1**	**1.9**
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		----	**1**	----	----	**176**
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	**0.5**	<5.0	<5.0	**0.6**
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	<0.5	<5.0	<5.0	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	<0.5	<5.0	<5.0	<0.5
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg		<1.0	<1.0	<10.0	<10.0	<1.0
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	<0.5	<5.0	<5.0	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	<0.5	<5.0	<5.0	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	<0.5	<5.0	<5.0	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	<0.5	<5.0	<5.0	<0.5
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		<0.5	<0.5	<5.0	<5.0	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	<0.5	<5.0	<5.0	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<0.5	<5.0	<5.0	<0.5
Pentachlorophenol	87-86-5	2.0	mg/kg		<2.0	<2.0	<20.0	<20.0	<2.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	**6.3**	<5.0	<5.0	**5.2**
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	**3.5**	**9.3**	<5.0	**13.1**
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<5.0	<5.0	**0.8**
Fluorene	86-73-7	0.5	mg/kg		<0.5	**2.3**	**5.6**	<5.0	**1.9**
Phenanthrene	85-01-8	0.5	mg/kg		**2.3**	**19.3**	**48.0**	**26.9**	**30.7**
Anthracene	120-12-7	0.5	mg/kg		**0.9**	**5.5**	**16.4**	**8.3**	**13.7**
Fluoranthene	206-44-0	0.5	mg/kg		**4.6**	**27.8**	**89.0**	**46.4**	**59.8**
Pyrene	129-00-0	0.5	mg/kg		**4.4**	**26.0**	**83.4**	**43.8**	**58.0**
Benz(a)anthracene	56-55-3	0.5	mg/kg		**2.0**	**12.2**	**38.3**	**19.2**	**35.2**
Chrysene	218-01-9	0.5	mg/kg		**1.8**	**10.2**	**34.2**	**18.1**	**29.9**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP6 (0-0.1)	TP6 (0.25-0.3)	TP6 (1.75-1.8)	TP7 (0-0.1)	TP7 (0.3-0.4)
				Client sampling date / time	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00
					EM1100639-018	EM1100639-019	EM1100639-021	EM1100639-022	EM1100639-023
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		1.7	9.9	32.3	15.9	35.8
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		1.5	8.0	28.8	17.2	26.8
Benzo(a)pyrene	50-32-8	0.5	mg/kg		2.2	12.8	42.4	21.4	41.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		1.0	5.5	19.4	10.9	20.4
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	1.6	<5.0	<5.0	5.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		1.3	6.6	25.0	14.4	23.6
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	260	1100	660	1260
C29 - C36 Fraction	----	100	mg/kg		<100	230	790	560	1220
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	490	1890	1220	2480
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	100	70	120
>C16 - C34 Fraction	----	100	mg/kg		<250	520	1790	1150	2230
>C34 - C40 Fraction	----	100	mg/kg		<200	200	520	440	830
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
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		78.0	75.7	57.9	54.3	77.4
2-Chlorophenol-D4	93951-73-6	0.1	%		94.6	90.6	82.5	81.6	94.2
2.4.6-Tribromophenol	118-79-6	0.1	%		59.2	61.2	48.8	41.7	102
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		100	94.7	90.5	91.2	97.0
Anthracene-d10	1719-06-8	0.1	%		92.8	95.5	122	113	99.2
4-Terphenyl-d14	1718-51-0	0.1	%		103	104	97.9	92.8	114
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		118	118	120	110	98.3
Toluene-D8	2037-26-5	0.1	%		99.9	116	97.3	99.7	84.7
4-Bromofluorobenzene	460-00-4	0.1	%		103	118	101	104	82.2

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP7 (1.75-1.8)	TP7 (2.9-3)	TP8 (0-0.1)	TP8 (0.6-0.7)	TP9 (0-0.1)
				Client sampling date / time	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	19-JAN-2011 15:00
					EM1100639-024	EM1100639-025	EM1100639-026	EM1100639-027	EM1100639-028
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**19.6**	**15.0**	**13.0**	**8.7**	**8.2**
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)									
Sulfate as SO4 2-	14808-79-8	50	mg/kg		**6170**	----	----	**90**	----
ED040T : Total Sulfate by ICPAES									
Sulfate as SO4 2-	14808-79-8	100	mg/kg		**16200**	----	----	<100	----
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%		**1.05**	----	----	<0.01	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**9**	----	**6**	**28**	<5
Cadmium	7440-43-9	1	mg/kg		<1	----	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**55**	----	**29**	**11**	**6**
Copper	7440-50-8	5	mg/kg		**36**	----	**113**	<5	**14**
Lead	7439-92-1	5	mg/kg		**153**	----	**222**	**6**	**42**
Nickel	7440-02-0	2	mg/kg		**22**	----	**47**	**3**	**4**
Zinc	7440-66-6	5	mg/kg		**68**	----	**132**	**6**	**38**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		**0.6**	----	<0.1	<0.1	<0.1
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		**252**	----	----	<1	----
EK085M: Sulfide as S2-									
Sulfide as S	----	0.01	%		**0.51**	----	----	<0.01	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		**68.7**	<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		**101**	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg		**222**	<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		**169**	<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		**2440**	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		**473**	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP7 (1.75-1.8)	TP7 (2.9-3)	TP8 (0-0.1)	TP8 (0.6-0.7)	TP9 (0-0.1)
				Client sampling date / time: 18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	19-JAN-2011 15:00
				EM1100639-024	EM1100639-025	EM1100639-026	EM1100639-027	EM1100639-028
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Acenaphthene	83-32-9	0.5	mg/kg	**161**	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	**948**	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	**2370**	**1.0**	**2.9**	**1.6**	**0.9**
Anthracene	120-12-7	0.5	mg/kg	**889**	<0.5	**1.1**	**0.7**	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	**1600**	**0.7**	**6.7**	**1.3**	**2.0**
Pyrene	129-00-0	0.5	mg/kg	**1490**	**0.6**	**6.6**	**1.2**	**1.9**
Benz(a)anthracene	56-55-3	0.5	mg/kg	**644**	<0.5	**3.5**	<0.5	**0.8**
Chrysene	218-01-9	0.5	mg/kg	**530**	<0.5	**3.7**	<0.5	**1.0**
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	**424**	<0.5	**3.3**	<0.5	**0.6**
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	**402**	<0.5	**2.5**	<0.5	**0.7**
Benzo(a)pyrene	50-32-8	0.5	mg/kg	**570**	<0.5	**3.8**	<0.5	**0.8**
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	**219**	<0.5	**2.0**	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	**73.5**	<0.5	**0.6**	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	**252**	<0.5	**2.5**	<0.5	**0.6**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	**76**	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	**9080**	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	**37200**	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	**13200**	<100	**140**	<100	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	**59500**	<50	**140**	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	**83**	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	**8230**	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	**29500**	<120	**180**	<100	**100**
>C34 - C40 Fraction	----	100	mg/kg	**4460**	<200	<200	<150	<150
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	**23.8**	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	**19.9**	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	**3.4**	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	**18.2**	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	**7.6**	<0.5	<0.5	<0.5	<0.5
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**83.9**	**87.8**	**82.6**	**81.8**	**81.5**
2-Chlorophenol-D4	93951-73-6	0.1	%	**92.8**	**98.4**	**94.0**	**95.8**	**94.8**
2.4.6-Tribromophenol	118-79-6	0.1	%	**73.3**	**76.0**	**65.7**	**63.0**	**54.6**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**94.5**	**99.4**	**95.1**	**98.4**	**95.2**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP7 (1.75-1.8)	TP7 (2.9-3)	TP8 (0-0.1)	TP8 (0.6-0.7)	TP9 (0-0.1)
				Client sampling date / time: 18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	19-JAN-2011 15:00
				EM1100639-024	EM1100639-025	EM1100639-026	EM1100639-027	EM1100639-028
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.1	%	**67.0**	**97.7**	**95.4**	**93.2**	**91.1**
4-Terphenyl-d14	1718-51-0	0.1	%	**122**	**104**	**107**	**101**	**103**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**109**	**99.7**	**77.3**	**91.7**	**83.7**
Toluene-D8	2037-26-5	0.1	%	**134**	**105**	**84.3**	**96.0**	**86.5**
4-Bromofluorobenzene	460-00-4	0.1	%	**Not Determined**	**107**	**75.1**	**100**	**91.6**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP9 (0.4-0.5)	TP9 (0.7-0.8)	TP10 (0-0.1)	TP10 (0.5-0.6)	TP10 (1-1.1)
				Client sampling date / time	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00
					EM1100639-029	EM1100639-030	EM1100639-031	EM1100639-032	EM1100639-033
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**9.3**	**10.6**	**19.1**	**9.8**	**9.1**
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**54**	**10**	**5**	**12**	**26**
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**17**	**8**	**14**	**19**	**51**
Copper	7440-50-8	5	mg/kg		<5	**20**	**18**	**13**	**50**
Lead	7439-92-1	5	mg/kg		**8**	**148**	**56**	**303**	**537**
Nickel	7440-02-0	2	mg/kg		**4**	**9**	**15**	**16**	**41**
Zinc	7440-66-6	5	mg/kg		**6**	**150**	**78**	**135**	**251**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	**0.3**	<0.1	**0.3**	**1.0**
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		----	----	----	----	**198**
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	<0.5	<0.5	**0.6**	**3.6**
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	**2.5**
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg		<1.0	<1.0	<1.0	<1.0	**4.3**
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	**1.8**
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	**5.5**	<0.5	**7.4**	**63.6**
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	**8.6**	<0.5	**12.2**	**39.5**
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	**1.0**	**4.5**
Fluorene	86-73-7	0.5	mg/kg		<0.5	**1.3**	<0.5	**3.0**	**17.4**
Phenanthrene	85-01-8	0.5	mg/kg		**1.0**	**21.3**	**0.6**	**41.3**	**208**
Anthracene	120-12-7	0.5	mg/kg		<0.5	**11.0**	<0.5	**17.3**	**52.4**
Fluoranthene	206-44-0	0.5	mg/kg		**0.7**	**52.6**	**1.5**	**73.4**	**241**
Pyrene	129-00-0	0.5	mg/kg		**0.6**	**51.5**	**1.5**	**68.6**	**202**
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	**37.3**	**0.7**	**36.2**	**95.4**
Chrysene	218-01-9	0.5	mg/kg		<0.5	**32.2**	**0.8**	**41.8**	**86.4**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP9 (0.4-0.5)	TP9 (0.7-0.8)	TP10 (0-0.1)	TP10 (0.5-0.6)	TP10 (1-1.1)
				Client sampling date / time	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00
					EM1100639-029	EM1100639-030	EM1100639-031	EM1100639-032	EM1100639-033
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		<0.5	**28.7**	**0.6**	**40.4**	**86.4**
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	**21.9**	**0.7**	**29.4**	**70.0**
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	**31.4**	**0.8**	**38.5**	**83.4**
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	**13.6**	<0.5	**20.2**	**48.6**
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	**4.5**	<0.5	**5.6**	**15.1**
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	**14.7**	**0.7**	**22.7**	**52.0**
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	**190**
C15 - C28 Fraction	----	100	mg/kg		<100	**800**	<100	**1090**	**2330**
C29 - C36 Fraction	----	100	mg/kg		<100	**750**	<100	**1010**	**1600**
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	**1550**	<50	**2100**	**4120**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	**300**
>C16 - C34 Fraction	----	100	mg/kg		<100	**1520**	<150	**2000**	**3710**
>C34 - C40 Fraction	----	100	mg/kg		<100	**510**	**210**	**700**	**1080**
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	**1.2**
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	**1.2**
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	**0.8**
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**80.5**	**82.0**	**78.5**	**78.1**	**103**
2-Chlorophenol-D4	93951-73-6	0.1	%		**94.5**	**90.2**	**93.0**	**91.9**	**112**
2.4.6-Tribromophenol	118-79-6	0.1	%		**54.8**	**77.2**	**59.1**	**76.2**	**109**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**95.8**	**95.2**	**95.5**	**91.0**	**116**
Anthracene-d10	1719-06-8	0.1	%		**106**	**95.2**	**94.6**	**95.6**	**103**
4-Terphenyl-d14	1718-51-0	0.1	%		**101**	**115**	**110**	**109**	**121**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**86.3**	**93.6**	**76.3**	**84.8**	**110**
Toluene-D8	2037-26-5	0.1	%		**93.3**	**94.7**	**80.6**	**80.5**	**103**
4-Bromofluorobenzene	460-00-4	0.1	%		**94.0**	**95.5**	**80.0**	**80.0**	**98.6**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP11 (0-0.2)	TP11 (0.5-0.6)	TP11 (1.2-1.3)	----	----
				Client sampling date / time	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	----	----
					EM1100639-034	EM1100639-035	EM1100639-036	----	----
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**15.4**	**17.6**	**9.2**	----	----
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)									
Sulfate as SO4 2-	14808-79-8	50	mg/kg		----	----	**3410**	----	----
ED040T : Total Sulfate by ICPAES									
Sulfate as SO4 2-	14808-79-8	100	mg/kg		----	----	**6710**	----	----
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%		----	----	**0.15**	----	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	**10**	----	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	----	----
Chromium	7440-47-3	2	mg/kg		**41**	**51**	**16**	----	----
Copper	7440-50-8	5	mg/kg		**14**	**17**	**19**	----	----
Lead	7439-92-1	5	mg/kg		**14**	**32**	**435**	----	----
Nickel	7440-02-0	2	mg/kg		**29**	**35**	**14**	----	----
Zinc	7440-66-6	5	mg/kg		**55**	**66**	**126**	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	**1.4**	----	----
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		----	**2**	**254**	----	----
EK085M: Sulfide as S2-									
Sulfide as S	----	0.01	%		----	----	<0.01	----	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	<0.5	**0.6**	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg		<1.0	<1.0	<1.0	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Pentachlorophenol	87-86-5	2.0	mg/kg		<2.0	<2.0	<2.0	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	**5.3**	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	**9.2**	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP11 (0-0.2)	TP11 (0.5-0.6)	TP11 (1.2-1.3)	----	----
				Client sampling date / time: 19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	----	----
				EM1100639-034	EM1100639-035	EM1100639-036	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	**0.9**	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	**3.1**	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	**39.9**	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	**15.1**	----	----
Fluoranthene	206-44-0	0.5	mg/kg	**0.8**	**0.6**	**71.3**	----	----
Pyrene	129-00-0	0.5	mg/kg	**0.7**	**0.6**	**67.9**	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	**41.4**	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	**36.0**	----	----
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	**26.7**	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	**28.0**	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	**35.4**	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	**15.5**	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	**4.3**	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	**17.5**	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	**900**	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	**780**	----	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	<50	<50	**1680**	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10	----	----
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	**1640**	----	----
>C34 - C40 Fraction	----	100	mg/kg	<350	<150	**540**	----	----
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	**0.4**	----	----
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	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**97.4**	**81.2**	**78.9**	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	**97.8**	**95.5**	**94.3**	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%	**97.2**	**54.3**	**82.0**	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**100**	**99.9**	**93.9**	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP11 (0-0.2)	TP11 (0.5-0.6)	TP11 (1.2-1.3)	----	----
				Client sampling date / time	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	----	----
					EM1100639-034	EM1100639-035	EM1100639-036	----	----
EP075(SIM)T: PAH Surrogates - Continued									
Anthracene-d10	1719-06-8	0.1	%		**93.2**	**116**	**97.5**	----	----
4-Terphenyl-d14	1718-51-0	0.1	%		**101**	**108**	**114**	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**86.0**	**98.1**	**98.0**	----	----
Toluene-D8	2037-26-5	0.1	%		**88.4**	**100**	**98.8**	----	----
4-Bromofluorobenzene	460-00-4	0.1	%		**104**	**102**	**93.8**	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	48.5	123.5
2-Chlorophenol-D4	93951-73-6	51.8	129.7
2.4.6-Tribromophenol	118-79-6	26.8	126.6
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	57.9	125.2
Anthracene-d10	1719-06-8	62.6	135.5
4-Terphenyl-d14	1718-51-0	63.7	135.2
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	59.0	126.2
Toluene-D8	2037-26-5	59.5	128.6
4-Bromofluorobenzene	460-00-4	56.4	129.9

CHAIN OF CUSTODY

ALS Laboratory: *please tick* →

☐ Sydney: 277 Woodpark Rd, Smithfield NSW 2176 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: Environmental Earth Sciences	**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):**	**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:
OFFICE: P.O.BOX 2253, FOOTSCRAY , VIC, 3011		
PROJECT: ALBERT PARK GAS WORKS	**ALS QUOTE NO.:** ME/015/11	**COC SEQUENCE NUMBER (Circle)** COC: (1) 2 3 4 5 7 OF: 1 2 3 4 5 (6)
ORDER NUMBER: 210074		
PROJECT MANAGER: DAVID JAMES	**CONTACT PH:**	
SAMPLER: DJ,JI,VR,SF	**SAMPLER MOBILE:** 0437 033 796	
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default):** ENMRG & ESDAT	
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):		

RELINQUISHED BY:	**RECEIVED BY:**	**RELINQUISHED BY:** Samples	**RECEIVED BY:** Anthe
DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME: 21/1 3:30

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: SPLIT WORK ORDER - EM1100640 & EM1100641

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		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).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	S-27 PACKAGE - 8 metals, TPH/BTEX/PAH/Phenols	Total Cyanide - EK026G	Sulphate - NEPM - ED040N	Sulphide - EK085 (Leco S to ALS Brisbane)	Ammonia as N				
1	TP1 (0-0.1)	18/01/2011	Soil		1	1								
2	TP1 (0.35-0.4)	18/01/2011	Soil		1	1								
3	TP1 (0.3-0.35)	18/01/2011	Soil		1	1	1							
4	TP2 (0-0.1)	18/01/2011	Soil		1	1	1							
5	TP2 (0.95-1.0)	18/01/2011	Soil		1	1								
6	TP2 (1.5-1.6)	18/01/2011	Soil		1	1								
7	TP3 (0-0.1)	18/01/2011	Soil		1	1								
8	TP3 (0.3)	18/01/2011	Soil		1	1	1							
9	TP3 (1.4)	18/01/2011	Soil		1	1								
10	TP3 (2.0)	18/01/2011	Soil		1									HOLD
11	TP4 (0-0.1)	18/01/2011	Soil		1	1								
12	TP4 (0.25-0.3)	18/01/2011	Soil		1	1	1							
				TOTAL	12	11	4	0	0	0				

Environmental Division
Melbourne
Work Order
EM1100639

Telephone : +61-3-8549 9600

SCANNED

SCANNED

DW 24/1/11

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.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ **Sydney:** 277 Woodpark Rd, Smithfield NSW 2176 Ph: 02 8784 8555 E:samples.sydney@alsenviro.com
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☐ **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: Environmental Earth Sciences	**TURNAROUND REQUIREMENTS :** ☐ Standard TAT **(List due date):**	**FOR LABORATORY USE ONLY (Circle)**	
OFFICE: P.O.BOX 2253, FOOTSCRAY , VIC, 3011	(Standard TAT may be longer for some tests e.g.. Ultra Trace Organics) ☐ Non Standard or urgent TAT **(List due date):**	Custody Seal Intact?	Yes No N/A
PROJECT: ALBERT PARK GAS WORKS	**ALS QUOTE NO.: ME/015/11**	Free ice / frozen ice bricks present upon receipt?	Yes No N/A
ORDER NUMBER: 210074	**COC SEQUENCE NUMBER (Circle)** COC: 1 2 3 4 5 7	Random Sample Temperature on Receipt:	°C
PROJECT MANAGER: DAVID JAMES	**CONTACT PH:** OF: 1 2 3 4 5 6	Other comment:	

SAMPLER: DJ,JI,VR,SF	**SAMPLER MOBILE: 0437 033 796**	**RELINQUISHED BY:**	**RECEIVED BY:**	**RELINQUISHED BY:** Samples	**RECEIVED BY:** Amrita
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default): ENMRG & ESDAT**				
Email Reports to (will default to PM if no other addresses are listed):		DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME: 21/1 3 30
Email Invoice to (will default to PM if no other addresses are listed):					

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		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).									Additional Information	
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	S-27 PACKAGE - 8 metals, TPH/BTEX/PAH/Phenols	Total Cyanide - EK026G	Sulphate - NEPM - ED040N	Sulphide - EK085 (Leco S to ALS Brisbane)	Ammonia as N						
13	TP4 (0.5)	18/01/2011	Soil		1	1										
14	TP5 (0-0.1)	18/01/2011	Soil		1	1										
15	TP5 (0.8)	18/01/2011	Soil		1	1	# - see email OW 24/1/11								HOLD	as per DJ 21/1/11
16	TP5 (1.1)	18/01/2011	Soil		1										HOLD	
17	TP5 (1.8)	18/01/2011	Soil		1	1										
18	TP6 (0-0.1)	18/01/2011	Soil		1	1										
19	TP6 (0.25-0.3)	18/01/2011	Soil		1	1	1									
20	TP6 (0.75-0.8)	18/01/2011	Soil		1										HOLD	
21	TP6 (1.75-1.8)	18/01/2011	Soil		1	1										
22	TP7 (0-0.1)	18/01/2011	Soil		1	1										
23	TP7 (0.3-0.4)	18/01/2011	Soil		1	1	1									
24	TP7 (1.75-1.8)	18/01/2011	Soil		1	1	1	1	1							
				TOTAL	12	9	4	1	1	0						

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;
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ALS Laboratory: please tick →

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☐ 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: Environmental Earth Sciences	**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):**	**FOR LABORATORY USE ONLY (Circle)**
OFFICE: P.O.BOX 2253, FOOTSCRAY , VIC, 3011		Custody Seal Intact? Yes No N/A
PROJECT: ALBERT PARK GAS WORKS	**ALS QUOTE NO.: ME/015/11**	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: 210074	**COC SEQUENCE NUMBER (Circle)** COC: 1 2 (3) 4 5 OF: 1 2 3 4 5 (9)	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: DAVID JAMES	**CONTACT PH:**	Other comment:
SAMPLER: DJ,JI,VR,SF	**SAMPLER MOBILE: 0437 033 796**	
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default): ENMRG & ESDAT**	
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):		

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY: Samples	RECEIVED BY: Amrita
DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME: 21/1 3:30

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		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).									Additional Information	
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	S-27 PACKAGE - 8 metals, TPH/BTEX/PAH/Phenols	Total Cyanide - EK026G	Sulphate - NEPM - ED040N	Sulphide - EK085 (Leco S to ALS Brisbane)	Ammonia as N						
25	TP7 (2.9-3)	18/01/2011	Soil		1	1	1	1	1	- see email DW 24/1/11					HOLD	QS 25/1/11 DJ
26	TP8 (0-0.1)	18/01/2011	Soil		1	1										
27	TP8 (0.6-0.7)	18/01/2011	Soil		1	1	1	1	1							
28	TP9 (0-0.1)	19/01/2011	Soil		1	1										
29	TP9 (0.4-0.5)	19/01/2011	Soil		1	1	1									
30	TP9 (0.7-0.8)	19/01/2011	Soil		1	1										
31	TP10 (0-0.1)	19/01/2011	Soil		1	1										
32	TP10 (0.5-0.6)	19/01/2011	Soil		1	1										
33	TP10 (1-1.1)	19/01/2011	Soil		1	1	1									
34	TP11 (0-0.2)	19/01/2011	Soil		1	1										
35	TP11 (0.5-0.6)	19/01/2011	Soil		1	1	1									
36	TP11 (1.2-1.3)	19/01/2011	Soil		1	1	1	1	1							
				TOTAL	12	12	6	3	3	0						

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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.

Danielle White

From: Carol Walsh
Sent: Monday, 24 January 2011 4:54 PM
To: Danielle White; Emily Sabatka; Rosalinda Laria; Peter Ravlic
Cc: Samples Melbourne
Subject: FW: ISSUES WITH SAMPLES RECEIVED 21/1/2011 - ALBERT PARK GAS WORKS
Follow Up Flag: Follow up
Flag Status: Red

Please see below.

Regards

How was your customer experience? Please send us your feedback

Carol Walsh
Senior Client Services Officer

ALS | Environmental (General Environmental Group)

Address
4 Westall Rd, Springvale, VIC, 3171
PHONE +61 3 8549 9600
FAX +61 3 8549 9601
www.alsglobal.com

From: David James [mailto:djames@eesi.biz]
Sent: Monday, 24 January 2011 2:37 PM
To: Carol Walsh
Subject: RE: ISSUES WITH SAMPLES RECEIVED 21/1/2011 - ALBERT PARK GAS WORKS

Hi Carol – can I get some extra analysis on the following samples:

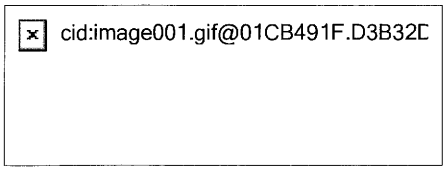
EM1100639 : SAMPLE 15 - TP5(0.8) for TPH/BTEX/PAH;
EM1100639 : SAMPLE 25 - TP7(2.9-3.0) for TPH/BTEX/PAH and Phenols;
EM1100640: SAMPLE 17 - TP15(2.4-2.5) for TPH/BTEX/PAH;
EM1100640: SAMPLE 21 - TP16(2-2.1) for TPH/BTEX/PAH;
EM1100641: SAMPLE 5 - TP22(2.4-2.5) for TPH/BTEX/PAH; and
EM1100641: SAMPLE 4 - TP22(0.6-0.7) for TPH/BTEX/PAH.

Yes - DUP 6 is on HOLD.

Also, I have 500ml ambers for rinsate collected on Wednesday and Thursday I shall courier them across if you can add TPH (C10-C36) and PAH analysis to the COC.
For EM1100641 – RINSATE 2 (SAMPLE 21) AND RINSATE 3(SAMPLE 22) – a 500mL amber bottle is being delivered Tuesday morning 25/1/11. Please add TPH(C10-C36) Plus PAH to these 2 samples.

Regards,

David James – Environmental Engineer
PO Box 2253, Footscray, VIC 3011.



p: 03 9687 1666
d: 03 8398 4419
m: 0437 033 796
f: 03 9687 1844
djames@eesi.biz
www.environmentalearthsciences.com

From: Carol Walsh [mailto:CarolW@alsglobal.com]
Sent: Monday, 24 January 2011 2:16 PM
To: David James
Subject: ISSUES WITH SAMPLES RECEIVED 21/1/2011 - ALBERT PARK GAS WORKS

David,

We have split the samples into 3 work orders: EM1100639, EM1100640 & EM1100641. Only 1 admin fee will apply.

A couple of issues with samples received 21/1/2011 for Albert Park Gas works.

Some hold samples had analysis indicated – as discussed with you on Friday –we are to ignore analysis and keep samples on hold.

DUP6 20/1/2011 - No analysis indicated or HOLD indicated.

Rinsate samples –

no metals bottle received – dissolved metals will be taken from the unpreserved green bottle – lab filtering will result in "non compliance" being reported.

Additional bottles received for rinsates – cyanide and nutrients bottles – no analysis required. TPH / BTEX analysis requested – only amber 40ml volatile vial received – no amber 100mL for semivolatiles. We can only perform TPH(C6-C9)/BTEX for these samples.

Trip samples – only 40mL amber vial received – TPH C6-C9/BTEX only can be performed on these samples.

Regards

How was your customer experience? Please send us your feedback

Carol Walsh
Senior Client Services Officer

ALS | Environmental (General Environmental Group)

Address
4 Westall Rd, Springvale, VIC, 3171
PHONE +61 3 8549 9600
FAX +61 3 8549 9601
www.alsglobal.com

P Please consider the environment before printing this email.

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order : **EM1100639**

Client	: **ENVIRONMENTAL EARTH SCIENCES**	Laboratory	: Environmental Division Melbourne
Contact	: MR DAVID JAMES	Contact	: Carol Walsh
Address	: P.O.BOX 2253 FOOTSCRAY VIC, AUSTRALIA 3011	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: djames@eesi.biz	E-mail	: carol.walsh@alsenviro.com
Telephone	: +61 96871666	Telephone	: +61-3-8549 9608
Facsimile	: +61 03 96871844	Facsimile	: +61-3-8549 9601
Project	: ALBERT PARK GAS WORKS	Page	: 1 of 3
Order number	: 210074		
C-O-C number	: ----	Quote number	: EM2011ENVEAR0210 (ME/015/11)
Site	: ----		
Sampler	: ----	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 21-JAN-2011	Issue Date	: 24-JAN-2011 16:24
Client Requested Due Date	: 31-JAN-2011	Scheduled Reporting Date	: **31-JAN-2011**

Delivery Details

Mode of Delivery	: Carrier	Temperature	: 15.4-18.6 - Ice bricks present
No. of coolers/boxes	: 3	No. of samples received	: 36
Security Seal	: Intact.	No. of samples analysed	: 31

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Requested Deliverables
- **Samples received in appropriately pretreated and preserved containers.**
- **Sample(s) have been received within recommended holding times**
- **Please direct any queries related to sample condition / numbering / breakages to Peter Ravlic.**
- **Analytical work for this work order will be conducted at ALS Melbourne.**
- ***This is a split batch of EM1100640 & EM1100641.**
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.

Sample Container(s)/Preservation Non-Compliances

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

- **No sample container / preservation non-compliance exist.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process neccessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
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.

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	(On Hold) SOIL No analysis requested	SOIL - ED040N Calcium Phosphate Extractable Sulfate	SOIL - EK026G (Solids) Total Cyanide By Discrete Analyser	SOIL - EK085 Sulfide as S	SOIL - S-27 TPH/BTEX/PAH/Phenols/8Metals
EM1100639-001	18-JAN-2011 15:00	TP1 (0-0.1)					✓
EM1100639-002	18-JAN-2011 15:00	TP1 (0.35-0.4)					✓
EM1100639-003	18-JAN-2011 15:00	TP1 (0.3-0.35)			✓		✓
EM1100639-004	18-JAN-2011 15:00	TP2 (0-0.1)			✓		✓
EM1100639-005	18-JAN-2011 15:00	TP2 (0.95-1.0)					✓
EM1100639-006	18-JAN-2011 15:00	TP2 (1.5-1.6)					✓
EM1100639-007	18-JAN-2011 15:00	TP3 (0-0.1)					✓
EM1100639-008	18-JAN-2011 15:00	TP3 (0.3)			✓		✓
EM1100639-009	18-JAN-2011 15:00	TP3 (1.4)					✓
EM1100639-010	18-JAN-2011 15:00	TP3 (2.0)	✓				
EM1100639-011	18-JAN-2011 15:00	TP4 (0-0.1)					✓
EM1100639-012	18-JAN-2011 15:00	TP4 (0.25-0.3)			✓		✓
EM1100639-013	18-JAN-2011 15:00	TP4 (0.5)					✓
EM1100639-014	18-JAN-2011 15:00	TP5 (0-0.1)					✓
EM1100639-015	18-JAN-2011 15:00	TP5 (0.8)	✓				
EM1100639-016	18-JAN-2011 15:00	TP5 (1.1)	✓				
EM1100639-017	18-JAN-2011 15:00	TP5 (1.8)					✓
EM1100639-018	18-JAN-2011 15:00	TP6 (0-0.1)					✓
EM1100639-019	18-JAN-2011 15:00	TP6 (0.25-0.3)			✓		✓
EM1100639-020	18-JAN-2011 15:00	TP6 (0.75-0.8)	✓				
EM1100639-021	18-JAN-2011 15:00	TP6 (1.75-1.8)					✓
EM1100639-022	18-JAN-2011 15:00	TP7 (0-0.1)					✓
EM1100639-023	18-JAN-2011 15:00	TP7 (0.3-0.4)			✓		✓
EM1100639-024	18-JAN-2011 15:00	TP7 (1.75-1.8)		✓	✓	✓	✓
EM1100639-025	18-JAN-2011 15:00	TP7 (2.9-3)	✓				
EM1100639-026	18-JAN-2011 15:00	TP8 (0-0.1)					✓
EM1100639-027	18-JAN-2011 15:00	TP8 (0.6-0.7)		✓	✓	✓	✓
EM1100639-028	19-JAN-2011 15:00	TP9 (0-0.1)					✓
EM1100639-029	19-JAN-2011 15:00	TP9 (0.4-0.5)					✓
EM1100639-030	19-JAN-2011 15:00	TP9 (0.7-0.8)					✓
EM1100639-031	19-JAN-2011 15:00	TP10 (0-0.1)					✓
EM1100639-032	19-JAN-2011 15:00	TP10 (0.5-0.6)					✓
EM1100639-033	19-JAN-2011 15:00	TP10 (1-1.1)			✓		✓
EM1100639-034	19-JAN-2011 15:00	TP11 (0-0.2)					✓
EM1100639-035	19-JAN-2011 15:00	TP11 (0.5-0.6)			✓		✓

			(On Hold) SOIL No analysis requested	SOIL - ED040N Calcium Phosphate Extractable Sulfate	SOIL - EK026G (Solids) Total Cyanide By Discrete Analyser	SOIL - EK085 Sulfide as S	SOIL - S-27 TPH/BTEX/PAH/Phenols/8Metals
EM1100639-036	19-JAN-2011 15:00	TP11 (1.2-1.3)		✓	✓	✓	✓

Requested Deliverables

ALL INVOICES MELB ADDRESS

- A4 - AU Tax Invoice (INV)	Email	eesvic@eesi.biz

MR DAVID JAMES

- *AU Certificate of Analysis - NATA (COA)	Email	djames@eesi.biz
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	djames@eesi.biz
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	djames@eesi.biz
- A4 - AU Sample Receipt Notification - Environmental (SRN)	Email	djames@eesi.biz
- Chain of Custody (CoC) (COC)	Email	djames@eesi.biz
- EDI Format - ENMRG (ENMRG)	Email	djames@eesi.biz
- EDI Format - ESDAT (ESDAT)	Email	djames@eesi.biz

MS CAROL WALSH

- Chain of Custody (CoC) (COC)	Email	carol.walsh@alsenviro.com

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **EM1100640**	Page	: 1 of 23
Amendment	: **2**		
Client	: **ENVIRONMENTAL EARTH SCIENCES**	Laboratory	: Environmental Division Melbourne
Contact	: MR DAVID JAMES	Contact	: Carol Walsh
Address	: P.O.BOX 2253 FOOTSCRAY VIC, AUSTRALIA 3011	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: djames@eesi.biz	E-mail	: carol.walsh@alsenviro.com
Telephone	: +61 96871666	Telephone	: +61-3-8549 9608
Facsimile	: +61 03 96871844	Facsimile	: +61-3-8549 9601
Project	: ALBERT PARK GAS WORKS	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: 210074		
C-O-C number	: ----	Date Samples Received	: 21-JAN-2011
Sampler	: ----	Issue Date	: 04-NOV-2011
Site	: ----		
		No. of samples received	: 37
Quote number	: ME/015/11 V3	No. of samples analysed	: 32

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

This document is issued in accordance with NATA accreditation requirements.

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*
Herman Lin	Laboratory Coordinator	Melbourne Inorganics
Kim McCabe	Senior Inorganic Chemist	Stafford Minerals - AY
Xingbin Lin	Senior Organic Chemist	Melbourne Inorganics
Xingbin Lin	Senior Organic Chemist	Melbourne Organics

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 insuffient 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

- **3/11/11 - This report has been amended and re-released to allow the reporting of additional analytical data.**
- **4/11/2011:This report has been amended following changes to the analytical data reported. The quality system is being utilised to resolve this issue. The specific data affected includes TPH >C16-C34 result for sample #34.**
- **EP071: LOR raised for particular TPH bands due to laboratory background level.**
- **EP075(SIM): Particular samples required dilution due to the presence of high level contaminants. LOR values have been adjusted accordingly.**
- **EP075(SIM): Poor matrix spike recovery due to high level contaminants.**
- **This is a split batch of EM1100639 & EM1100641.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP11 (2-2.1)	TP12 (0-0.1)	TP12 (0.2-0.3)	TP12 (0.6-0.7)	TP13 (0-0.1)
				Client sampling date / time	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00
					EM1100640-001	EM1100640-002	EM1100640-003	EM1100640-004	EM1100640-006
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**16.6**	**7.4**	**10.4**	**16.0**	**11.8**
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)									
Sulfate as SO4 2-	14808-79-8	50	mg/kg		**270**	----	<50	----	----
ED040T : Total Sulfate by ICPAES									
Sulfate as SO4 2-	14808-79-8	100	mg/kg		**240**	----	**390**	----	----
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%		**0.08**	----	**0.07**	----	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	**5**	**5**	**15**	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**5**	**9**	**21**	**18**	**10**
Copper	7440-50-8	5	mg/kg		<5	**7**	**11**	**15**	**7**
Lead	7439-92-1	5	mg/kg		**124**	**47**	**133**	**460**	**22**
Nickel	7440-02-0	2	mg/kg		<2	**6**	**16**	**14**	**7**
Zinc	7440-66-6	5	mg/kg		**8**	**31**	**49**	**218**	**24**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	**0.1**	**0.7**	<0.1
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		----	----	**35**	**204**	----
EK085M: Sulfide as S2-									
Sulfide as S	----	0.01	%		**0.07**	----	**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		**1.7**	<0.5	**1.7**	**4.2**	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		**0.8**	**0.8**	**6.2**	**13.8**	<0.5

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP11 (2-2.1)	TP12 (0-0.1)	TP12 (0.2-0.3)	TP12 (0.6-0.7)	TP13 (0-0.1)
				Client sampling date / time: 19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00
				EM1100640-001	EM1100640-002	EM1100640-003	EM1100640-004	EM1100640-006
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	**0.6**	**1.2**	<0.5
Fluorene	86-73-7	0.5	mg/kg	**1.9**	<0.5	**2.6**	**3.8**	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	**4.4**	**1.8**	**22.1**	**32.1**	**0.6**
Anthracene	120-12-7	0.5	mg/kg	**1.6**	**0.5**	**6.8**	**11.5**	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	**3.9**	**3.6**	**32.3**	**85.5**	**1.2**
Pyrene	129-00-0	0.5	mg/kg	**4.0**	**3.4**	**31.9**	**87.2**	**1.2**
Benz(a)anthracene	56-55-3	0.5	mg/kg	**1.7**	**2.0**	**18.1**	**36.6**	**0.6**
Chrysene	218-01-9	0.5	mg/kg	**1.2**	**1.5**	**13.6**	**28.3**	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	**1.6**	**2.3**	**18.9**	**40.0**	**0.6**
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	**0.7**	**1.1**	**7.2**	**14.6**	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	**1.5**	**2.0**	**17.1**	**36.3**	**0.6**
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	**0.6**	**1.1**	**8.2**	**16.2**	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	**2.5**	**6.1**	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	**0.8**	**1.4**	**9.8**	**18.3**	<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	**480**	**1070**	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	**370**	**920**	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	<50	<50	**850**	**1990**	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	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	**790**	**1840**	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	**230**	**560**	<100
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
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**93.8**	**88.6**	**99.1**	**94.3**	**95.8**
2-Chlorophenol-D4	93951-73-6	0.1	%	**102**	**97.0**	**107**	**100**	**104**
2.4.6-Tribromophenol	118-79-6	0.1	%	**85.2**	**80.7**	**92.9**	**83.7**	**90.6**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**101**	**95.2**	**105**	**99.8**	**102**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP11 (2-2.1)	TP12 (0-0.1)	TP12 (0.2-0.3)	TP12 (0.6-0.7)	TP13 (0-0.1)
				Client sampling date / time: 19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00
				EM1100640-001	EM1100640-002	EM1100640-003	EM1100640-004	EM1100640-006
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.1	%	**93.5**	**85.5**	**95.1**	**90.8**	**91.9**
4-Terphenyl-d14	1718-51-0	0.1	%	**90.8**	**84.9**	**94.8**	**90.4**	**94.4**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**95.0**	**86.6**	**87.8**	**86.1**	**91.8**
Toluene-D8	2037-26-5	0.1	%	**83.9**	**81.8**	**82.3**	**85.6**	**88.8**
4-Bromofluorobenzene	460-00-4	0.1	%	**83.9**	**83.4**	**81.8**	**84.5**	**89.1**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP13 (0.3-0.35)	TP13 (0.8-0.85)	TP14 (0.1-0.15)	TP14 (0.5-0.6)	TP14 (0.85-0.9)
				Client sampling date / time	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00
					EM1100640-007	EM1100640-008	EM1100640-010	EM1100640-011	EM1100640-012
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**13.9**	**16.3**	**14.4**	**18.5**	**25.1**
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**6**	<5	<5	**14**	**6**
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**17**	**4**	**4**	**19**	**3**
Copper	7440-50-8	5	mg/kg		**8**	**16**	<5	<5	**17**
Lead	7439-92-1	5	mg/kg		**19**	**70**	**10**	**18**	**73**
Nickel	7440-02-0	2	mg/kg		**14**	**38**	<2	**6**	**8**
Zinc	7440-66-6	5	mg/kg		**30**	**63**	**19**	**13**	**54**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	**0.4**
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		**17**	**20**	**2**	**3**	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	**5.6**	<0.5	<0.5	**7.8**
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	<5.0	<0.5	<0.5	<5.0
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	<5.0	<0.5	<0.5	<5.0
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg		<1.0	<10.0	<1.0	<1.0	<10.0
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	<5.0	<0.5	<0.5	<5.0
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	<5.0	<0.5	<0.5	<5.0
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	<5.0	<0.5	<0.5	<5.0
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	<5.0	<0.5	<0.5	<5.0
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		<0.5	<5.0	<0.5	<0.5	<5.0
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	<5.0	<0.5	<0.5	<5.0
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<5.0	<0.5	<0.5	<5.0
Pentachlorophenol	87-86-5	2.0	mg/kg		<2.0	<20.0	<2.0	<2.0	<20.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		**1.4**	**40.4**	<0.5	<0.5	**117**
Acenaphthylene	208-96-8	0.5	mg/kg		**5.5**	**63.0**	<0.5	<0.5	**172**
Acenaphthene	83-32-9	0.5	mg/kg		**0.6**	**7.9**	<0.5	<0.5	**38.8**
Fluorene	86-73-7	0.5	mg/kg		**1.8**	**48.1**	<0.5	<0.5	**134**
Phenanthrene	85-01-8	0.5	mg/kg		**17.0**	**329**	<0.5	**1.0**	**1470**
Anthracene	120-12-7	0.5	mg/kg		**5.5**	**103**	<0.5	<0.5	**266**
Fluoranthene	206-44-0	0.5	mg/kg		**29.7**	**425**	<0.5	**1.6**	**1500**
Pyrene	129-00-0	0.5	mg/kg		**30.2**	**383**	<0.5	**1.4**	**1250**
Benz(a)anthracene	56-55-3	0.5	mg/kg		**16.5**	**207**	<0.5	**0.7**	**441**
Chrysene	218-01-9	0.5	mg/kg		**12.5**	**157**	<0.5	**0.5**	**331**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP13 (0.3-0.35)	TP13 (0.8-0.85)	TP14 (0.1-0.15)	TP14 (0.5-0.6)	TP14 (0.85-0.9)
				Client sampling date / time	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00
					EM1100640-007	EM1100640-008	EM1100640-010	EM1100640-011	EM1100640-012
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		17.3	224	<0.5	0.7	432
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		7.0	93.5	<0.5	<0.5	176
Benzo(a)pyrene	50-32-8	0.5	mg/kg		16.2	189	<0.5	0.6	353
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		7.1	79.4	<0.5	<0.5	153
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		2.0	23.3	<0.5	<0.5	53.4
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		8.3	85.7	<0.5	<0.5	158
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	100	<50	<50	570
C15 - C28 Fraction	----	100	mg/kg		340	4510	<100	<100	13200
C29 - C36 Fraction	----	100	mg/kg		300	3020	<100	<100	6280
^ C10 - C36 Fraction (sum)	----	50	mg/kg		640	7630	<50	<50	20000
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	13
>C10 - C16 Fraction	----	50	mg/kg		<50	260	<50	<50	1460
>C16 - C34 Fraction	----	100	mg/kg		600	7120	<100	<100	18500
>C34 - C40 Fraction	----	100	mg/kg		140	1730	<120	<100	3460
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	2.1
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	1.7
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	1.3
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		95.3	87.9	91.6	95.8	91.3
2-Chlorophenol-D4	93951-73-6	0.1	%		104	99.1	99.5	105	104
2.4.6-Tribromophenol	118-79-6	0.1	%		88.7	63.5	85.7	78.6	66.9
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		103	110	98.9	104	112
Anthracene-d10	1719-06-8	0.1	%		92.2	118	89.9	91.7	108
4-Terphenyl-d14	1718-51-0	0.1	%		93.1	109	91.9	94.6	117
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		90.7	118	89.3	87.1	87.8
Toluene-D8	2037-26-5	0.1	%		87.8	97.6	86.5	88.0	102
4-Bromofluorobenzene	460-00-4	0.1	%		93.2	93.1	92.6	88.4	86.3

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP15 (0-0.1)	TP15 (0.5-0.6)	TP15 (1-1.1)	TP15 (2.4-2.5)	TP16 (0.05-0.15)
				Client sampling date / time	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00
					EM1100640-014	EM1100640-015	EM1100640-016	EM1100640-017	EM1100640-018
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**9.1**	**16.1**	**6.0**	**11.5**	**11.5**
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)									
Sulfate as SO4 2-	14808-79-8	50	mg/kg		<50	----	----	----	<50
ED040T : Total Sulfate by ICPAES									
Sulfate as SO4 2-	14808-79-8	100	mg/kg		**230**	----	----	----	**520**
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%		**0.01**	----	----	----	**0.03**
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**8**	**35**	<5	----	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	----	<1
Chromium	7440-47-3	2	mg/kg		**11**	**21**	**6**	----	**7**
Copper	7440-50-8	5	mg/kg		**25**	<5	**20**	----	**10**
Lead	7439-92-1	5	mg/kg		**125**	**12**	**52**	----	**49**
Nickel	7440-02-0	2	mg/kg		**9**	**10**	**8**	----	**6**
Zinc	7440-66-6	5	mg/kg		**132**	**9**	**77**	----	**40**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		**0.2**	<0.1	**0.2**	----	**0.2**
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		----	<1	----	----	----
EK085M: Sulfide as S2-									
Sulfide as S	----	0.01	%		<0.01	----	----	----	**0.01**
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	<0.5	<5.0	----	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	<0.5	<5.0	----	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	<0.5	<5.0	----	<0.5
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg		<1.0	<1.0	<10.0	----	<1.0
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	<0.5	<5.0	----	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	<0.5	<5.0	----	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	<0.5	<5.0	----	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	<0.5	<5.0	----	<0.5
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		<0.5	<0.5	<5.0	----	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	<0.5	<5.0	----	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<0.5	<5.0	----	<0.5
Pentachlorophenol	87-86-5	2.0	mg/kg		<2.0	<2.0	<20.0	----	<2.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	**9.4**	<0.5	**1.8**
Acenaphthylene	208-96-8	0.5	mg/kg		----	----	----	<0.5	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP15 (0-0.1)	TP15 (0.5-0.6)	TP15 (1-1.1)	TP15 (2.4-2.5)	TP16 (0.05-0.15)
				Client sampling date / time: 19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00
				EM1100640-014	EM1100640-015	EM1100640-016	EM1100640-017	EM1100640-018
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	**12.7**	----	**4.2**
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<5.0	----	<0.5
Fluorene	86-73-7	0.5	mg/kg	----	----	----	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<5.0	----	**2.0**
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	----	----	----	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	**0.5**	**2.0**	**45.0**	----	**18.0**
Anthracene	120-12-7	0.5	mg/kg	<0.5	**0.6**	**15.5**	----	**4.8**
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	**1.2**	**4.1**	**115**	----	**25.2**
Pyrene	129-00-0	0.5	mg/kg	----	----	----	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	**1.2**	**3.6**	**115**	----	**25.6**
Benz(a)anthracene	56-55-3	0.5	mg/kg	**0.6**	**2.0**	**65.9**	----	**13.3**
Chrysene	218-01-9	0.5	mg/kg	----	----	----	<0.5	----
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	----	----	----	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	**0.5**	**1.4**	**48.5**	----	**9.9**
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	**0.8**	**2.2**	**80.5**	----	**14.6**
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	**0.9**	**31.3**	----	**7.0**
Benzo(a)pyrene	50-32-8	0.5	mg/kg	**0.7**	**1.7**	**65.8**	----	**12.3**
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	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	**0.7**	**30.4**	----	**5.4**
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	----	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	**8.5**	----	**1.5**
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	**0.8**	**35.5**	----	**6.4**
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	**1610**	<100	**230**
C29 - C36 Fraction	----	100	mg/kg	<100	<100	**1440**	<100	**180**
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	<50	<50	**3050**	<50	**410**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	**80**	<50	<50

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP15 (0-0.1)	TP15 (0.5-0.6)	TP15 (1-1.1)	TP15 (2.4-2.5)	TP16 (0.05-0.15)
				Client sampling date / time: 19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00
				EM1100640-014	EM1100640-015	EM1100640-016	EM1100640-017	EM1100640-018
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft - Continued								
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	**2800**	<100	**390**
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	**850**	<100	<100
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
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**97.1**	**91.9**	**91.1**	**94.4**	**98.9**
2-Chlorophenol-D4	93951-73-6	0.1	%	**105**	**101**	**103**	**104**	**110**
2.4.6-Tribromophenol	118-79-6	0.1	%	**91.5**	**82.0**	**95.1**	**81.9**	**88.2**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**105**	**100**	**108**	**104**	**108**
Anthracene-d10	1719-06-8	0.1	%	**95.3**	**91.7**	**123**	**91.9**	**95.6**
4-Terphenyl-d14	1718-51-0	0.1	%	**93.6**	**89.9**	**104**	**98.3**	**99.0**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**85.9**	**88.7**	**82.6**	**92.5**	**85.9**
Toluene-D8	2037-26-5	0.1	%	**81.4**	**91.9**	**81.8**	**83.4**	**82.3**
4-Bromofluorobenzene	460-00-4	0.1	%	**82.6**	**78.6**	**90.3**	**82.4**	**81.2**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP16 (0.4-0.5)	TP16 (1-1.1)	TP16 (2-2.1)	TP17 (0-0.1)	TP17 (0.3-0.4)
				Client sampling date / time	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00
					EM1100640-019	EM1100640-020	EM1100640-021	EM1100640-022	EM1100640-023
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**10.7**	**26.1**	**24.6**	**5.5**	**10.5**
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**7**	**12**	----	<5	**11**
Cadmium	7440-43-9	1	mg/kg		<1	<1	----	<1	<1
Chromium	7440-47-3	2	mg/kg		**6**	**4**	----	**2**	**12**
Copper	7440-50-8	5	mg/kg		**8**	**35**	----	<5	**67**
Lead	7439-92-1	5	mg/kg		**48**	**399**	----	**11**	**161**
Nickel	7440-02-0	2	mg/kg		**10**	**28**	----	**5**	**24**
Zinc	7440-66-6	5	mg/kg		**131**	**90**	----	**13**	**191**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		**0.1**	<0.1	----	<0.1	**0.2**
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		----	**17**	----	----	**6**
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<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
2-Methylphenol	95-48-7	0.5	mg/kg		<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
2-Nitrophenol	88-75-5	0.5	mg/kg		<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
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<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
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		<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
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Pentachlorophenol	87-86-5	2.0	mg/kg		<2.0	<2.0	----	<2.0	<2.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		**2.9**	**2.2**	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		----	----	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg		----	----	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		**7.4**	**3.4**	----	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		**0.9**	<0.5	----	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		----	----	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg		**3.5**	**0.5**	----	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		----	----	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg		----	----	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg		**28.6**	**11.4**	----	**0.6**	**1.2**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP16 (0.4-0.5)	TP16 (1-1.1)	TP16 (2-2.1)	TP17 (0-0.1)	TP17 (0.3-0.4)
				Client sampling date / time: 19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00
				EM1100640-019	EM1100640-020	EM1100640-021	EM1100640-022	EM1100640-023
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Anthracene	120-12-7	0.5	mg/kg	**7.9**	**3.8**	----	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	----	----	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	**40.2**	**36.2**	----	**1.4**	**2.3**
Pyrene	129-00-0	0.5	mg/kg	----	----	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	**38.8**	**37.8**	----	**1.3**	**2.3**
Benz(a)anthracene	56-55-3	0.5	mg/kg	**20.2**	**27.8**	----	**0.7**	**1.2**
Chrysene	218-01-9	0.5	mg/kg	----	----	<0.5	----	----
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	----	----	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg	**15.4**	**21.3**	----	**0.5**	**1.0**
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	**26.0**	**41.3**	----	**0.9**	**1.6**
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	<0.5	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	**12.1**	**15.3**	----	<0.5	**0.6**
Benzo(a)pyrene	50-32-8	0.5	mg/kg	**21.1**	**32.8**	----	**0.7**	**1.3**
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	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	**9.4**	**16.5**	----	<0.5	**0.6**
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	**2.7**	**5.9**	----	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	**10.4**	**18.8**	----	<0.5	**0.8**
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	**540**	**390**	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	**430**	**610**	<100	<100	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	**970**	**1000**	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	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	**900**	**880**	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	**270**	**410**	<100	<100	<100
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: TP16 (0.4-0.5)	TP16 (1-1.1)	TP16 (2-2.1)	TP17 (0-0.1)	TP17 (0.3-0.4)
				Client sampling date / time: 19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00
				EM1100640-019	EM1100640-020	EM1100640-021	EM1100640-022	EM1100640-023
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**101**	**92.3**	**98.3**	**102**	**94.3**
2-Chlorophenol-D4	93951-73-6	0.1	%	**109**	**101**	**107**	**110**	**103**
2.4.6-Tribromophenol	118-79-6	0.1	%	**87.1**	**83.3**	**85.4**	**91.3**	**81.0**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**107**	**105**	**106**	**108**	**103**
Anthracene-d10	1719-06-8	0.1	%	**86.7**	**93.9**	**94.0**	**100**	**94.1**
4-Terphenyl-d14	1718-51-0	0.1	%	**86.8**	**93.8**	**99.3**	**100**	**91.7**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**83.5**	**89.3**	**94.5**	**80.8**	**81.5**
Toluene-D8	2037-26-5	0.1	%	**84.4**	**109**	**91.4**	**80.1**	**82.6**
4-Bromofluorobenzene	460-00-4	0.1	%	**80.5**	**106**	**88.5**	**80.2**	**80.8**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP17 (1.0-1.1)	TP18 (0-0.1)	TP18 (0.25-0.3)	TP18 (0.7-0.8)	TP19 (0-0.1)
				Client sampling date / time	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00
					EM1100640-024	EM1100640-026	EM1100640-027	EM1100640-028	EM1100640-029
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**6.5**	**11.1**	**14.1**	**14.4**	**5.2**
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)									
Sulfate as SO4 2-	14808-79-8	50	mg/kg		----	----	<50	**14300**	----
ED040T : Total Sulfate by ICPAES									
Sulfate as SO4 2-	14808-79-8	100	mg/kg		----	----	**410**	**213000**	----
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%		----	----	**0.04**	**7.09**	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**14**	<5	**17**	**26**	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**35**	**7**	**16**	**11**	<2
Copper	7440-50-8	5	mg/kg		**24**	**10**	**20**	<5	<5
Lead	7439-92-1	5	mg/kg		**254**	**30**	**64**	**6720**	**6**
Nickel	7440-02-0	2	mg/kg		**30**	**6**	**19**	**6**	<2
Zinc	7440-66-6	5	mg/kg		**232**	**52**	**80**	**312**	<5
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		**1.6**	**0.1**	**0.1**	**1.2**	<0.1
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		----	----	**24**	----	----
EK085M: Sulfide as S2-									
Sulfide as S	----	0.01	%		----	----	**0.02**	<0.01	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		**1.0**	<0.5	<0.5	**1.7**	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg		**0.6**	<0.5	<0.5	**1.0**	<0.5
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg		**1.5**	<1.0	<1.0	**3.0**	<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		**0.6**	<0.5	<0.5	**1.1**	<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		**12.4**	<0.5	<0.5	**18.7**	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		**13.0**	**1.5**	**1.6**	**13.4**	<0.5

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP17 (1.0-1.1)	TP18 (0-0.1)	TP18 (0.25-0.3)	TP18 (0.7-0.8)	TP19 (0-0.1)
				Client sampling date / time	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00
					EM1100640-024	EM1100640-026	EM1100640-027	EM1100640-028	EM1100640-029
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Acenaphthene	83-32-9	0.5	mg/kg		**1.4**	<0.5	<0.5	**1.8**	<0.5
Fluorene	86-73-7	0.5	mg/kg		**6.9**	<0.5	<0.5	**5.2**	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		**53.9**	**3.4**	**5.7**	**128**	<0.5
Anthracene	120-12-7	0.5	mg/kg		**16.5**	**1.4**	**2.0**	**21.1**	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		**80.7**	**8.8**	**11.3**	**160**	<0.5
Pyrene	129-00-0	0.5	mg/kg		**72.6**	**8.8**	**10.9**	**144**	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		**31.3**	**4.8**	**5.7**	**87.6**	<0.5
Chrysene	218-01-9	0.5	mg/kg		**26.5**	**4.1**	**5.0**	**75.6**	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		**39.5**	**6.5**	**7.2**	**121**	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		**12.2**	**2.2**	**2.5**	**43.7**	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		**31.8**	**5.2**	**5.9**	**69.1**	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		**17.5**	**2.8**	**3.0**	**35.9**	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		**6.4**	**0.8**	**0.8**	**13.7**	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		**19.9**	**3.4**	**3.6**	**38.4**	<0.5
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		**90**	<50	<50	**340**	<50
C15 - C28 Fraction	----	100	mg/kg		**1240**	**130**	**160**	**3080**	<100
C29 - C36 Fraction	----	100	mg/kg		**1360**	**120**	**140**	**2240**	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		**2690**	**250**	**300**	**5660**	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		**170**	<50	<50	**500**	<50
>C16 - C34 Fraction	----	100	mg/kg		**2240**	**580**	**240**	**4820**	<100
>C34 - C40 Fraction	----	100	mg/kg		**1060**	**570**	<100	**1400**	<100
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		**1.0**	<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
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**99.9**	**99.2**	**101**	**96.0**	**96.0**
2-Chlorophenol-D4	93951-73-6	0.1	%		**103**	**102**	**104**	**96.4**	**100**
2.4.6-Tribromophenol	118-79-6	0.1	%		**94.6**	**94.0**	**86.9**	**74.2**	**83.3**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**106**	**108**	**109**	**98.3**	**104**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	TP17 (1.0-1.1)	TP18 (0-0.1)	TP18 (0.25-0.3)	TP18 (0.7-0.8)	TP19 (0-0.1)
Client sample ID								
Client sampling date / time				20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00
				EM1100640-024	EM1100640-026	EM1100640-027	EM1100640-028	EM1100640-029
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.1	%	**96.0**	**102**	**102**	**90.7**	**101**
4-Terphenyl-d14	1718-51-0	0.1	%	**97.8**	**99.2**	**101**	**95.6**	**105**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**93.2**	**89.7**	**117**	**132**	**89.6**
Toluene-D8	2037-26-5	0.1	%	**90.5**	**99.9**	**122**	**131**	**91.6**
4-Bromofluorobenzene	460-00-4	0.1	%	**84.2**	**94.1**	**107**	**113**	**89.7**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP19 (0.3-0.4)	TP19 (0.6-0.7)	TP20 (0.1-0.2)	TP20 (0.6-0.7)	TP20 (0.8-0.9)
				Client sampling date / time	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00
					EM1100640-030	EM1100640-031	EM1100640-032	EM1100640-033	EM1100640-034
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**9.4**	**11.0**	**12.2**	**8.4**	**30.2**
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)									
Sulfate as SO4 2-	14808-79-8	50	mg/kg		----	----	----	**1710**	**2900**
ED040T : Total Sulfate by ICPAES									
Sulfate as SO4 2-	14808-79-8	100	mg/kg		----	----	----	**3130**	**86800**
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%		----	----	----	**0.42**	**4.73**
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**16**	<5	<5	<5	**30**
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**12**	**17**	**29**	<2	<2
Copper	7440-50-8	5	mg/kg		**19**	**26**	**12**	<5	<5
Lead	7439-92-1	5	mg/kg		**77**	**69**	**11**	**12**	**56**
Nickel	7440-02-0	2	mg/kg		**11**	**25**	**26**	<2	**3**
Zinc	7440-66-6	5	mg/kg		**66**	**36**	**42**	<5	**89**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		**0.2**	**0.2**	<0.1	<0.1	**0.2**
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		----	**154**	----	**199**	**4240**
EK055: Ammonia as N									
Ammonia as N	7664-41-7	20	mg/kg		----	----	----	----	**20**
EK085M: Sulfide as S2-									
Sulfide as S	----	0.01	%		----	----	----	**0.32**	**1.84**
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	<0.5	<0.5	**3.8**	**3.2**
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	**1.4**	**1.8**
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg		<1.0	<1.0	<1.0	**5.1**	**6.0**
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	**1.6**	**3.3**
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	TP19 (0.3-0.4)	TP19 (0.6-0.7)	TP20 (0.1-0.2)	TP20 (0.6-0.7)	TP20 (0.8-0.9)
				Client sampling date / time	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00
					EM1100640-030	EM1100640-031	EM1100640-032	EM1100640-033	EM1100640-034
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Naphthalene	91-20-3	0.5	mg/kg		**0.7**	<0.5	<0.5	**24.2**	**9.7**
Acenaphthylene	208-96-8	0.5	mg/kg		**2.7**	<0.5	**0.6**	**53.6**	**25.3**
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	**4.6**	**1.4**
Fluorene	86-73-7	0.5	mg/kg		**1.0**	<0.5	<0.5	**21.4**	**3.8**
Phenanthrene	85-01-8	0.5	mg/kg		**8.4**	<0.5	**2.1**	**228**	**66.0**
Anthracene	120-12-7	0.5	mg/kg		**2.6**	<0.5	**0.8**	**78.0**	**29.3**
Fluoranthene	206-44-0	0.5	mg/kg		**13.0**	**0.9**	**4.0**	**389**	**286**
Pyrene	129-00-0	0.5	mg/kg		**12.0**	**0.6**	**3.7**	**357**	**285**
Benz(a)anthracene	56-55-3	0.5	mg/kg		**6.3**	<0.5	**1.8**	**188**	**268**
Chrysene	218-01-9	0.5	mg/kg		**5.2**	**0.6**	**1.6**	**154**	**297**
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		**7.2**	**0.6**	**2.2**	**223**	**471**
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		**3.0**	<0.5	**0.8**	**81.2**	**170**
Benzo(a)pyrene	50-32-8	0.5	mg/kg		**5.7**	<0.5	**1.3**	**185**	**82.0**
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		**3.0**	<0.5	**1.0**	**82.8**	**155**
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		**0.9**	<0.5	<0.5	**28.4**	**47.3**
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		**3.5**	<0.5	**1.1**	**95.8**	**154**
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	**100**	**840**
C15 - C28 Fraction	----	100	mg/kg		**210**	<100	<100	**4620**	**8030**
C29 - C36 Fraction	----	100	mg/kg		**310**	<100	<100	**3370**	**5870**
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		**520**	<50	<50	**8090**	**14700**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	**270**	**1230**
>C16 - C34 Fraction	----	100	mg/kg		**520**	**140**	<100	**7380**	**12700**
>C34 - C40 Fraction	----	100	mg/kg		**280**	<100	<100	**1930**	**3570**
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	**1.2**	**0.4**
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	**1.0**	<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
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**98.9**	**81.5**	**100**	**92.3**	**109**
2-Chlorophenol-D4	93951-73-6	0.1	%		**103**	**77.5**	**105**	**97.6**	**106**
2.4.6-Tribromophenol	118-79-6	0.1	%		**91.0**	**32.7**	**82.9**	**78.1**	**93.1**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP19 (0.3-0.4)	TP19 (0.6-0.7)	TP20 (0.1-0.2)	TP20 (0.6-0.7)	TP20 (0.8-0.9)
				Client sampling date / time: 20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00
				EM1100640-030	EM1100640-031	EM1100640-032	EM1100640-033	EM1100640-034
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**107**	**106**	**109**	**101**	**102**
Anthracene-d10	1719-06-8	0.1	%	**101**	**82.3**	**102**	**95.5**	**98.8**
4-Terphenyl-d14	1718-51-0	0.1	%	**100**	**87.9**	**102**	**106**	**118**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**86.0**	**81.0**	**86.6**	**123**	**110**
Toluene-D8	2037-26-5	0.1	%	**79.9**	**83.4**	**92.0**	**108**	**118**
4-Bromofluorobenzene	460-00-4	0.1	%	**80.7**	**74.6**	**88.1**	**78.5**	**99.8**

Analytical Results

Sub-Matrix: SOIL			Client sample ID	TP21 (0-0.1)	TP21 (0.45-0.5)	----	----	----
			Client sampling date / time	20-JAN-2011 15:00	20-JAN-2011 15:00	----	----	----
Compound	CAS Number	LOR	Unit	EM1100640-035	EM1100640-036	----	----	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**20.2**	**12.9**	----	----	----
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)								
Sulfate as SO4 2-	14808-79-8	50	mg/kg	<50	**60**	----	----	----
ED040T : Total Sulfate by ICPAES								
Sulfate as SO4 2-	14808-79-8	100	mg/kg	**800**	**200**	----	----	----
ED042T: Total Sulfur by LECO								
Sulfur - Total as S (LECO)	----	0.01	%	**0.02**	<0.01	----	----	----
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	**8**	**33**	----	----	----
Copper	7440-50-8	5	mg/kg	**18**	**11**	----	----	----
Lead	7439-92-1	5	mg/kg	**140**	**9**	----	----	----
Nickel	7440-02-0	2	mg/kg	**10**	**24**	----	----	----
Zinc	7440-66-6	5	mg/kg	**77**	**37**	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.1**	<0.1	----	----	----
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	----	**44**	----	----	----
EK085M: Sulfide as S2-								
Sulfide as S	----	0.01	%	<0.01	<0.01	----	----	----
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	----	----	----

Analytical Results

Sub-Matrix: SOIL				Client sample ID	TP21 (0-0.1)	TP21 (0.45-0.5)	----	----	----
				Client sampling date / time	20-JAN-2011 15:00	20-JAN-2011 15:00	----	----	----
Compound	CAS Number	LOR	Unit		EM1100640-035	EM1100640-036	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
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		**0.7**	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		**2.2**	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg		**2.2**	<0.5	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		**1.1**	<0.5	----	----	----
Chrysene	218-01-9	0.5	mg/kg		**1.0**	<0.5	----	----	----
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		**1.4**	<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		**0.9**	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		**0.8**	<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		**1.1**	<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	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	----	----	----
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	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**102**	**103**	----	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%		**106**	**104**	----	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%		**81.3**	**75.9**	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**113**	**109**	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP21 (0-0.1)	TP21 (0.45-0.5)	----	----	----
				Client sampling date / time: 20-JAN-2011 15:00	20-JAN-2011 15:00	----	----	----
				EM1100640-035	EM1100640-036	----	----	----
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.1	%	**107**	**117**	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	**107**	**115**	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**118**	**104**	----	----	----
Toluene-D8	2037-26-5	0.1	%	**114**	**108**	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	**99.6**	**95.3**	----	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	48.5	123.5
2-Chlorophenol-D4	93951-73-6	51.8	129.7
2.4.6-Tribromophenol	118-79-6	26.8	126.6
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	57.9	125.2
Anthracene-d10	1719-06-8	62.6	135.5
4-Terphenyl-d14	1718-51-0	63.7	135.2
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	59.0	126.2
Toluene-D8	2037-26-5	59.5	128.6
4-Bromofluorobenzene	460-00-4	56.4	129.9

CHAIN OF CUSTODY

ALS Laboratory: **please tick** →

☐ **Sydney**: 277 Woodpark Rd, Smithfield NSW 2176 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: Environmental Earth Sciences	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT **(List due date):**
OFFICE: P.O.BOX 2253, FOOTSCRAY , VIC, 3011		☐ Non Standard or urgent TAT **(List due date):**
PROJECT: ALBERT PARK GAS WORKS	**ALS QUOTE NO.: ME/015/11**	**COC SEQUENCE NUMBER (Circle)** COC: 1 2 3 (4) 5 7 OF: 1 2 3 4 5 (9)
ORDER NUMBER: 210074		
PROJECT MANAGER: DAVID JAMES	**CONTACT PH:**	
SAMPLER: DJ,JI,VR,SF	**SAMPLER MOBILE: 0437 033 796**	
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default): ENMRG & ESDAT**	
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):		

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:	RECEIVED BY:	RELINQUISHED BY: Samples	RECEIVED BY: Anritha
DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME: 21/1 3:30

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: SPLIT WORK ORDER - EM1100639 + EM1100641

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		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).									Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	S-27 PACKAGE - 8 metals, TPH/BTEX/PAH/Phenols	Total Cyanide - EK026G	Sulphate - NEPM - ED040N	Sulphide - EK085 (Leco S to ALS Brisbane)	Ammonia as N					
1	TP11 (2-2.1)	19/01/2011	Soil		1	1		1	1						
2	TP12 (0-0.1)	19/01/2011	Soil		1	1									
3	TP12 (0.2-0.3)	19/01/2011	Soil		1	1	1	1	1						
4	TP12 (0.6-0.7)	19/01/2011	Soil		1	1	1								
5	TP12 (1.7-1.8)	19/01/2011	Soil		1										HOLD
6	TP13 (0-0.1)	19/01/2011	Soil		1	1									
7	TP13 (0.3-0.35)	19/01/2011	Soil		1	1	1								
8	TP13 (0.8-0.85)	19/01/2011	Soil		1	1	1								
9	TP13 (2.3-2.4)	19/01/2011	Soil		1										HOLD
10	TP14 (0.1-0.15)	19/01/2011	Soil		1	1	1								
11	TP14 (0.5-0.6)	19/01/2011	Soil		1	1	1								
12	TP14 (0.85-0.9)	19/01/2011	Soil		1	1									
				TOTAL	12	10	6	2	2	0					

Environmental Division Melbourne
Work Order
EM1100640

Telephone : +61-3-8549 9600

SCANNED

DW 24/1/11

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.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ **Sydney**: 277 Woodpark Rd, Smithfield NSW 2176 Ph: 02 8784 8555 E:samples.sydney@alsenviro.com
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☐ **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: Environmental Earth Sciences	**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):**	**FOR LABORATORY USE ONLY (Circle)** Custody Seal Intact? Yes No N/A
OFFICE: P.O.BOX 2253, FOOTSCRAY , VIC, 3011		Free ice / frozen ice bricks present upon receipt? Yes No N/A
PROJECT: ALBERT PARK GAS WORKS	**ALS QUOTE NO.: ME/015/11**	Random Sample Temperature on Receipt: °C
ORDER NUMBER: 210074	**COC SEQUENCE NUMBER (Circle)** COC: 1 2 3 4 (5) 7	Other comment:
PROJECT MANAGER: DAVID JAMES	**CONTACT PH:** OF: 1 2 3 4 5 (9)	
SAMPLER: DJ,JI,VR,SF	**SAMPLER MOBILE: 0437 033 796**	**RELINQUISHED BY:** **RECEIVED BY:** **RELINQUISHED BY:** Samples **RECEIVED BY:** Amitha
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default): ENMRG & ESDAT**	DATE/TIME: DATE/TIME: DATE/TIME: DATE/TIME: 21/1 3.30
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):		

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		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).									Additional Information	
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	S-27 PACKAGE - 8 metals, TPH/BTEX/PAH/Phenols	Total Cyanide - EK026G	Sulphate - NEPM - ED040N	Sulphide - EK085 (Leco S to ALS Brisbane)	Ammonia as N						
13	TP14 (1.75-1.8)	19/01/2011	Soil		1										HOLD	
14	TP15 (0-0.1)	19/01/2011	Soil		1	1		1	1							
15	TP15 (0.5-0.6)	19/01/2011	Soil		1	1	1									
16	TP15 (1-1.1)	19/01/2011	Soil		1	1										
17	TP15 (2.4-2.5)	19/01/2011	Soil		1	~~1~~ - see email OW 24/1/11									HOLD	as per DJ 21/1/11
18	TP16 (0.05-0.15)	19/01/2011	Soil		1	1		1	1							
19	TP16 (0.4-0.5)	19/01/2011	Soil		1	1										
20	TP16 (1-1.1)	19/01/2011	Soil		1	1	1									
21	TP16 (2-2.1)	19/01/2011	Soil		1	~~2~~1 - see email OW 24/1/11									HOLD	as per DJ 21/1/11
22	TP17 (0-0.1)	20/01/2011	Soil		1	1										
23	TP17 (0.3-0.4)	20/01/2011	Soil		1	1	1									
24	TP17 (1.0-1.1)	20/01/2011	Soil		1	1										
				TOTAL	12	11	3	2	2	0						

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.

CHAIN OF CUSTODY

ALS Laboratory: *please tick* →

☐ **Sydney**: 277 Woodpark Rd, Smithfield NSW 2176 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: Environmental Earth Sciences	**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):
OFFICE: P.O.BOX 2253, FOOTSCRAY , VIC, 3011	
PROJECT: ALBERT PARK GAS WORKS	**ALS QUOTE NO.:** ME/015/11
ORDER NUMBER: 210074	**COC SEQUENCE NUMBER (Circle)** COC: 1 2 3 4 5 (6) 7 OF: 1 2 3 4 5 (9)
PROJECT MANAGER: DAVID JAMES	**CONTACT PH:**
SAMPLER: DJ,JI,VR,SF	**SAMPLER MOBILE:** 0437 033 796
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default):** ENMRG & ESDAT
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):	

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:	**RECEIVED BY:**	**RELINQUISHED BY:** Samply	**RECEIVED BY:** Anitha
DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME: 3.30 21

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		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).					Additional Information
LAB ID	**SAMPLE ID**	**DATE / TIME**	**MATRIX**	**TYPE & PRESERVATIVE** *(refer to codes below)*	**TOTAL BOTTLES**	**S-27 PACKAGE - 8 metals, TPH/BTEX/PAH/Phenols**	**Total Cyanide - EK026G**	**Sulphate - NEPM - ED040N**	**Sulphide - EK085 (Leco S to ALS Brisbane)**	**Ammonia as N**	
25	TP17 (2.2-2.3)	20/01/2011	Soil		1						HOLD
26	TP18 (0-0.1)	20/01/2011	Soil		1	1					
27	TP18 (0.25-0.3)	20/01/2011	Soil		1	1	1	1	1		
28	TP18 (0.7-0.8)	20/01/2011	Soil		1	1		1	1		
29	TP19 (0-0.1)	20/01/2011	Soil		1	1					
30	TP19 (0.3-0.4)	20/01/2011	Soil		1	1					
31	TP19 (0.6-0.7)	20/01/2011	Soil		1	1	1				
32	TP20 (0.1-0.2)	20/01/2011	Soil		1	1					
33	TP20 (0.6-0.7)	20/01/2011	Soil		1	1	1	1	1		
34	TP20 (0.8-0.9)	20/01/2011	Soil		1	1	1	1	1	1	
35	TP21 (0-0.1)	20/01/2011	Soil		1	1		1	1		
36	TP21 (0.45-0.5)	20/01/2011	Soil		1	1	1	1	1		
37	TP20 (2.1-2.2)	20/1/11	S	(extra sample) TOTAL	12	11	5	6	6	1	Hold.

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.

Danielle White

From: Carol Walsh
Sent: Monday, 24 January 2011 4:54 PM
To: Danielle White; Emily Sabatka; Rosalinda Laria; Peter Ravlic
Cc: Samples Melbourne
Subject: FW: ISSUES WITH SAMPLES RECEIVED 21/1/2011 - ALBERT PARK GAS WORKS
Follow Up Flag: Follow up
Flag Status: Red

Please see below.

Regards

How was your customer experience? Please send us your feedback

Carol Walsh
Senior Client Services Officer

ALS | Environmental (General Environmental Group)

Address
4 Westall Rd, Springvale, VIC, 3171
PHONE +61 3 8549 9600
FAX +61 3 8549 9601
www.alsglobal.com

From: David James [mailto:djames@eesi.biz]
Sent: Monday, 24 January 2011 2:37 PM
To: Carol Walsh
Subject: RE: ISSUES WITH SAMPLES RECEIVED 21/1/2011 - ALBERT PARK GAS WORKS

Hi Carol – can I get some extra analysis on the following samples:

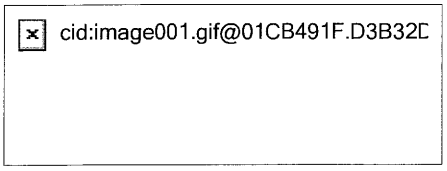
EM1100639 : SAMPLE 15 - TP5(0.8) for TPH/BTEX/PAH;
EM1100639 : SAMPLE 25 - TP7(2.9-3.0) for TPH/BTEX/PAH and Phenols;
EM1100640: SAMPLE 17 - TP15(2.4-2.5) for TPH/BTEX/PAH;
EM1100640: SAMPLE 21 - TP16(2-2.1) for TPH/BTEX/PAH;
EM1100641: SAMPLE 5 - TP22(2.4-2.5) for TPH/BTEX/PAH; and
EM1100641: SAMPLE 4 - TP22(0.6-0.7) for TPH/BTEX/PAH.

Yes - DUP 6 is on HOLD.

Also, I have 500ml ambers for rinsate collected on Wednesday and Thursday I shall courier them across if you can add TPH (C10-C36) and PAH analysis to the COC.
For EM1100641 – RINSATE 2 (SAMPLE 21) AND RINSATE 3(SAMPLE 22) – a 500mL amber bottle is being delivered Tuesday morning 25/1/11. Please add TPH(C10-C36) Plus PAH to these 2 samples.

Regards,

David James – Environmental Engineer
PO Box 2253, Footscray, VIC 3011.



p: 03 9687 1666
d: 03 8398 4419
m: 0437 033 796
f: 03 9687 1844
djames@eesi.biz
www.environmentalearthsciences.com

From: Carol Walsh [mailto:CarolW@alsglobal.com]
Sent: Monday, 24 January 2011 2:16 PM
To: David James
Subject: ISSUES WITH SAMPLES RECEIVED 21/1/2011 - ALBERT PARK GAS WORKS

David,

We have split the samples into 3 work orders: EM1100639, EM1100640 & EM1100641. Only 1 admin fee will apply.

A couple of issues with samples received 21/1/2011 for Albert Park Gas works.

Some hold samples had analysis indicated – as discussed with you on Friday –we are to ignore analysis and keep samples on hold.

DUP6 20/1/2011 - No analysis indicated or HOLD indicated.

Rinsate samples –

no metals bottle received – dissolved metals will be taken from the unpreserved green bottle – lab filtering will result in "non compliance" being reported.

Additional bottles received for rinsates – cyanide and nutrients bottles – no analysis required. TPH / BTEX analysis requested – only amber 40ml volatile vial received – no amber 100mL for semivolatiles. We can only perform TPH(C6-C9)/BTEX for these samples.

Trip samples – only 40mL amber vial received – TPH C6-C9/BTEX only can be performed on these samples.

Regards

How was your customer experience? Please send us your feedback

Carol Walsh
Senior Client Services Officer

ALS | Environmental (General Environmental Group)

Address
4 Westall Rd, Springvale, VIC, 3171
PHONE +61 3 8549 9600
FAX +61 3 8549 9601
www.alsglobal.com

P Please consider the environment before printing this email.

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order : **EM1100640**

Client	: **ENVIRONMENTAL EARTH SCIENCES**	Laboratory	: Environmental Division Melbourne
Contact	: MR DAVID JAMES	Contact	: Carol Walsh
Address	: P.O.BOX 2253 FOOTSCRAY VIC, AUSTRALIA 3011	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: djames@eesi.biz	E-mail	: carol.walsh@alsenviro.com
Telephone	: +61 96871666	Telephone	: +61-3-8549 9608
Facsimile	: +61 03 96871844	Facsimile	: +61-3-8549 9601
Project	: ALBERT PARK GAS WORKS	Page	: 1 of 3
Order number	: 210074		
C-O-C number	: ----	Quote number	: EM2011ENVEAR0210 (ME/015/11)
Site	: ----		
Sampler	: ----	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 21-JAN-2011	Issue Date	: 24-JAN-2011 16:31
Client Requested Due Date	: 31-JAN-2011	Scheduled Reporting Date	: **31-JAN-2011**

Delivery Details

Mode of Delivery	: Carrier	Temperature	: 15.4-18.6 - Ice bricks present
No. of coolers/boxes	: 3	No. of samples received	: 37
Security Seal	: Intact.	No. of samples analysed	: 30

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Requested Deliverables
- **Samples received in appropriately pretreated and preserved containers.**
- **Sample(s) have been received within recommended holding times**
- **Please direct any queries related to sample condition / numbering / breakages to Peter Ravlic.**
- **Analytical work for this work order will be conducted at ALS Melbourne.**
- ***This is a split batch of EM1100639 & EM1100641.**
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.

Sample Container(s)/Preservation Non-Compliances

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

- **No sample container / preservation non-compliance exist.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process neccessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
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.

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	(On Hold) SOIL No analysis requested	SOIL - ED040N Calcium Phosphate Extractable Sulfate	SOIL - EK026G (Solids) Total Cyanide By Discrete Analyser	SOIL - EK055 (solids) Ammonia as N	SOIL - EK085 Sulfide as S	SOIL - S-27 TPH/BTEX/PAH/Phenols/8Metals
EM1100640-001	19-JAN-2011 15:00	TP11 (2-2.1)		✓			✓	✓
EM1100640-002	19-JAN-2011 15:00	TP12 (0-0.1)						✓
EM1100640-003	19-JAN-2011 15:00	TP12 (0.2-0.3)		✓	✓		✓	✓
EM1100640-004	19-JAN-2011 15:00	TP12 (0.6-0.7)			✓			✓
EM1100640-005	19-JAN-2011 15:00	TP12 (1.7-1.8)	✓					
EM1100640-006	19-JAN-2011 15:00	TP13 (0-0.1)						✓
EM1100640-007	19-JAN-2011 15:00	TP13 (0.3-0.35)			✓			✓
EM1100640-008	19-JAN-2011 15:00	TP13 (0.8-0.85)			✓			✓
EM1100640-009	19-JAN-2011 15:00	TP13 (2.3-2.4)	✓					
EM1100640-010	19-JAN-2011 15:00	TP14 (0.1-0.15)			✓			✓
EM1100640-011	19-JAN-2011 15:00	TP14 (0.5-0.6)			✓			✓
EM1100640-012	19-JAN-2011 15:00	TP14 (0.85-0.9)						✓
EM1100640-013	19-JAN-2011 15:00	TP14 (1.75-1.8)	✓					
EM1100640-014	19-JAN-2011 15:00	TP15 (0-0.1)		✓			✓	✓
EM1100640-015	19-JAN-2011 15:00	TP15 (0.5-0.6)			✓			✓
EM1100640-016	19-JAN-2011 15:00	TP15 (1-1.1)						✓
EM1100640-017	19-JAN-2011 15:00	TP15 (2.4-2.5)	✓					
EM1100640-018	19-JAN-2011 15:00	TP16 (0.05-0.15)		✓			✓	✓
EM1100640-019	19-JAN-2011 15:00	TP16 (0.4-0.5)						✓
EM1100640-020	19-JAN-2011 15:00	TP16 (1-1.1)			✓			✓
EM1100640-021	19-JAN-2011 15:00	TP16 (2-2.1)	✓					
EM1100640-022	20-JAN-2011 15:00	TP17 (0-0.1)						✓
EM1100640-023	20-JAN-2011 15:00	TP17 (0.3-0.4)			✓			✓
EM1100640-024	20-JAN-2011 15:00	TP17 (1.0-1.1)						✓
EM1100640-025	20-JAN-2011 15:00	TP17 (2.2-2.3)	✓					
EM1100640-026	20-JAN-2011 15:00	TP18 (0-0.1)						✓
EM1100640-027	20-JAN-2011 15:00	TP18 (0.25-0.3)		✓	✓		✓	✓
EM1100640-028	20-JAN-2011 15:00	TP18 (0.7-0.8)		✓			✓	✓
EM1100640-029	20-JAN-2011 15:00	TP19 (0-0.1)						✓
EM1100640-030	20-JAN-2011 15:00	TP19 (0.3-0.4)						✓
EM1100640-031	20-JAN-2011 15:00	TP19 (0.6-0.7)			✓			✓
EM1100640-032	20-JAN-2011 15:00	TP20 (0.1-0.2)						✓
EM1100640-033	20-JAN-2011 15:00	TP20 (0.6-0.7)		✓	✓		✓	✓
EM1100640-034	20-JAN-2011 15:00	TP20 (0.8-0.9)		✓	✓	✓	✓	✓
EM1100640-035	20-JAN-2011 15:00	TP21 (0-0.1)		✓			✓	✓

			(On Hold) SOIL No analysis requested	SOIL - ED040N Calcium Phosphate Extractable Sulfate	SOIL - EK026G (Solids) Total Cyanide By Discrete Analyser	SOIL - EK055 (solids) Ammonia as N	SOIL - EK085 Sulfide as S	SOIL - S-27 TPH/BTEX/PAH/Phenols/8Metals
EM1100640-036	20-JAN-2011 15:00	TP21 (0.45-0.5)		✓	✓		✓	✓
EM1100640-037	20-JAN-2011 15:00	TP20 (2.1-2.2)	✓					

Requested Deliverables

ALL INVOICES MELB ADDRESS

- A4 - AU Tax Invoice (INV)	Email	eesvic@eesi.biz

MR DAVID JAMES

- *AU Certificate of Analysis - NATA (COA)	Email	djames@eesi.biz
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	djames@eesi.biz
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	djames@eesi.biz
- A4 - AU Sample Receipt Notification - Environmental (SRN)	Email	djames@eesi.biz
- Chain of Custody (CoC) (COC)	Email	djames@eesi.biz
- EDI Format - ENMRG (ENMRG)	Email	djames@eesi.biz
- EDI Format - ESDAT (ESDAT)	Email	djames@eesi.biz

MS CAROL WALSH

- Chain of Custody (CoC) (COC)	Email	carol.walsh@alsenviro.com

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **EM1100641**	Page	: 1 of 19
Amendment	: **1**		
Client	: **ENVIRONMENTAL EARTH SCIENCES**	Laboratory	: Environmental Division Melbourne
Contact	: MR DAVID JAMES	Contact	: Carol Walsh
Address	: P.O.BOX 2253 FOOTSCRAY VIC, AUSTRALIA 3011	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: djames@eesi.biz	E-mail	: carol.walsh@alsenviro.com
Telephone	: +61 96871666	Telephone	: +61-3-8549 9608
Facsimile	: +61 03 96871844	Facsimile	: +61-3-8549 9601
Project	: ALBERT PARK GAS WORKS	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: 210074		
C-O-C number	: ----	Date Samples Received	: 21-JAN-2011
Sampler	: ----	Issue Date	: 07-NOV-2011
Site	: ----		
		No. of samples received	: 32
Quote number	: ME/015/11 V3	No. of samples analysed	: 30

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

This document is issued in accordance with NATA accreditation requirements.

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*
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics
Herman Lin	Laboratory Coordinator	Melbourne Inorganics
Kim McCabe	Senior Inorganic Chemist	Stafford Minerals - AY
Nancy Wang	Senior Semivolatile Instrument Chemist	Melbourne Inorganics
Nancy Wang	Senior Semivolatile Instrument Chemist	Melbourne Organics
Xingbin Lin	Senior Organic Chemist	Melbourne Organics

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 insuffient 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

- **3/11/11 - This report has been amended and re-released to allow the reporting of additional analytical data.**
- **EG035F: Mercury results for EM1100641 #20 has been confirmed by duplicate analysis.**
- **EP075(SIM): Poor duplicate precision due to sample matrix effects. Confirmed by re-analysis.**
- **This is a split batch of EM1100639 & EM1100640.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP21 (0.8-0.9)	TP22 (0-0.1)	TP22 (0.3-0.4)	TP22 (0.6-0.7)	TP22 (2.4-2.5)
				Client sampling date / time	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00
					EM1100641-001	EM1100641-002	EM1100641-003	EM1100641-004	EM1100641-005
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**7.5**	**9.2**	**18.4**	**10.2**	**20.1**
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**23**	**10**	**63**	----	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	----	----
Chromium	7440-47-3	2	mg/kg		**9**	**10**	**24**	----	----
Copper	7440-50-8	5	mg/kg		<5	**8**	<5	----	----
Lead	7439-92-1	5	mg/kg		**17**	**16**	**20**	----	----
Nickel	7440-02-0	2	mg/kg		**5**	**8**	**9**	----	----
Zinc	7440-66-6	5	mg/kg		**26**	**52**	**43**	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	----	----
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		----	----	<1	----	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		**0.5**	**0.8**	<0.5	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg		<1.0	<1.0	<1.0	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Pentachlorophenol	87-86-5	2.0	mg/kg		<2.0	<2.0	<2.0	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		**5.4**	**3.0**	<0.5	**0.9**	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		----	----	----	**2.5**	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		----	----	----	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		**17.3**	**6.1**	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg		**2.4**	**2.2**	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg		----	----	----	**1.1**	<0.5
Fluorene	86-73-7	0.5	mg/kg		**14.2**	**4.9**	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg		----	----	----	**13.4**	<0.5
Anthracene	120-12-7	0.5	mg/kg		----	----	----	**4.5**	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		**132**	**36.3**	**0.6**	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP21 (0.8-0.9)	TP22 (0-0.1)	TP22 (0.3-0.4)	TP22 (0.6-0.7)	TP22 (2.4-2.5)
				Client sampling date / time: 20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00
				EM1100641-001	EM1100641-002	EM1100641-003	EM1100641-004	EM1100641-005
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Anthracene	120-12-7	0.5	mg/kg	**22.9**	**12.5**	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	**25.4**	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	**136**	**52.2**	**1.7**	----	----
Pyrene	129-00-0	0.5	mg/kg	----	----	----	**24.8**	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	**15.1**	<0.5
Pyrene	129-00-0	0.5	mg/kg	**114**	**48.0**	**1.6**	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	**49.8**	**23.1**	**1.1**	----	----
Chrysene	218-01-9	0.5	mg/kg	----	----	----	**13.6**	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	----	----	----	**14.7**	<0.5
Chrysene	218-01-9	0.5	mg/kg	**39.7**	**20.7**	**0.9**	----	----
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	**33.7**	**17.8**	**0.7**	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	**14.0**	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	**17.5**	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	**26.3**	**16.7**	**1.1**	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	**35.8**	**20.8**	**1.2**	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	**8.1**	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	----	**2.7**	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	**14.2**	**8.3**	**0.6**	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	----	**8.8**	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	**5.3**	**2.8**	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	**14.1**	**8.7**	**0.7**	----	----
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	**1320**	<100	<100	**260**	<100
C29 - C36 Fraction	----	100	mg/kg	**660**	<100	<100	**280**	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	**1980**	<50	<50	**540**	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	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	**2000**	**140**	<100	**510**	<100
>C34 - C40 Fraction	----	100	mg/kg	**430**	<100	<100	**170**	**150**
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: TP21 (0.8-0.9)	TP22 (0-0.1)	TP22 (0.3-0.4)	TP22 (0.6-0.7)	TP22 (2.4-2.5)
				Client sampling date / time: 20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00
				EM1100641-001	EM1100641-002	EM1100641-003	EM1100641-004	EM1100641-005
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**103**	**97.3**	**99.9**	**95.6**	**100**
2-Chlorophenol-D4	93951-73-6	0.1	%	**108**	**102**	**105**	**100**	**107**
2.4.6-Tribromophenol	118-79-6	0.1	%	**91.1**	**93.6**	**83.4**	**86.3**	**87.3**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**107**	**101**	**105**	**101**	**107**
Anthracene-d10	1719-06-8	0.1	%	**99.8**	**97.8**	**92.9**	**94.5**	**95.5**
4-Terphenyl-d14	1718-51-0	0.1	%	**116**	**107**	**104**	**100**	**110**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**94.3**	**92.9**	**94.8**	**91.4**	**92.6**
Toluene-D8	2037-26-5	0.1	%	**93.1**	**90.3**	**92.0**	**85.8**	**80.4**
4-Bromofluorobenzene	460-00-4	0.1	%	**102**	**97.3**	**103**	**95.3**	**93.1**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP23 (0-0.1)	TP23 (0.4-0.5)	TP23 (1-1.1)	TP24 (0-0.1)	TP24 (0.5-0.6)
				Client sampling date / time	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00
					EM1100641-006	EM1100641-007	EM1100641-008	EM1100641-009	EM1100641-010
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**3.4**	**12.0**	**9.4**	**10.7**	**8.0**
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	**16**	**16**	<5	**40**
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**5**	**10**	**16**	**23**	**13**
Copper	7440-50-8	5	mg/kg		**7**	**16**	<5	**10**	<5
Lead	7439-92-1	5	mg/kg		**6**	**12**	**16**	**10**	**9**
Nickel	7440-02-0	2	mg/kg		**19**	**4**	**8**	**19**	**5**
Zinc	7440-66-6	5	mg/kg		**19**	**8**	**11**	**34**	<5
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		----	<1	----	----	**2**
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	**0.7**	<0.5	**0.6**
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	**1.1**	**2.0**	**0.6**	**0.8**
Pyrene	129-00-0	0.5	mg/kg		<0.5	**1.0**	**2.0**	**0.5**	**0.8**
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	**0.5**	**1.1**	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	**0.5**	**1.0**	<0.5	<0.5

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP23 (0-0.1)	TP23 (0.4-0.5)	TP23 (1-1.1)	TP24 (0-0.1)	TP24 (0.5-0.6)
				Client sampling date / time: 20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00
				EM1100641-006	EM1100641-007	EM1100641-008	EM1100641-009	EM1100641-010
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	**0.8**	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	**0.6**	**1.1**	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	**1.1**	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	**0.6**	<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	**0.6**	<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
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	**100**	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	**100**	<100	<100	<100	<100
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
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**99.7**	**102**	**103**	**98.6**	**99.4**
2-Chlorophenol-D4	93951-73-6	0.1	%	**106**	**109**	**109**	**105**	**104**
2.4.6-Tribromophenol	118-79-6	0.1	%	**83.0**	**83.5**	**85.4**	**89.5**	**83.6**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**106**	**108**	**109**	**104**	**104**
Anthracene-d10	1719-06-8	0.1	%	**89.6**	**94.1**	**99.0**	**91.4**	**88.6**
4-Terphenyl-d14	1718-51-0	0.1	%	**105**	**108**	**106**	**104**	**105**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**90.9**	**96.6**	**94.3**	**101**	**103**
Toluene-D8	2037-26-5	0.1	%	**82.6**	**93.6**	**87.4**	**90.2**	**95.8**
4-Bromofluorobenzene	460-00-4	0.1	%	**89.7**	**104**	**93.6**	**95.8**	**96.7**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP24 (1.1-1.2)	TP25 (0-0.1)	TP25 (0.7-0.8)	TP25 (1.2-1.3)	TP26 (0-0.1)
				Client sampling date / time	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00
					EM1100641-011	EM1100641-013	EM1100641-014	EM1100641-015	EM1100641-016
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**9.0**	**11.4**	**12.6**	**1.8**	**3.4**
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**13**	<5	**5**	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		<2	**7**	**16**	<2	**3**
Copper	7440-50-8	5	mg/kg		<5	<5	<5	<5	<5
Lead	7439-92-1	5	mg/kg		<5	**11**	**20**	<5	<5
Nickel	7440-02-0	2	mg/kg		**3**	**3**	**9**	<2	**6**
Zinc	7440-66-6	5	mg/kg		**7**	**82**	**12**	<5	**12**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		----	----	**29**	----	----
EK055: Ammonia as N									
Ammonia as N	7664-41-7	20	mg/kg		----	----	<20	----	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		**1.3**	<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		**0.9**	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg		**2.3**	<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		**1.2**	<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		**5.8**	<0.5	**0.6**	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		**45.5**	<0.5	**0.6**	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		**3.0**	<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		**260**	<0.5	**2.6**	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		**108**	<0.5	**0.9**	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		**538**	<0.5	**4.8**	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		**520**	<0.5	**4.3**	<0.5	<0.5

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP24 (1.1-1.2)	TP25 (0-0.1)	TP25 (0.7-0.8)	TP25 (1.2-1.3)	TP26 (0-0.1)
				Client sampling date / time: 20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00
				EM1100641-011	EM1100641-013	EM1100641-014	EM1100641-015	EM1100641-016
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benz(a)anthracene	56-55-3	0.5	mg/kg	**242**	<0.5	**2.0**	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	**211**	<0.5	**1.8**	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	**147**	<0.5	**1.3**	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	**177**	<0.5	**1.8**	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	**161**	<0.5	**1.9**	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	**38.4**	<0.5	**0.9**	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	**13.5**	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	**35.4**	<0.5	**0.9**	<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	**5760**	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	**3640**	<100	<100	<100	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	**9400**	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	**230**	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	**8610**	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	**1940**	**110**	<100	<100	<100
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
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**97.0**	**103**	**99.5**	**98.6**	**101**
2-Chlorophenol-D4	93951-73-6	0.1	%	**104**	**107**	**105**	**104**	**105**
2.4.6-Tribromophenol	118-79-6	0.1	%	**100**	**85.0**	**84.8**	**74.4**	**71.5**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**105**	**108**	**105**	**104**	**106**
Anthracene-d10	1719-06-8	0.1	%	**88.8**	**95.3**	**97.3**	**89.5**	**88.4**
4-Terphenyl-d14	1718-51-0	0.1	%	**119**	**107**	**100**	**105**	**106**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**114**	**118**	**97.4**	**97.1**	**100**
Toluene-D8	2037-26-5	0.1	%	**102**	**108**	**91.5**	**92.3**	**90.8**
4-Bromofluorobenzene	460-00-4	0.1	%	**108**	**113**	**96.5**	**96.4**	**93.6**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP26 (0.5-0.6)	TP26 (1.8-1.9)	TP26 (2.5-2.6)	DUP1	DUP2
				Client sampling date / time: 20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00
				EM1100641-017	EM1100641-018	EM1100641-019	EM1100641-026	EM1100641-027
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**12.2**	**15.6**	**17.6**	**8.8**	**10.1**
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)								
Sulfate as SO4 2-	14808-79-8	50	mg/kg	<50	**610**	----	----	**90**
ED040T : Total Sulfate by ICPAES								
Sulfate as SO4 2-	14808-79-8	100	mg/kg	**130**	**500**	----	----	<100
ED042T: Total Sulfur by LECO								
Sulfur - Total as S (LECO)	----	0.01	%	**0.04**	**0.14**	----	----	<0.01
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**17**	<5	**14**	**30**	**21**
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**10**	**5**	**14**	**10**	**6**
Copper	7440-50-8	5	mg/kg	**5**	<5	<5	<5	<5
Lead	7439-92-1	5	mg/kg	**19**	<5	**8**	**16**	<5
Nickel	7440-02-0	2	mg/kg	**7**	**6**	**9**	**5**	<2
Zinc	7440-66-6	5	mg/kg	**51**	<5	<5	**124**	<5
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.3**	<0.1	<0.1	**0.1**	<0.1
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	**108**	**4**	----	**1**	<1
EK055: Ammonia as N								
Ammonia as N	7664-41-7	20	mg/kg	<20	**30**	**500**	----	----
EK085M: Sulfide as S2-								
Sulfide as S	----	0.01	%	**0.03**	**0.12**	----	----	<0.01
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	**1.8**	<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	**2.0**	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	**3.0**	<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	**1.6**	<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	TP26 (0.5-0.6)	TP26 (1.8-1.9)	TP26 (2.5-2.6)	DUP1	DUP2
Client sample ID								
Client sampling date / time				20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00
				EM1100641-017	EM1100641-018	EM1100641-019	EM1100641-026	EM1100641-027
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Naphthalene	91-20-3	0.5	mg/kg	**11.6**	**1.5**	<0.5	**0.6**	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	**15.3**	<0.5	<0.5	**1.7**	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	**2.5**	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	**12.1**	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	**79.3**	**1.0**	<0.5	**5.1**	<0.5
Anthracene	120-12-7	0.5	mg/kg	**22.8**	<0.5	<0.5	**1.8**	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	**122**	**1.1**	<0.5	**7.4**	<0.5
Pyrene	129-00-0	0.5	mg/kg	**105**	**0.9**	<0.5	**7.6**	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	**49.1**	<0.5	<0.5	**3.5**	<0.5
Chrysene	218-01-9	0.5	mg/kg	**39.9**	<0.5	<0.5	**3.2**	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	**33.4**	<0.5	<0.5	**2.5**	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	**24.3**	<0.5	<0.5	**3.2**	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	**39.1**	<0.5	<0.5	**3.7**	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	**17.6**	<0.5	<0.5	**1.8**	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	**5.5**	<0.5	<0.5	**0.6**	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	**17.5**	<0.5	<0.5	**2.1**	<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	**1240**	<100	<100	**140**	<100
C29 - C36 Fraction	----	100	mg/kg	**950**	<100	<100	**170**	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	**2190**	<50	<50	**310**	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	**70**	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	**2050**	<100	<100	**250**	<100
>C34 - C40 Fraction	----	100	mg/kg	**600**	<100	<100	**140**	<100
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
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**95.0**	**101**	**100**	**99.8**	**98.3**
2-Chlorophenol-D4	93951-73-6	0.1	%	**101**	**102**	**104**	**104**	**102**
2.4.6-Tribromophenol	118-79-6	0.1	%	**93.6**	**77.8**	**72.9**	**85.4**	**75.4**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP26 (0.5-0.6)	TP26 (1.8-1.9)	TP26 (2.5-2.6)	DUP1	DUP2
				Client sampling date / time: 20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00
				EM1100641-017	EM1100641-018	EM1100641-019	EM1100641-026	EM1100641-027
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**102**	**105**	**104**	**103**	**103**
Anthracene-d10	1719-06-8	0.1	%	**93.3**	**101**	**93.0**	**100**	**92.2**
4-Terphenyl-d14	1718-51-0	0.1	%	**107**	**102**	**104**	**99.1**	**104**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**97.7**	**102**	**104**	**94.1**	**99.4**
Toluene-D8	2037-26-5	0.1	%	**89.1**	**88.1**	**91.4**	**89.9**	**86.2**
4-Bromofluorobenzene	460-00-4	0.1	%	**95.5**	**93.4**	**98.0**	**88.9**	**93.2**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	DUP3	DUP4	DUP5	DUP7	----
				Client sampling date / time	19-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	----
					EM1100641-028	EM1100641-029	EM1100641-030	EM1100641-032	----
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**21.3**	**5.0**	**18.6**	**16.1**	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**22**	<5	<5	<5	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	----
Chromium	7440-47-3	2	mg/kg		**25**	**3**	**15**	**4**	----
Copper	7440-50-8	5	mg/kg		<5	**5**	<5	<5	----
Lead	7439-92-1	5	mg/kg		**15**	**11**	**8**	<5	----
Nickel	7440-02-0	2	mg/kg		**9**	**3**	**2**	**3**	----
Zinc	7440-66-6	5	mg/kg		**7**	**15**	<5	<5	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	----
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		**4**	----	----	----	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<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	----
2-Methylphenol	95-48-7	0.5	mg/kg		<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	----
2-Nitrophenol	88-75-5	0.5	mg/kg		<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	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<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	----
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		<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	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Pentachlorophenol	87-86-5	2.0	mg/kg		<2.0	<2.0	<2.0	<2.0	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		**0.8**	<0.5	<0.5	**1.2**	----
Acenaphthylene	208-96-8	0.5	mg/kg		**1.5**	<0.5	<0.5	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg		**13.9**	**0.9**	<0.5	**0.9**	----
Anthracene	120-12-7	0.5	mg/kg		**4.1**	<0.5	<0.5	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg		**16.7**	**1.5**	<0.5	**0.9**	----
Pyrene	129-00-0	0.5	mg/kg		**13.8**	**1.4**	<0.5	**0.7**	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		**5.1**	**0.6**	<0.5	<0.5	----
Chrysene	218-01-9	0.5	mg/kg		**4.7**	**0.7**	<0.5	<0.5	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	DUP3	DUP4	DUP5	DUP7	----
				Client sampling date / time	19-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	----
					EM1100641-028	EM1100641-029	EM1100641-030	EM1100641-032	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		**3.5**	**0.5**	<0.5	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		**2.9**	<0.5	<0.5	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		**3.6**	**0.6**	<0.5	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		**2.1**	<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	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		**2.6**	**0.6**	<0.5	<0.5	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	----
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	----
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	----
C29 - C36 Fraction	----	100	mg/kg		**150**	<100	<100	<100	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		**150**	<50	<50	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	----
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	----
>C16 - C34 Fraction	----	100	mg/kg		**270**	<100	<100	<100	----
>C34 - C40 Fraction	----	100	mg/kg		**250**	<120	<120	<100	----
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	----
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg		<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	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**80.4**	**79.9**	**82.0**	**82.4**	----
2-Chlorophenol-D4	93951-73-6	0.1	%		**94.6**	**94.8**	**94.0**	**94.6**	----
2.4.6-Tribromophenol	118-79-6	0.1	%		**57.5**	**57.6**	**51.0**	**60.1**	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**97.6**	**95.2**	**96.3**	**98.4**	----
Anthracene-d10	1719-06-8	0.1	%		**97.1**	**108**	**117**	**99.9**	----
4-Terphenyl-d14	1718-51-0	0.1	%		**101**	**107**	**104**	**106**	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**104**	**98.0**	**124**	**85.2**	----
Toluene-D8	2037-26-5	0.1	%		**114**	**104**	**124**	**87.6**	----
4-Bromofluorobenzene	460-00-4	0.1	%		**112**	**99.6**	**124**	**90.5**	----

Analytical Results

Sub-Matrix: **WATER**

Compound	CAS Number	LOR	Unit	Rinsate (1)	Rinsate (2)	Rinsate (3)	Trip 1	Trip 2
Client sample ID								
Client sampling date / time				18-JAN-2011 15:00	19-JAN-2011 15:00	20-JAN-2011 15:00	18-JAN-2011 15:00	19-JAN-2011 15:00
				EM1100641-020	**EM1100641-021**	**EM1100641-022**	**EM1100641-023**	**EM1100641-024**
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	<0.005	----	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	----	----
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	----	----
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	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	<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								
>C10 - C16 Fraction	----	100	µg/L	----	<100	<100	----	----
C6 - C10 Fraction	----	20	µg/L	<20	<20	<20	<20	<20
>C16 - C34 Fraction	----	100	µg/L	----	<100	<100	----	----
>C34 - C40 Fraction	----	100	µg/L	----	<100	<100	----	----

Analytical Results

Sub-Matrix: **WATER**

Compound	CAS Number	LOR	Unit	Client sample ID: Rinsate (1)	Rinsate (2)	Rinsate (3)	Trip 1	Trip 2
				Client sampling date / time: 18-JAN-2011 15:00	19-JAN-2011 15:00	20-JAN-2011 15:00	18-JAN-2011 15:00	19-JAN-2011 15:00
				EM1100641-020	EM1100641-021	EM1100641-022	EM1100641-023	EM1100641-024
EP080: BTEX								
Benzene	71-43-2	1	µg/L	<1	<1	<1	<1	<1
Toluene	108-88-3	2	µg/L	<2	<2	<2	<2	<2
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	<2	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	<2	<2
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	<2	<2
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	----	**32.1**	**23.5**	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	----	**73.2**	**60.3**	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%	----	**70.7**	**69.5**	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	----	**77.8**	**76.6**	----	----
Anthracene-d10	1719-06-8	0.1	%	----	**76.3**	**72.5**	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	----	**74.5**	**72.3**	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**112**	**118**	**107**	**89.6**	**126**
Toluene-D8	2037-26-5	0.1	%	**111**	**112**	**102**	**88.6**	**111**
4-Bromofluorobenzene	460-00-4	0.1	%	**99.3**	**101**	**93.7**	**81.5**	**101**

Analytical Results

Sub-Matrix: **WATER**

Compound	CAS Number	LOR	Unit	Client sample ID	Trip 3	----	----	----	----
				Client sampling date / time	20-JAN-2011 15:00	----	----	----	----
					EM1100641-025	**----**	**----**	**----**	**----**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		<20	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	20	µg/L		<20	----	----	----	----
EP080: BTEX									
Benzene	71-43-2	1	µg/L		<1	----	----	----	----
Toluene	108-88-3	2	µg/L		<2	----	----	----	----
Ethylbenzene	100-41-4	2	µg/L		<2	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	----	----	----	----
ortho-Xylene	95-47-6	2	µg/L		<2	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**119**	----	----	----	----
Toluene-D8	2037-26-5	0.1	%		**104**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%		**95.7**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	48.5	123.5
2-Chlorophenol-D4	93951-73-6	51.8	129.7
2.4.6-Tribromophenol	118-79-6	26.8	126.6
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	57.9	125.2
Anthracene-d10	1719-06-8	62.6	135.5
4-Terphenyl-d14	1718-51-0	63.7	135.2
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	59.0	126.2
Toluene-D8	2037-26-5	59.5	128.6
4-Bromofluorobenzene	460-00-4	56.4	129.9

Sub-Matrix: **WATER**

Compound	CAS Number	Recovery Limits (%) Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10.0	59.3
2-Chlorophenol-D4	93951-73-6	15.2	116.3
2.4.6-Tribromophenol	118-79-6	14.5	137.9
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	37.8	128.4
Anthracene-d10	1719-06-8	36.3	136.7
4-Terphenyl-d14	1718-51-0	42.1	130.1
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	77.5	124.5
Toluene-D8	2037-26-5	77.6	122.2
4-Bromofluorobenzene	460-00-4	70.8	124.9

CHAIN OF CUSTODY

ALS Laboratory: *please tick* →

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☐ **Newcastle**: 5 Rosegum Rd, Warabrook NSW 2304 Ph:02 4968 9433 E:samples.newcastle@alsenviro.com
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☐ **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: Environmental Earth Sciences	**TURNAROUND REQUIREMENTS :** ☐ Standard TAT **(List due date):**	**FOR LABORATORY USE ONLY (Circle)**
OFFICE: P.O.BOX 2253, FOOTSCRAY , VIC, 3011	(Standard TAT may be longer for some tests e.g.. Ultra Trace Organics) ☐ Non Standard or urgent TAT **(List due date):**	Custody Seal Intact? Yes No N/A
PROJECT: ALBERT PARK GAS WORKS	**ALS QUOTE NO.: ME/015/11**	**COC SEQUENCE NUMBER (Circle)** Free Ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: 210074		COC: 1 2 3 4 5 (7) of (9) Random Sample Temperature on Receipt: °C
PROJECT MANAGER: DAVID JAMES	**CONTACT PH:**	OF: 1 2 3 4 5 Other comment:

SAMPLER: DJ,JI,VR,SF	**SAMPLER MOBILE: 0437 033 796**	**RELINQUISHED BY:**	**RECEIVED BY:**	**RELINQUISHED BY:** Samplers	**RECEIVED BY:** Anitha
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default): ENMRG & ESDAT**				
Email Reports to (will default to PM if no other addresses are listed):		DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME: 21/1 3:30
Email Invoice to (will default to PM if no other addresses are listed):					

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: SPLIT WORK ORDER – EM1100639 + EM1100640

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		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).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	S-27 PACKAGE - 8 metals, TPH/BTEX/PAH/Phenols	Total Cyanide - EK026G	Sulphate - NEPM - ED040N	Sulphide - EK085 (Leco S to ALS Brisbane)	Ammonia as N				
1	TP21 (0.8-0.9)	20/01/2011	Soil		1	1								
2	TP22 (0-0.1)	20/01/2011	Soil		1	1								
3	TP22 (0.3-0.4)	20/01/2011	Soil		1	1	1							
4	TP22 (0.6-0.7)	20/01/2011	Soil		1									
5	TP22 (2.4-2.5)	20/01/2011	Soil		1	✓								HOLD AS Per DJ 21/1/11
6	TP23 (0-0.1)	20/01/2011	Soil		1	1								
7	TP23 (0.4-0.5)	20/01/2011	Soil		1	1	1							
8	TP23 (1-1.1)	20/01/2011	Soil		1	1								
9	TP24 (0-0.1)	20/01/2011	Soil		1	1								
10	TP24 (0.5-0.6)	20/01/2011	Soil		1	1	1							
11	TP24 (1.1-1.2)	20/01/2011	Soil		1	1								
12	TP24 (2.1-2.2)	20/01/2011	Soil		1									DW 24/1/11
				TOTAL	12	10	3	0	0	0				

Environmental Division Melbourne Work Order **EM1100641**

Telephone : +61-3-8549 9600

SCANNED

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.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

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CLIENT: Environmental Earth Sciences	**TURNAROUND REQUIREMENTS :** ☐ Standard TAT **(List due date):**	**FOR LABORATORY USE ONLY (Circle)**
OFFICE: P.O.BOX 2253, FOOTSCRAY , VIC, 3011	(Standard TAT may be longer for some tests e.g.. Ultra Trace Organics) ☐ Non Standard or urgent TAT **(List due date):**	Custody Seal Intact? Yes No N/A
PROJECT: ALBERT PARK GAS WORKS	**ALS QUOTE NO.: ME/015/11**	**COC SEQUENCE NUMBER (Circle)** Free Ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: 210074		COC: 1 2 3 4 5 (8) Random Sample Temperature on Receipt: °C
PROJECT MANAGER: DAVID JAMES	**CONTACT PH:**	OF: 1 2 3 4 5 (9) Other comment:
SAMPLER: DJ,JI,VR,SF	**SAMPLER MOBILE: 0437 033 796**	**RELINQUISHED BY:** **RECEIVED BY:** **RELINQUISHED BY:** Samples **RECEIVED BY:** Anitha
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default): ENMRG & ESDAT**	
Email Reports to (will default to PM if no other addresses are listed):		DATE/TIME: DATE/TIME: DATE/TIME: DATE/TIME: 21/1 3:30
Email Invoice to (will default to PM if no other addresses are listed):		

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		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).										Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	S-27 PACKAGE - 8 metals, TPH/BTEX/PAH/Phenols	Total Cyanide - EK026G	Sulphate - NEPM - ED040N	Sulphide - EK085 (Leco S to ALS Brisbane)	Ammonia as N	Dissolved Metals (8 metals)	TPH/BTEX (volatiles)	TPH C10-C36 PAH			
13	TP25 (0-0.1)	20/01/2011	Soil		1	1										
14	TP25 (0.7-0.8)	20/01/2011	Soil		1	1	1			1						
15	TP25 (1.2-1.3)	20/01/2011	Soil		1	1										
16	TP26 (0-0.1)	20/01/2011	Soil		1	1										
17	TP26 (0.5-0.6)	20/01/2011	Soil		1	1	1	1	1	1						
18	TP26 (1.8-1.9)	20/01/2011	Soil		1	1	1	1	1	1						
19	TP26 (2.5-2.6)	20/01/2011	Soil		1	1				1						
20	Rinsate (1)	18/01/2011	Water								1	1				added by DJ 24/1/11.
21	Rinsate (2)	19/01/2011	Water								1	1	✓			
22	Rinsate (3)	20/01/2011	Water								1	1	✓			
23	Trip 1	18/01/2011	Water		1							1				
24	Trip 2	19/01/2011	Water		1							1				
				TOTAL	9	7	3	2	2	4	2	2				

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CLIENT: Environmental Earth Sciences	**TURNAROUND REQUIREMENTS :** ☐ Standard TAT **(List due date):**	**FOR LABORATORY USE ONLY (Circle)**
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PROJECT: ALBERT PARK GAS WORKS	**ALS QUOTE NO.: ME/015/11**	**COC SEQUENCE NUMBER (Circle)** Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: 210074		COC: 1 2 3 4 5 (9) Random Sample Temperature on Receipt °C
PROJECT MANAGER: DAVID JAMES	**CONTACT PH:**	OF: 1 2 3 4 5 (9) Other comment:
SAMPLER: DJ,JI,VR,SF	**SAMPLER MOBILE: 0437 033 796**	**RELINQUISHED BY:** / **RECEIVED BY:** / **RELINQUISHED BY:** Samples / **RECEIVED BY:** Anitha
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default): ENMRG & ESDAT**	
Email Reports to (will default to PM if no other addresses are listed):	DATE/TIME: / DATE/TIME: / DATE/TIME: / DATE/TIME: 21/1 3:30	
Email Invoice to (will default to PM if no other addresses are listed):		

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		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).									Additional Information	
LAB ID	**SAMPLE ID**	**DATE / TIME**	**MATRIX**	**TYPE & PRESERVATIVE** *(refer to codes below)*	**TOTAL BOTTLES**	**S-27 PACKAGE - 8 metals, TPH/BTEX/PAH/Phenols**	**Total Cyanide - EK026G**	**Sulphate - NEPM - ED040N**	**Sulphide - EK085 (Leco S to ALS Brisbane)**	**Ammonia as N**	**Dissolved Metals (8 metals)**	**TPH/BTEX (volatiles only)**			
25	Trip 3	20/01/2011	Water		1							1			
26	DUP1	18/01/2011	Soil		1	1	1								
27	DUP2	18/1	Soil		1	1	1	1	1						
28	DUP3	19/1	Soil		1	1	1								
29	DUP4	20/1	Soil		1	1									
30	DUP5	20/1	Soil		1	1									
31	DUP6	20/1	Soil		1										
32 -	DUP7	20/1	Soil		1	1									
				TOTAL	8	6	3	1	1	0	0	1			

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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.

Danielle White

From: Carol Walsh
Sent: Monday, 24 January 2011 4:54 PM
To: Danielle White; Emily Sabatka; Rosalinda Laria; Peter Ravlic
Cc: Samples Melbourne
Subject: FW: ISSUES WITH SAMPLES RECEIVED 21/1/2011 - ALBERT PARK GAS WORKS
Follow Up Flag: Follow up
Flag Status: Red

Please see below.

Regards

How was your customer experience? Please send us your feedback

Carol Walsh
Senior Client Services Officer

ALS | Environmental (General Environmental Group)

Address
4 Westall Rd, Springvale, VIC, 3171
PHONE +61 3 8549 9600
FAX +61 3 8549 9601
www.alsglobal.com

From: David James [mailto:djames@eesi.biz]
Sent: Monday, 24 January 2011 2:37 PM
To: Carol Walsh
Subject: RE: ISSUES WITH SAMPLES RECEIVED 21/1/2011 - ALBERT PARK GAS WORKS

Hi Carol – can I get some extra analysis on the following samples:

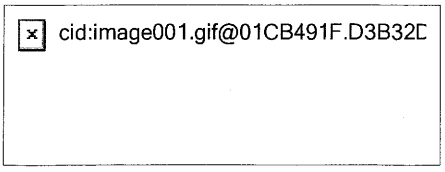
EM1100639 : SAMPLE 15 - TP5(0.8) for TPH/BTEX/PAH;
EM1100639 : SAMPLE 25 - TP7(2.9-3.0) for TPH/BTEX/PAH and Phenols;
EM1100640: SAMPLE 17 - TP15(2.4-2.5) for TPH/BTEX/PAH;
EM1100640: SAMPLE 21 - TP16(2-2.1) for TPH/BTEX/PAH;
EM1100641: SAMPLE 5 - TP22(2.4-2.5) for TPH/BTEX/PAH; and
EM1100641: SAMPLE 4 - TP22(0.6-0.7) for TPH/BTEX/PAH.

Yes - DUP 6 is on HOLD.

Also, I have 500ml ambers for rinsate collected on Wednesday and Thursday I shall courier them across if you can add TPH (C10-C36) and PAH analysis to the COC.
For EM1100641 – RINSATE 2 (SAMPLE 21) AND RINSATE 3(SAMPLE 22) – a 500mL amber bottle is being delivered Tuesday morning 25/1/11. Please add TPH(C10-C36) Plus PAH to these 2 samples.

Regards,

David James – Environmental Engineer
PO Box 2253, Footscray, VIC 3011.



p: 03 9687 1666
d: 03 8398 4419
m: 0437 033 796
f: 03 9687 1844
djames@eesi.biz
www.environmentalearthsciences.com

From: Carol Walsh [mailto:CarolW@alsglobal.com]
Sent: Monday, 24 January 2011 2:16 PM
To: David James
Subject: ISSUES WITH SAMPLES RECEIVED 21/1/2011 - ALBERT PARK GAS WORKS

David,

We have split the samples into 3 work orders: EM1100639, EM1100640 & EM1100641. Only 1 admin fee will apply.

A couple of issues with samples received 21/1/2011 for Albert Park Gas works.

Some hold samples had analysis indicated – as discussed with you on Friday –we are to ignore analysis and keep samples on hold.

DUP6 20/1/2011 - No analysis indicated or HOLD indicated.

Rinsate samples –

no metals bottle received – dissolved metals will be taken from the unpreserved green bottle – lab filtering will result in "non compliance" being reported.

Additional bottles received for rinsates – cyanide and nutrients bottles – no analysis required. TPH / BTEX analysis requested – only amber 40ml volatile vial received – no amber 100mL for semivolatiles. We can only perform TPH(C6-C9)/BTEX for these samples.

Trip samples – only 40mL amber vial received – TPH C6-C9/BTEX only can be performed on these samples.

Regards

How was your customer experience? Please send us your feedback

Carol Walsh
Senior Client Services Officer

ALS | Environmental (General Environmental Group)

Address
4 Westall Rd, Springvale, VIC, 3171
PHONE +61 3 8549 9600
FAX +61 3 8549 9601
www.alsglobal.com

P Please consider the environment before printing this email.

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order	: **EM1100641**		
Client	: **ENVIRONMENTAL EARTH SCIENCES**	Laboratory	: Environmental Division Melbourne
Contact	: MR DAVID JAMES	Contact	: Carol Walsh
Address	: P.O.BOX 2253 FOOTSCRAY VIC, AUSTRALIA 3011	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: djames@eesi.biz	E-mail	: carol.walsh@alsenviro.com
Telephone	: +61 96871666	Telephone	: +61-3-8549 9608
Facsimile	: +61 03 96871844	Facsimile	: +61-3-8549 9601
Project	: ALBERT PARK GAS WORKS	Page	: 1 of 3
Order number	: 210074		
C-O-C number	: ----	Quote number	: EM2011ENVEAR0210 (ME/015/11)
Site	: ----		
Sampler	: ----	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 21-JAN-2011	Issue Date	: 24-JAN-2011 16:19
Client Requested Due Date	: 31-JAN-2011	Scheduled Reporting Date	: **31-JAN-2011**

Delivery Details

Mode of Delivery	: Carrier	Temperature	: 15.4-18.6 - Ice bricks present
No. of coolers/boxes	: 3	No. of samples received	: 32
Security Seal	: Intact.	No. of samples analysed	: 28

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Requested Deliverables
- **Sample containers do not comply to pretreatment / preservation standards (AS, APHA, USEPA). Please refer to the Sample Container(s)/Preservation Non-Compliance Log at the end of this report for details.**
- **Sample(s) have been received within recommended holding times**
- **Please direct any queries related to sample condition / numbering / breakages to Peter Ravlic.**
- **Analytical work for this work order will be conducted at ALS Melbourne.**
- **This is a split batch of EM1100639 & EM1100640.**
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.

Sample Container(s)/Preservation Non-Compliances

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

Method / Client sample ID	Sample Container Received	Preferred Sample Container for Analysis
EG020A-F : Dissolved Metals by ICP-MS - Suite A		
Rinsate (1)	- Clear Plastic Bottle - Natural	- Clear Plastic Bottle - Nitric Acid; Filtered
Rinsate (2)	- Clear Plastic Bottle - Natural	- Clear Plastic Bottle - Nitric Acid; Filtered
Rinsate (3)	- Clear Plastic Bottle - Natural	- Clear Plastic Bottle - Nitric Acid; Filtered
EG035F : Dissolved Mercury by FIMS		
Rinsate (1)	- Clear Plastic Bottle - Natural	- Clear Plastic Bottle - Nitric Acid; Filtered
Rinsate (2)	- Clear Plastic Bottle - Natural	- Clear Plastic Bottle - Nitric Acid; Filtered
Rinsate (3)	- Clear Plastic Bottle - Natural	- Clear Plastic Bottle - Nitric Acid; Filtered

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process neccessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
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.

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	(On Hold) SOIL No analysis requested	SOIL - ED040N Calcium Phosphate Extractable Sulfate	SOIL - EK026G (Solids) Total Cyanide By Discrete Analyser	SOIL - EK055 (solids) Ammonia as N	SOIL - EK085 Sulfide as S	SOIL - S-27 TPH/BTEX/PAH/Phenols/8Metals
EM1100641-001	20-JAN-2011 15:00	TP21 (0.8-0.9)						✓
EM1100641-002	20-JAN-2011 15:00	TP22 (0-0.1)						✓
EM1100641-003	20-JAN-2011 15:00	TP22 (0.3-0.4)			✓			✓
EM1100641-004	20-JAN-2011 15:00	TP22 (0.6-0.7)	✓					
EM1100641-005	20-JAN-2011 15:00	TP22 (2.4-2.5)	✓					
EM1100641-006	20-JAN-2011 15:00	TP23 (0-0.1)						✓
EM1100641-007	20-JAN-2011 15:00	TP23 (0.4-0.5)			✓			✓
EM1100641-008	20-JAN-2011 15:00	TP23 (1-1.1)						✓
EM1100641-009	20-JAN-2011 15:00	TP24 (0-0.1)						✓
EM1100641-010	20-JAN-2011 15:00	TP24 (0.5-0.6)			✓			✓
EM1100641-011	20-JAN-2011 15:00	TP24 (1.1-1.2)						✓
EM1100641-012	20-JAN-2011 15:00	TP24 (2.1-2.2)	✓					
EM1100641-013	20-JAN-2011 15:00	TP25 (0-0.1)						✓
EM1100641-014	20-JAN-2011 15:00	TP25 (0.7-0.8)			✓	✓		✓
EM1100641-015	20-JAN-2011 15:00	TP25 (1.2-1.3)						✓
EM1100641-016	20-JAN-2011 15:00	TP26 (0-0.1)						✓
EM1100641-017	20-JAN-2011 15:00	TP26 (0.5-0.6)		✓	✓	✓	✓	✓
EM1100641-018	20-JAN-2011 15:00	TP26 (1.8-1.9)		✓	✓	✓	✓	✓
EM1100641-019	20-JAN-2011 15:00	TP26 (2.5-2.6)				✓		✓
EM1100641-026	18-JAN-2011 15:00	DUP1			✓			✓
EM1100641-027	18-JAN-2011 15:00	DUP2		✓	✓		✓	✓
EM1100641-028	19-JAN-2011 15:00	DUP3			✓			✓
EM1100641-029	20-JAN-2011 15:00	DUP4						✓
EM1100641-030	20-JAN-2011 15:00	DUP5						✓
EM1100641-031	20-JAN-2011 15:00	DUP6	✓					
EM1100641-032	20-JAN-2011 15:00	DUP7						✓

Matrix: **WATER**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	WATER - W-02 8 Metals	WATER - W-18 TPH(C6 - C9)/BTEX
EM1100641-020	18-JAN-2011 15:00	Rinsate (1)	✓	✓
EM1100641-021	19-JAN-2011 15:00	Rinsate (2)	✓	✓
EM1100641-022	20-JAN-2011 15:00	Rinsate (3)	✓	✓
EM1100641-023	18-JAN-2011 15:00	Trip 1		✓
EM1100641-024	19-JAN-2011 15:00	Trip 2		✓
EM1100641-025	20-JAN-2011 15:00	Trip 3		✓

Requested Deliverables

ALL INVOICES MELB ADDRESS

- A4 - AU Tax Invoice (INV)	Email	eesvic@eesi.biz

MR DAVID JAMES

- *AU Certificate of Analysis - NATA (COA)	Email	djames@eesi.biz
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	djames@eesi.biz
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	djames@eesi.biz
- A4 - AU Sample Receipt Notification - Environmental (SRN)	Email	djames@eesi.biz
- Chain of Custody (CoC) (COC)	Email	djames@eesi.biz
- EDI Format - ENMRG (ENMRG)	Email	djames@eesi.biz
- EDI Format - ESDAT (ESDAT)	Email	djames@eesi.biz

MS CAROL WALSH

- Chain of Custody (CoC) (COC)	Email	carol.walsh@alsenviro.com

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **EM1100885**	Page	: 1 of 24
Amendment	: **1**		
Client	: **ENVIRONMENTAL EARTH SCIENCES**	Laboratory	: Environmental Division Melbourne
Contact	: MR DAVID JAMES	Contact	: Carol Walsh
Address	: P.O.BOX 2253 FOOTSCRAY VIC, AUSTRALIA 3011	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: djames@eesi.biz	E-mail	: carol.walsh@alsenviro.com
Telephone	: +61 96871666	Telephone	: +61-3-8549 9608
Facsimile	: +61 03 96871844	Facsimile	: +61-3-8549 9601
Project	: ALBERT PARK GAS WORKS	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: 210074		
C-O-C number	: ----	Date Samples Received	: 28-JAN-2011
Sampler	: JI, JF	Issue Date	: 08-NOV-2011
Site	: ----		
		No. of samples received	: 35
Quote number	: ME/015/11 V3	No. of samples analysed	: 32

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

This document is issued in accordance with NATA accreditation requirements.

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*
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics
Herman Lin	Laboratory Coordinator	Melbourne Inorganics
Kim McCabe	Senior Inorganic Chemist	Stafford Minerals - AY
Nancy Wang	Senior Semivolatile Instrument Chemist	Melbourne Organics
Nikki Stepniewski	Senior Inorganic Instrument Chemist	Melbourne Inorganics
Xingbin Lin	Senior Organic Chemist	Melbourne Inorganics
Xingbin Lin	Senior Organic Chemist	Melbourne Organics

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 insuffient 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

- **3/11/11 - This report has been amended and re-released to allow the reporting of additional analytical data.**
- **EP071: Poor matrix spike recovery due to matrix effects.**
- **EP075(SIM): Poor duplicate precision for sample EM1100885-023 due to sample heterogeneity. Confirmed by re-extraction and re-analysis.**
- **Total Sulphur conducted by ALS Brisbane, NATA Site No. 818.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	BH1 (0-0.1)	BH1 (0.3-0.4)	BH1 (1-1.1)	BH2 (0-0.1)	BH2 (0.2-0.3)
Client sample ID								
Client sampling date / time				27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00
				EM1100885-001	EM1100885-002	EM1100885-003	EM1100885-005	EM1100885-006
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**5.3**	**9.8**	**6.4**	**6.6**	**4.8**
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)								
Sulfate as SO4 2-	14808-79-8	50	mg/kg	----	----	----	----	**120**
ED040T : Total Sulfate by ICPAES								
Sulfate as SO4 2-	14808-79-8	100	mg/kg	----	----	----	----	**160**
ED042T: Total Sulfur by LECO								
Sulfur - Total as S (LECO)	----	0.01	%	----	----	----	----	**0.06**
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	**16**	<5	**8**	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**10**	**26**	**17**	**16**	**3**
Copper	7440-50-8	5	mg/kg	**14**	**15**	<5	**24**	<5
Lead	7439-92-1	5	mg/kg	**17**	**36**	**5**	**102**	**27**
Nickel	7440-02-0	2	mg/kg	**24**	**27**	**2**	**15**	**6**
Zinc	7440-66-6	5	mg/kg	**36**	**78**	**9**	**120**	**33**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	**0.6**	<0.1
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	----	**3**	----	----	**11**
EK085M: Sulfide as S2-								
Sulfide as S	----	0.01	%	----	----	----	----	**0.06**
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	**19.0**	<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**	**1.2**	<0.5	**0.7**	**0.8**
Acenaphthylene	208-96-8	0.5	mg/kg	**0.6**	**1.5**	<0.5	**1.1**	**3.4**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	BH1 (0-0.1)	BH1 (0.3-0.4)	BH1 (1-1.1)	BH2 (0-0.1)	BH2 (0.2-0.3)
Client sample ID								
Client sampling date / time				27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00
				EM1100885-001	EM1100885-002	EM1100885-003	EM1100885-005	EM1100885-006
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
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	**0.9**	<0.5	<0.5	**1.8**
Phenanthrene	85-01-8	0.5	mg/kg	**2.1**	**9.9**	**2.4**	**4.7**	**21.9**
Anthracene	120-12-7	0.5	mg/kg	**0.7**	**3.3**	**0.8**	**1.6**	**6.6**
Fluoranthene	206-44-0	0.5	mg/kg	**3.5**	**16.0**	**3.3**	**10.6**	**40.8**
Pyrene	129-00-0	0.5	mg/kg	**3.2**	**14.9**	**2.9**	**10.3**	**39.0**
Benz(a)anthracene	56-55-3	0.5	mg/kg	**1.6**	**7.7**	**1.3**	**5.4**	**20.0**
Chrysene	218-01-9	0.5	mg/kg	**1.3**	**6.4**	**1.2**	**4.7**	**15.5**
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	**1.9**	**10.8**	**0.9**	**4.2**	**14.7**
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	**0.7**	**10.2**	**0.8**	**4.5**	**13.7**
Benzo(a)pyrene	50-32-8	0.5	mg/kg	**1.5**	**7.0**	**1.1**	**5.7**	**19.8**
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	**0.7**	**3.0**	<0.5	**2.6**	**7.7**
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	**1.1**	<0.5	**0.8**	**2.3**
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	**0.8**	**3.6**	**0.6**	**3.2**	**8.8**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	**120**	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	**160**	**730**	<100	**160**	**580**
C29 - C36 Fraction	----	100	mg/kg	<100	**360**	<100	**200**	**440**
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	**160**	**1210**	<50	**360**	**1020**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	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	**250**	**1080**	**110**	**330**	**960**
>C34 - C40 Fraction	----	100	mg/kg	<100	**210**	<100	**150**	**300**
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
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**91.8**	**87.1**	**82.9**	**81.6**	**77.9**
2-Chlorophenol-D4	93951-73-6	0.1	%	**92.0**	**99.6**	**90.9**	**89.2**	**86.1**
2.4.6-Tribromophenol	118-79-6	0.1	%	**88.7**	**79.6**	**58.8**	**60.5**	**56.4**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**94.2**	**89.6**	**85.9**	**82.8**	**78.8**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH1 (0-0.1)	BH1 (0.3-0.4)	BH1 (1-1.1)	BH2 (0-0.1)	BH2 (0.2-0.3)
				Client sampling date / time: 27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00
				EM1100885-001	EM1100885-002	EM1100885-003	EM1100885-005	EM1100885-006
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.1	%	**93.0**	**87.2**	**93.6**	**92.0**	**77.4**
4-Terphenyl-d14	1718-51-0	0.1	%	**89.3**	**101**	**89.0**	**90.0**	**79.1**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**105**	**109**	**113**	**120**	**109**
Toluene-D8	2037-26-5	0.1	%	**102**	**109**	**114**	**121**	**108**
4-Bromofluorobenzene	460-00-4	0.1	%	**106**	**108**	**114**	**120**	**105**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH2 (0.9-1)	BH3 (0-0.1)	BH3 (0.2-0.3)	BH3 (0.6-0.7)	BH4 (0-0.1)
				Client sampling date / time: 27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00
				EM1100885-007	EM1100885-009	EM1100885-010	EM1100885-011	EM1100885-012
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**5.2**	**12.6**	**9.4**	**13.9**	**9.3**
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)								
Sulfate as SO4 2-	14808-79-8	50	mg/kg	**50**	----	----	**7260**	----
ED040T : Total Sulfate by ICPAES								
Sulfate as SO4 2-	14808-79-8	100	mg/kg	<100	----	----	**24600**	----
ED042T: Total Sulfur by LECO								
Sulfur - Total as S (LECO)	----	0.01	%	<0.01	----	----	**0.58**	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	**22**	<5	<5	**7**
Cadmium	7440-43-9	1	mg/kg	<1	**1**	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**5**	**56**	**8**	**31**	**14**
Copper	7440-50-8	5	mg/kg	<5	**38**	<5	**18**	**24**
Lead	7439-92-1	5	mg/kg	<5	**136**	**686**	**10**	**137**
Nickel	7440-02-0	2	mg/kg	<2	**48**	**10**	**28**	**8**
Zinc	7440-66-6	5	mg/kg	**17**	**124**	**84**	**16**	**122**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	**1.4**	<0.1	<0.1	<0.1
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	----	----	**69**	**40**	----
EK085M: Sulfide as S2-								
Sulfide as S	----	0.01	%	<0.01	----	----	<0.01	----
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	**1.8**	**0.6**	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	**2.0**	**5.6**	**0.8**	<0.5

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH2 (0.9-1)	BH3 (0-0.1)	BH3 (0.2-0.3)	BH3 (0.6-0.7)	BH4 (0-0.1)
				Client sampling date / time: 27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00
				EM1100885-007	EM1100885-009	EM1100885-010	EM1100885-011	EM1100885-012
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	**0.6**	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	**3.5**	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	**3.8**	**30.4**	**4.8**	**0.5**
Anthracene	120-12-7	0.5	mg/kg	<0.5	**1.4**	**8.6**	**1.6**	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	**9.6**	**44.4**	**6.9**	**1.6**
Pyrene	129-00-0	0.5	mg/kg	<0.5	**8.7**	**40.0**	**6.2**	**1.6**
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	**5.3**	**20.6**	**3.0**	**0.9**
Chrysene	218-01-9	0.5	mg/kg	<0.5	**5.4**	**16.4**	**2.7**	**1.0**
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	**5.3**	**16.4**	**2.3**	**1.0**
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	**4.4**	**15.8**	**2.4**	**0.9**
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	**3.9**	**22.2**	**3.1**	**1.2**
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	**2.7**	**9.3**	**1.4**	**0.6**
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	**0.8**	**2.6**	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	**3.0**	**10.7**	**1.6**	**0.8**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	**70**	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	**390**	**710**	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	**300**	**550**	**140**	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	**760**	**1260**	**140**	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	**130**	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	**620**	**1160**	**210**	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	**210**	**390**	**140**	<100
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
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**77.4**	**85.0**	**84.6**	**79.4**	**82.4**
2-Chlorophenol-D4	93951-73-6	0.1	%	**82.2**	**88.2**	**95.6**	**91.9**	**88.1**
2.4.6-Tribromophenol	118-79-6	0.1	%	**54.0**	**82.3**	**66.9**	**54.6**	**59.5**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**78.7**	**85.6**	**84.3**	**85.5**	**83.1**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH2 (0.9-1)	BH3 (0-0.1)	BH3 (0.2-0.3)	BH3 (0.6-0.7)	BH4 (0-0.1)
				Client sampling date / time: 27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00
				EM1100885-007	EM1100885-009	EM1100885-010	EM1100885-011	EM1100885-012
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.1	%	**92.4**	**90.0**	**78.9**	**90.6**	**90.7**
4-Terphenyl-d14	1718-51-0	0.1	%	**82.7**	**92.1**	**81.0**	**87.2**	**85.5**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**115**	**113**	**114**	**106**	**117**
Toluene-D8	2037-26-5	0.1	%	**113**	**114**	**112**	**104**	**116**
4-Bromofluorobenzene	460-00-4	0.1	%	**111**	**112**	**110**	**98.6**	**114**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	BH4 (0.2-0.3)	BH4 (0.6-0.7)	BH5 (0-0.1)	BH5 (0.2-0.3)	BH5 (0.6-0.7)
				Client sampling date / time	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00
					EM1100885-013	EM1100885-014	EM1100885-015	EM1100885-016	EM1100885-017
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**8.8**	**24.3**	**18.7**	**11.4**	**9.3**
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)									
Sulfate as SO4 2-	14808-79-8	50	mg/kg		----	**15500**	<50	<50	**2280**
ED040T : Total Sulfate by ICPAES									
Sulfate as SO4 2-	14808-79-8	100	mg/kg		----	**162000**	**180**	<100	**11800**
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%		----	**5.64**	**0.03**	**0.14**	**1.13**
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**136**	**63**	<5	**45**	**13**
Cadmium	7440-43-9	1	mg/kg		**1**	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**95**	**113**	**8**	**15**	**105**
Copper	7440-50-8	5	mg/kg		**456**	**56**	**18**	<5	**52**
Lead	7439-92-1	5	mg/kg		**466**	**332**	**76**	**11**	**91**
Nickel	7440-02-0	2	mg/kg		**42**	**39**	**6**	**5**	**70**
Zinc	7440-66-6	5	mg/kg		**54**	**56**	**91**	**14**	**44**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		**5.5**	**5.9**	<0.1	<0.1	**1.5**
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		**676**	----	----	**9**	**540**
EK055: Ammonia as N									
Ammonia as N	7664-41-7	20	mg/kg		----	**50**	----	----	<20
EK085M: Sulfide as S2-									
Sulfide as S	----	0.01	%		----	**0.24**	**0.02**	**0.14**	**0.74**
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	**0.6**	<0.5	**3.5**	**0.6**
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	**0.6**	<0.5	**1.3**	<0.5
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg		<1.0	**1.2**	<1.0	**3.6**	<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	**0.8**	<0.5	**0.9**	<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: BH4 (0.2-0.3)	BH4 (0.6-0.7)	BH5 (0-0.1)	BH5 (0.2-0.3)	BH5 (0.6-0.7)
				Client sampling date / time: 27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00
				EM1100885-013	EM1100885-014	EM1100885-015	EM1100885-016	EM1100885-017
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Naphthalene	91-20-3	0.5	mg/kg	0.8	1.7	<0.5	22.9	4.5
Acenaphthylene	208-96-8	0.5	mg/kg	4.1	7.2	<0.5	17.7	6.0
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	0.7	<0.5	3.0	2.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	1.3	<0.5	17.5	3.5
Phenanthrene	85-01-8	0.5	mg/kg	2.2	16.9	<0.5	222	29.1
Anthracene	120-12-7	0.5	mg/kg	1.5	8.5	<0.5	74.2	10.3
Fluoranthene	206-44-0	0.5	mg/kg	5.2	38.2	0.7	216	39.4
Pyrene	129-00-0	0.5	mg/kg	5.3	40.7	0.7	189	40.3
Benz(a)anthracene	56-55-3	0.5	mg/kg	4.8	23.8	<0.5	93.0	22.7
Chrysene	218-01-9	0.5	mg/kg	6.6	24.1	<0.5	73.7	21.0
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	13.2	45.2	<0.5	91.0	29.8
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	4.2	12.9	<0.5	17.5	8.8
Benzo(a)pyrene	50-32-8	0.5	mg/kg	3.6	27.1	<0.5	78.9	20.2
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	4.1	12.6	<0.5	18.0	9.3
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	1.4	4.4	<0.5	6.6	3.3
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	4.1	12.1	<0.5	17.1	9.6
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	370	170	<50	70	160
C15 - C28 Fraction	----	100	mg/kg	960	2680	<100	2960	1610
C29 - C36 Fraction	----	100	mg/kg	590	2730	<100	1620	1310
^ C10 - C36 Fraction (sum)	----	50	mg/kg	1920	5580	<50	4650	3080
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	480	310	<50	210	300
>C16 - C34 Fraction	----	100	mg/kg	1410	4880	<100	4360	2690
>C34 - C40 Fraction	----	100	mg/kg	280	1640	<100	950	820
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
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	96.7	83.8	76.8	83.8	84.6
2-Chlorophenol-D4	93951-73-6	0.1	%	102	87.6	84.8	89.9	89.5
2.4.6-Tribromophenol	118-79-6	0.1	%	111	107	54.8	66.9	88.3

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH4 (0.2-0.3)	BH4 (0.6-0.7)	BH5 (0-0.1)	BH5 (0.2-0.3)	BH5 (0.6-0.7)
				Client sampling date / time: 27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00
				EM1100885-013	EM1100885-014	EM1100885-015	EM1100885-016	EM1100885-017
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**101**	**82.9**	**78.7**	**88.0**	**87.0**
Anthracene-d10	1719-06-8	0.1	%	**92.6**	**77.7**	**92.8**	**79.7**	**79.0**
4-Terphenyl-d14	1718-51-0	0.1	%	**93.5**	**79.0**	**84.0**	**82.7**	**80.4**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**124**	**130**	**114**	**108**	**114**
Toluene-D8	2037-26-5	0.1	%	**119**	**131**	**112**	**109**	**112**
4-Bromofluorobenzene	460-00-4	0.1	%	**117**	**131**	**112**	**112**	**110**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	BH6 (0-0.1)	BH6 (0.3-0.4)	BH6 (1.7-1.8)	BH7 (0-0.1)	BH7 (0.3-0.4)
Client sample ID				BH6 (0-0.1)	BH6 (0.3-0.4)	BH6 (1.7-1.8)	BH7 (0-0.1)	BH7 (0.3-0.4)
Client sampling date / time				27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00
				EM1100885-018	EM1100885-019	EM1100885-020	EM1100885-021	EM1100885-022
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	13.1	10.0	12.2	6.3	5.1
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)								
Sulfate as SO4 2-	14808-79-8	50	mg/kg	----	----	----	----	<50
ED040T : Total Sulfate by ICPAES								
Sulfate as SO4 2-	14808-79-8	100	mg/kg	----	----	----	----	<100
ED042T: Total Sulfur by LECO								
Sulfur - Total as S (LECO)	----	0.01	%	----	----	----	----	0.05
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	6	28	20	6	10
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	10	8	21	9	10
Copper	7440-50-8	5	mg/kg	49	245	340	14	14
Lead	7439-92-1	5	mg/kg	88	43	11	70	64
Nickel	7440-02-0	2	mg/kg	20	8	26	13	18
Zinc	7440-66-6	5	mg/kg	73	17	84	84	70
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.3	<0.1	<0.1	<0.1	<0.1
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	----	247	7	----	3
EK085M: Sulfide as S2-								
Sulfide as S	----	0.01	%	----	----	----	----	0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	0.9
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	1.2
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	0.9
Acenaphthylene	208-96-8	0.5	mg/kg	0.6	<0.5	<0.5	<0.5	4.7

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	BH6 (0-0.1)	BH6 (0.3-0.4)	BH6 (1.7-1.8)	BH7 (0-0.1)	BH7 (0.3-0.4)
Client sample ID				BH6 (0-0.1)	BH6 (0.3-0.4)	BH6 (1.7-1.8)	BH7 (0-0.1)	BH7 (0.3-0.4)
Client sampling date / time				27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00
				EM1100885-018	EM1100885-019	EM1100885-020	EM1100885-021	EM1100885-022
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	**0.6**
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	**1.4**
Phenanthrene	85-01-8	0.5	mg/kg	**2.8**	<0.5	<0.5	**1.2**	**17.2**
Anthracene	120-12-7	0.5	mg/kg	**1.0**	<0.5	<0.5	<0.5	**6.1**
Fluoranthene	206-44-0	0.5	mg/kg	**5.0**	**0.6**	<0.5	**2.3**	**33.3**
Pyrene	129-00-0	0.5	mg/kg	**4.5**	**0.5**	<0.5	**2.2**	**33.2**
Benz(a)anthracene	56-55-3	0.5	mg/kg	**2.4**	<0.5	<0.5	**1.1**	**15.4**
Chrysene	218-01-9	0.5	mg/kg	**2.2**	<0.5	<0.5	**1.2**	**13.7**
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	**2.2**	<0.5	<0.5	**1.2**	**15.4**
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	**1.7**	<0.5	<0.5	**1.2**	**6.8**
Benzo(a)pyrene	50-32-8	0.5	mg/kg	**2.4**	<0.5	<0.5	**1.6**	**13.2**
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	**1.1**	<0.5	<0.5	**0.8**	**5.1**
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	**1.7**
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	**1.4**	<0.5	<0.5	**1.0**	**5.8**
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	**800**
C29 - C36 Fraction	----	100	mg/kg	**160**	<100	<100	<100	**610**
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	**260**	<50	<50	<50	**1410**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	**60**
>C16 - C34 Fraction	----	100	mg/kg	**240**	<100	<100	**140**	**1320**
>C34 - C40 Fraction	----	100	mg/kg	**140**	<100	<100	<100	**410**
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
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**77.4**	**77.8**	**79.4**	**80.0**	**86.3**
2-Chlorophenol-D4	93951-73-6	0.1	%	**88.4**	**84.6**	**89.6**	**89.9**	**93.1**
2.4.6-Tribromophenol	118-79-6	0.1	%	**59.6**	**53.5**	**56.7**	**51.9**	**89.4**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**79.9**	**79.0**	**83.4**	**83.5**	**91.2**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH6 (0-0.1)	BH6 (0.3-0.4)	BH6 (1.7-1.8)	BH7 (0-0.1)	BH7 (0.3-0.4)
				Client sampling date / time: 27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00
				EM1100885-018	EM1100885-019	EM1100885-020	EM1100885-021	EM1100885-022
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.1	%	**88.5**	**93.0**	**104**	**97.0**	**81.8**
4-Terphenyl-d14	1718-51-0	0.1	%	**83.6**	**82.3**	**84.4**	**88.8**	**83.5**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**118**	**114**	**98.3**	**104**	**112**
Toluene-D8	2037-26-5	0.1	%	**117**	**116**	**102**	**105**	**113**
4-Bromofluorobenzene	460-00-4	0.1	%	**115**	**114**	**99.8**	**105**	**112**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH7 (0.6-0.7)	BH8 (0-0.1)	BH8 (0.3-0.4)	BH8 (1.4-1.5)	BH9 (0.2-0.3)
				Client sampling date / time: 27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00
				EM1100885-023	EM1100885-025	EM1100885-026	EM1100885-027	EM1100885-028
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**6.2**	**10.4**	**8.5**	**5.9**	**7.0**
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)								
Sulfate as SO4 2-	14808-79-8	50	mg/kg	<50	----	----	<50	----
ED040T : Total Sulfate by ICPAES								
Sulfate as SO4 2-	14808-79-8	100	mg/kg	<100	----	----	<100	----
ED042T: Total Sulfur by LECO								
Sulfur - Total as S (LECO)	----	0.01	%	**0.01**	----	----	<0.01	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	**6**	**7**	**15**	**5**
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**7**	**12**	**8**	**5**	**15**
Copper	7440-50-8	5	mg/kg	<5	**29**	**16**	<5	**23**
Lead	7439-92-1	5	mg/kg	**6**	**72**	**69**	<5	**144**
Nickel	7440-02-0	2	mg/kg	**4**	**12**	**14**	<2	**60**
Zinc	7440-66-6	5	mg/kg	**7**	**92**	**81**	**10**	**117**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EK026G: Total Cyanide By Discrete Analyser								
Total Cyanide	57-12-5	1	mg/kg	**1**	----	**5**	----	----
EK055: Ammonia as N								
Ammonia as N	7664-41-7	20	mg/kg	<20	----	----	<20	----
EK085M: Sulfide as S2-								
Sulfide as S	----	0.01	%	**0.01**	----	----	<0.01	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	**1.8**	**1.6**	<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	**0.7**	**0.5**	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	**2.2**	**1.9**	<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	**0.7**	**0.8**	<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: BH7 (0.6-0.7)	BH8 (0-0.1)	BH8 (0.3-0.4)	BH8 (1.4-1.5)	BH9 (0.2-0.3)
				Client sampling date / time: 27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00
				EM1100885-023	EM1100885-025	EM1100885-026	EM1100885-027	EM1100885-028
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Naphthalene	91-20-3	0.5	mg/kg	**7.0**	**28.9**	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	**18.6**	**44.1**	**0.9**	<0.5	**2.0**
Acenaphthene	83-32-9	0.5	mg/kg	**3.4**	**9.6**	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	**13.9**	**75.4**	**0.6**	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	**124**	**388**	**6.2**	<0.5	**7.2**
Anthracene	120-12-7	0.5	mg/kg	**29.2**	**102**	**1.6**	<0.5	**2.3**
Fluoranthene	206-44-0	0.5	mg/kg	**158**	**303**	**6.6**	<0.5	**15.5**
Pyrene	129-00-0	0.5	mg/kg	**148**	**263**	**5.7**	<0.5	**15.8**
Benz(a)anthracene	56-55-3	0.5	mg/kg	**71.5**	**116**	**2.6**	<0.5	**8.1**
Chrysene	218-01-9	0.5	mg/kg	**52.3**	**91.7**	**2.0**	<0.5	**6.9**
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	**71.9**	**119**	**2.7**	<0.5	**8.0**
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	**14.7**	**35.4**	**1.1**	<0.5	**3.7**
Benzo(a)pyrene	50-32-8	0.5	mg/kg	**60.9**	**97.6**	**2.3**	<0.5	**7.8**
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	**16.7**	**30.0**	**1.1**	<0.5	**3.7**
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	**5.8**	**9.0**	<0.5	<0.5	**1.3**
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	**16.8**	**31.1**	**1.4**	<0.5	**4.7**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	**90**	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	**260**	**3080**	<100	<100	**230**
C29 - C36 Fraction	----	100	mg/kg	**200**	**1470**	<100	<100	**190**
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	**460**	**4640**	<50	<50	**420**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	**330**	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	**240**	**4390**	**170**	<100	**410**
>C34 - C40 Fraction	----	100	mg/kg	<100	**820**	<100	<100	**120**
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
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**90.2**	**87.5**	**79.7**	**81.3**	**82.6**
2-Chlorophenol-D4	93951-73-6	0.1	%	**90.3**	**94.3**	**90.0**	**92.4**	**93.6**
2.4.6-Tribromophenol	118-79-6	0.1	%	**87.8**	**107**	**80.0**	**79.7**	**82.4**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH7 (0.6-0.7)	BH8 (0-0.1)	BH8 (0.3-0.4)	BH8 (1.4-1.5)	BH9 (0.2-0.3)
				Client sampling date / time: 27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00
				EM1100885-023	EM1100885-025	EM1100885-026	EM1100885-027	EM1100885-028
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**93.6**	**91.3**	**89.7**	**92.0**	**92.6**
Anthracene-d10	1719-06-8	0.1	%	**89.2**	**89.2**	**84.4**	**82.0**	**85.6**
4-Terphenyl-d14	1718-51-0	0.1	%	**87.3**	**89.5**	**82.0**	**90.6**	**84.8**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**102**	**108**	**110**	**95.4**	**116**
Toluene-D8	2037-26-5	0.1	%	**102**	**104**	**110**	**98.8**	**114**
4-Bromofluorobenzene	460-00-4	0.1	%	**105**	**108**	**116**	**102**	**116**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	BH9 (0.9-1.0)	BH9 (1.4-1.5)	BH13 (0-0.1)	BH13 (0.3-0.4)	BH14 (0.05-0.15)
				Client sampling date / time	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00
					EM1100885-029	EM1100885-030	EM1100885-031	EM1100885-032	EM1100885-033
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**11.3**	**9.1**	**7.6**	**9.4**	**4.7**
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)									
Sulfate as SO4 2-	14808-79-8	50	mg/kg		----	----	----	<50	<50
ED040T : Total Sulfate by ICPAES									
Sulfate as SO4 2-	14808-79-8	100	mg/kg		----	----	----	<100	**530**
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%		----	----	----	<0.01	**0.10**
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**11**	**10**	<5	<5	**7**
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**19**	**7**	**2**	**17**	**16**
Copper	7440-50-8	5	mg/kg		**6**	<5	**6**	**9**	**22**
Lead	7439-92-1	5	mg/kg		**8**	<5	**10**	**15**	**126**
Nickel	7440-02-0	2	mg/kg		**5**	**4**	**3**	**13**	**14**
Zinc	7440-66-6	5	mg/kg		**44**	**46**	**16**	**30**	**58**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	**0.2**
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		**1**	----	----	**1**	----
EK085M: Sulfide as S2-									
Sulfide as S	----	0.01	%		----	----	----	<0.01	**0.08**
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	**1.2**	<0.5	**2.0**
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	**1.4**	<0.5	**6.1**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH9 (0.9-1.0)	BH9 (1.4-1.5)	BH13 (0-0.1)	BH13 (0.3-0.4)	BH14 (0.05-0.15)
				Client sampling date / time: 27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00
				EM1100885-029	EM1100885-030	EM1100885-031	EM1100885-032	EM1100885-033
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	**0.6**
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	**0.9**	<0.5	**2.3**
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	**5.7**	**1.5**	**28.6**
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	**1.6**	**0.5**	**8.6**
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	**7.0**	**3.1**	**40.4**
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	**6.2**	**2.9**	**38.1**
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	**3.1**	**1.3**	**19.3**
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	**2.5**	**1.1**	**15.8**
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	**3.5**	**1.4**	**22.1**
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	**1.5**	**0.7**	**7.2**
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	**3.1**	**1.2**	**17.8**
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	**1.5**	**0.7**	**9.1**
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	**3.3**
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	**1.8**	**0.8**	**11.0**
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	**120**	<100	**590**
C29 - C36 Fraction	----	100	mg/kg	<100	<100	**110**	<100	**480**
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	<50	<50	**230**	<50	**1070**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	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	**220**	**110**	**1000**
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	**300**
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
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**82.6**	**81.2**	**77.6**	**78.3**	**88.3**
2-Chlorophenol-D4	93951-73-6	0.1	%	**93.2**	**92.1**	**87.4**	**88.5**	**101**
2.4.6-Tribromophenol	118-79-6	0.1	%	**83.1**	**74.8**	**77.4**	**77.2**	**90.8**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**93.6**	**91.4**	**89.3**	**88.2**	**102**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH9 (0.9-1.0)	BH9 (1.4-1.5)	BH13 (0-0.1)	BH13 (0.3-0.4)	BH14 (0.05-0.15)
				Client sampling date / time: 27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00	27-JAN-2011 15:00
				EM1100885-029	EM1100885-030	EM1100885-031	EM1100885-032	EM1100885-033
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.1	%	**81.4**	**80.6**	**82.9**	**86.4**	**94.2**
4-Terphenyl-d14	1718-51-0	0.1	%	**91.1**	**90.4**	**80.6**	**82.8**	**95.6**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**116**	**102**	**101**	**106**	**108**
Toluene-D8	2037-26-5	0.1	%	**122**	**107**	**102**	**103**	**103**
4-Bromofluorobenzene	460-00-4	0.1	%	**124**	**110**	**107**	**109**	**107**

Analytical Results

Sub-Matrix: **SOIL**

			Client sample ID	**DUP1**	----	----	----	----
			Client sampling date / time	27-JAN-2011 15:00	----	----	----	----
Compound	*CAS Number*	*LOR*	*Unit*	**EM1100885-034**	**----**	**----**	**----**	**----**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**98.9**	----	----	----	----
Toluene-D8	2037-26-5	0.1	%	**97.3**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	**100**	----	----	----	----

Analytical Results

Sub-Matrix: **WATER**

Compound	CAS Number	LOR	Unit	Client sample ID: Trip 4	----	----	----	----
				Client sampling date / time: 27-JAN-2011 15:00	----	----	----	----
				EM1100885-035	**----**	**----**	**----**	**----**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	20	µg/L	<20	----	----	----	----
EP080: BTEX								
Benzene	71-43-2	1	µg/L	<1	----	----	----	----
Toluene	108-88-3	2	µg/L	<2	----	----	----	----
Ethylbenzene	100-41-4	2	µg/L	<2	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	----	----	----	----
ortho-Xylene	95-47-6	2	µg/L	<2	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**90.8**	----	----	----	----
Toluene-D8	2037-26-5	0.1	%	**87.4**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	**79.0**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	48.5	123.5
2-Chlorophenol-D4	93951-73-6	51.8	129.7
2.4.6-Tribromophenol	118-79-6	26.8	126.6
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	57.9	125.2
Anthracene-d10	1719-06-8	62.6	135.5
4-Terphenyl-d14	1718-51-0	63.7	135.2
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	59.0	126.2
Toluene-D8	2037-26-5	59.5	128.6
4-Bromofluorobenzene	460-00-4	56.4	129.9

Sub-Matrix: **WATER**

Compound	CAS Number	Recovery Limits (%) Low	High
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	77.5	124.5
Toluene-D8	2037-26-5	77.6	122.2
4-Bromofluorobenzene	460-00-4	70.8	124.9

CHAIN OF CUSTODY

ALS Laboratory: **please tick →**

☐ Sydney: 277 Woodpark Rd, Smithfield NSW 2176 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: Environmental Earth Sciences
OFFICE: P.O.BOX 2253, FOOTSCRAY , VIC, 3011
PROJECT: ALBERT PARK GAS WORKS
ORDER NUMBER: 210074
PROJECT MANAGER: DAVID JAMES — **CONTACT PH:** 0437 033 796
SAMPLER: JI,JF — **SAMPLER MOBILE:** 0437 033 796
COC emailed to ALS? (YES / NO) — **EDD FORMAT (or default):** ENMRG & ESDAT
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.: ME/015/11

COC SEQUENCE NUMBER (Circle)
COC: 1 2 3 4 5 7
OF: 1 2 3 4 5 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: 15.2, 17.4°c
Other comment:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
	RU		
DATE/TIME:	DATE/TIME: 28/1/11 3.15pm	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		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).					Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	S-27 PACKAGE - 8 metals, TPH/BTEX/PAH/Phenols	Total Cyanide - EK026G	Sulphate - NEPM - ED040N	Sulphide - EK085 (Leco S to ALS Brisbane)	Ammonia as N	
1	BH1 (0-0.1)	27/01/2011	Soil		1	1					
2	BH1 (0.3-0.4)	27/01/2011	Soil		1	1	1				
3	BH1 (1-1.1)	27/01/2011	Soil		1	1					
4	BH1 (1.6-1.7)	27/01/2011	Soil		1						HOLD
5	BH2 (0-0.1)	27/01/2011	Soil		1	1					
6	BH2 (0.2-0.3)	27/01/2011	Soil		1	1	1	1	1		
7	BH2 (0.9-1)	27/01/2011	Soil		1	1		1	1		
8	BH2 (1.2-1.3)	27/01/2011	Soil		1						HOLD
9	BH3 (0-0.1)	27/01/2011	Soil		1	1					
10	BH3 (0.2-0.3)	27/01/2011	Soil		1	1	1				
11	BH3 (0.6-0.7)	27/01/2011	Soil		1	1	1	1	1		
12	BH4 (0-0.1)	27/01/2011	Soil		1	1					
13	BH4 (0.2-0.3)	27/01/2011	Soil		1	1	1				
14	BH4 (0.6-0.7)	27/01/2011	Soil		1	1		1	1	1	
15	BH5 (0-0.1)	27/01/2011	Soil		1	1		1	1		
16	BH5 (0.2-0.3)	27/01/2011	Soil		1	1	1	1	1		
17	BH5 (0.6-0.7)	27/01/2011	Soil		1	1	1	1	1	1	
18	BH6 (0-0.1)	27/01/2011	Soil		1	1					
19	BH6 (0.3-0.4)	27/01/2011	Soil		1	1	1				
20	BH6 (1.7-1.8)	27/01/2011	Soil		1	1	1				
21	BH7 (0-0.1)	27/01/2011	Soil		1	1					
22	BH7 (0.3-0.4)	27/01/2011	Soil		1	1	1	1	1		
23	BH7 (0.6-0.7)	27/01/2011	Soil		1	1	1	1	1	1	
24	BH7 (1.4-1.5)	27/01/2011	Soil		1						HOLD
25	BH8 (0-0.1)	27/01/2011	Soil		1	1					
26	BH8 (0.3-0.4)	27/01/2011	Soil		1	1	1				
27	BH8 (1.4-1.5)	27/01/2011	Soil		1	1		1	1	1	
28	BH9 (0.2-0.3)	27/01/2011	Soil		1	1					
29	BH9 (0.9-1.0)	27/01/2011	Soil		1	1	1				
30	BH9 (1.4-1.5)	27/01/2011	Soil		1	1					
31	BH13 (0-0.1)	27/01/2011	Soil		1	1					
32	BH13 (0.3-0.4)	27/01/2011	Soil		1	1	1	1	1		
33	BH14 (0.05-0.15)	27/01/2011	Soil		1	1		1	1		
34	DUP1	27/01/2011	Soil		1	1					HOLD
				TOTAL	34	31	14	12	12		

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.

Analysis rec'd 28/1/11 8:30 Peter

URGENT

Environmental Division
Melbourne
Work Order
EM1100885

Telephone : + 61-3-8549 9600

SAMPLE RECEIVED WITHOUT COC

CLIENT: Envi Earth Sdn

DATE RECEIVED: 28/1/11 @ 3.15

PROJECT: 210074

CONTACT:

MATRIX (SOIL/WATER): Soil

APPROX NO. SAMPLES: 50

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order : **EM1100885**

Client	: **ENVIRONMENTAL EARTH SCIENCES**	Laboratory	: Environmental Division Melbourne
Contact	: MR DAVID JAMES	Contact	: Carol Walsh
Address	: P.O.BOX 2253 FOOTSCRAY VIC, AUSTRALIA 3011	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: djames@eesi.biz	E-mail	: carol.walsh@alsenviro.com
Telephone	: +61 96871666	Telephone	: +61-3-8549 9608
Facsimile	: +61 03 96871844	Facsimile	: +61-3-8549 9601
Project	: ALBERT PARK GAS WORKS	Page	: 1 of 3
Order number	: 210074		
C-O-C number	: ----	Quote number	: EM2011ENVEAR0210 (ME/015/11)
Site	: ----		
Sampler	: JI, JF	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 28-JAN-2011	Issue Date	: 01-FEB-2011 13:31
Client Requested Due Date	: 16-FEB-2011	Scheduled Reporting Date	: **16-FEB-2011**

Delivery Details

Mode of Delivery	: Carrier	Temperature	: 15.2-17.4 - Ice present
No. of coolers/boxes	: 1	No. of samples received	: 35
Security Seal	: Intact.	No. of samples analysed	: 31

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Requested Deliverables
- **Samples received in appropriately pretreated and preserved containers.**
- **Sample(s) have been received within recommended holding times**
- **Please direct any queries related to sample condition / numbering / breakages to Peter Ravlic.**
- **Analytical work for this work order will be conducted at ALS Melbourne and Brisbane.**
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.

Sample Container(s)/Preservation Non-Compliances

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

- **No sample container / preservation non-compliance exist.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process neccessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
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.

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	(On Hold) SOIL No analysis requested	SOIL - ED040N Calcium Phosphate Extractable Sulfate	SOIL - EK026G (Solids) Total Cyanide By Discrete Analyser	SOIL - EK055 (solids) Ammonia as N	SOIL - EK085 Sulfide as S	SOIL - S-27 TPH/BTEX/PAH/Phenols/8Metals
EM1100885-001	27-JAN-2011 15:00	BH1 (0-0.1)						✓
EM1100885-002	27-JAN-2011 15:00	BH1 (0.3-0.4)			✓			✓
EM1100885-003	27-JAN-2011 15:00	BH1 (1-1.1)						✓
EM1100885-004	27-JAN-2011 15:00	BH1 (1.6-1.7)	✓					
EM1100885-005	27-JAN-2011 15:00	BH2 (0-0.1)						✓
EM1100885-006	27-JAN-2011 15:00	BH2 (0.2-0.3)		✓	✓		✓	✓
EM1100885-007	27-JAN-2011 15:00	BH2 (0.9-1)		✓			✓	✓
EM1100885-008	27-JAN-2011 15:00	BH2 (1.2-1.3)	✓					
EM1100885-009	27-JAN-2011 15:00	BH3 (0-0.1)						✓
EM1100885-010	27-JAN-2011 15:00	BH3 (0.2-0.3)			✓			✓
EM1100885-011	27-JAN-2011 15:00	BH3 (0.6-0.7)		✓	✓		✓	✓
EM1100885-012	27-JAN-2011 15:00	BH4 (0-0.1)						✓
EM1100885-013	27-JAN-2011 15:00	BH4 (0.2-0.3)			✓			✓
EM1100885-014	27-JAN-2011 15:00	BH4 (0.6-0.7)		✓		✓	✓	✓
EM1100885-015	27-JAN-2011 15:00	BH5 (0-0.1)		✓			✓	✓
EM1100885-016	27-JAN-2011 15:00	BH5 (0.2-0.3)		✓	✓		✓	✓
EM1100885-017	27-JAN-2011 15:00	BH5 (0.6-0.7)		✓	✓	✓	✓	✓
EM1100885-018	27-JAN-2011 15:00	BH6 (0-0.1)						✓
EM1100885-019	27-JAN-2011 15:00	BH6 (0.3-0.4)			✓			✓
EM1100885-020	27-JAN-2011 15:00	BH6 (1.7-1.8)			✓			✓
EM1100885-021	27-JAN-2011 15:00	BH7 (0-0.1)						✓
EM1100885-022	27-JAN-2011 15:00	BH7 (0.3-0.4)		✓	✓		✓	✓
EM1100885-023	27-JAN-2011 15:00	BH7 (0.6-0.7)		✓	✓	✓	✓	✓
EM1100885-024	27-JAN-2011 15:00	BH7 (1.4-1.5)	✓					
EM1100885-025	27-JAN-2011 15:00	BH8 (0-0.1)						✓
EM1100885-026	27-JAN-2011 15:00	BH8 (0.3-0.4)			✓			✓
EM1100885-027	27-JAN-2011 15:00	BH8 (1.4-1.5)		✓		✓	✓	✓
EM1100885-028	27-JAN-2011 15:00	BH9 (0.2-0.3)						✓
EM1100885-029	27-JAN-2011 15:00	BH9 (0.9-1.0)			✓			✓
EM1100885-030	27-JAN-2011 15:00	BH9 (1.4-1.5)						✓
EM1100885-031	27-JAN-2011 15:00	BH13 (0-0.1)						✓
EM1100885-032	27-JAN-2011 15:00	BH13 (0.3-0.4)		✓	✓		✓	✓
EM1100885-033	27-JAN-2011 15:00	BH14 (0.05-0.15)		✓			✓	✓
EM1100885-034	27-JAN-2011 15:00	DUP1						✓

Matrix: **WATER**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	(On Hold) WATER No analysis requested
EM1100885-035	27-JAN-2011 15:00	Trip 4	✓

Requested Deliverables

ALL INVOICES MELB ADDRESS

- A4 - AU Tax Invoice (INV)	Email	eesvic@eesi.biz

MR DAVID JAMES

- *AU Certificate of Analysis - NATA (COA)	Email	djames@eesi.biz
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	djames@eesi.biz
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	djames@eesi.biz
- A4 - AU Sample Receipt Notification - Environmental (SRN)	Email	djames@eesi.biz
- Chain of Custody (CoC) (COC)	Email	djames@eesi.biz
- EDI Format - ENMRG (ENMRG)	Email	djames@eesi.biz
- EDI Format - ESDAT (ESDAT)	Email	djames@eesi.biz

MS CAROL WALSH

- Chain of Custody (CoC) (COC)	Email	carol.walsh@alsenviro.com

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **EM1100937**	Page	: 1 of 9
Amendment	: **1**		
Client	: **ENVIRONMENTAL EARTH SCIENCES**	Laboratory	: Environmental Division Melbourne
Contact	: MR DAVID JAMES	Contact	: Carol Walsh
Address	: P.O.BOX 2253 FOOTSCRAY VIC, AUSTRALIA 3011	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: djames@eesi.biz	E-mail	: carol.walsh@alsenviro.com
Telephone	: +61 96871666	Telephone	: +61-3-8549 9608
Facsimile	: +61 03 96871844	Facsimile	: +61-3-8549 9601
Project	: ALBERT PARK GAS WORKS	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: 210074		
C-O-C number	: ----	Date Samples Received	: 01-FEB-2011
Sampler	: JI	Issue Date	: 08-NOV-2011
Site	: ----		
		No. of samples received	: 12
Quote number	: ME/015/11 V3	No. of samples analysed	: 8

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

This document is issued in accordance with NATA accreditation requirements.

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*
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics
Eric Chau	Metals Team Leader	Melbourne Inorganics
Kim McCabe	Senior Inorganic Chemist	Stafford Minerals - AY
Nancy Wang	Senior Semivolatile Instrument Chemist	Melbourne Inorganics
Nancy Wang	Senior Semivolatile Instrument Chemist	Melbourne Organics
Nikki Stepniewski	Senior Inorganic Instrument Chemist	Melbourne Inorganics
Xingbin Lin	Senior Organic Chemist	Melbourne Organics

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 insuffient 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

- **3/11/11 - This report has been amended and re-released to allow the reporting of additional analytical data.**
- **EP075(SIM): Particular samples (EM1100937-004, 010) required dilution prior to analysis due to matrix interferences. LOR values have been adjusted accordingly.**
- **Total Sulphur conducted by ALS Brisbane, NATA Site No. 818.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	BH10 (0.2-0.3)	BH10 (1-1.1)	BH10 (1.6-1.7)	BH11 (0.5-0.6)	BH11 (1.3-1.4)
				Client sampling date / time	28-JAN-2011 15:00	28-JAN-2011 15:00	28-JAN-2011 15:00	28-JAN-2011 15:00	28-JAN-2011 15:00
					EM1100937-001	EM1100937-002	EM1100937-003	EM1100937-004	EM1100937-005
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**7.6**	**12.8**	**13.5**	**4.5**	**1.8**
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)									
Sulfate as SO4 2-	14808-79-8	50	mg/kg		<50	----	----	----	----
ED040T : Total Sulfate by ICPAES									
Sulfate as SO4 2-	14808-79-8	100	mg/kg		**560**	----	----	----	----
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%		**0.01**	----	----	----	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**25**	**13**	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**19**	**12**	**7**	<2	<2
Copper	7440-50-8	5	mg/kg		<5	<5	<5	<5	<5
Lead	7439-92-1	5	mg/kg		**21**	**9**	<5	<5	<5
Nickel	7440-02-0	2	mg/kg		**10**	**6**	**3**	**4**	<2
Zinc	7440-66-6	5	mg/kg		**17**	**7**	<5	<5	<5
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		**45**	----	----	----	----
EK085M: Sulfide as S2-									
Sulfide as S	----	0.01	%		<0.01	----	----	----	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	<0.5	<0.5	**702**	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	<0.5	<0.5	<2.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	<0.5	<0.5	**454**	<0.5
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg		<1.0	<1.0	<1.0	**1090**	<1.0
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	<0.5	<0.5	<2.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	<0.5	<0.5	**507**	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	<0.5	<0.5	<2.5	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	<0.5	<0.5	<2.5	<0.5
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		<0.5	<0.5	<0.5	<2.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	<0.5	<0.5	<2.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<0.5	<0.5	<2.5	<0.5
Pentachlorophenol	87-86-5	2.0	mg/kg		<2.0	<2.0	<2.0	<10.0	<2.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		**2.4**	<0.5	<0.5	**6600**	**0.8**
Acenaphthylene	208-96-8	0.5	mg/kg		**2.9**	<0.5	<0.5	**1170**	<0.5

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	BH10 (0.2-0.3)	BH10 (1-1.1)	BH10 (1.6-1.7)	BH11 (0.5-0.6)	BH11 (1.3-1.4)
				Client sampling date / time	28-JAN-2011 15:00	28-JAN-2011 15:00	28-JAN-2011 15:00	28-JAN-2011 15:00	28-JAN-2011 15:00
					EM1100937-001	EM1100937-002	EM1100937-003	EM1100937-004	EM1100937-005
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	**136**	<0.5
Fluorene	86-73-7	0.5	mg/kg		**1.5**	<0.5	<0.5	**1400**	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		**16.3**	**1.7**	<0.5	**5370**	**0.6**
Anthracene	120-12-7	0.5	mg/kg		**4.5**	**0.6**	<0.5	**1340**	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		**19.9**	**3.7**	**1.4**	**3690**	<0.5
Pyrene	129-00-0	0.5	mg/kg		**18.6**	**3.5**	**1.3**	**3250**	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		**9.9**	**1.8**	**0.6**	**1200**	<0.5
Chrysene	218-01-9	0.5	mg/kg		**7.8**	**1.4**	**0.5**	**924**	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		**11.4**	**1.9**	**0.7**	**1160**	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		**4.2**	**0.8**	<0.5	**372**	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		**9.2**	**1.7**	**0.6**	**1040**	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		**3.9**	**0.8**	<0.5	**396**	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		**1.3**	<0.5	<0.5	**78.0**	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		**4.3**	**1.0**	<0.5	**471**	<0.5
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	**68**	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	**5410**	<50
C15 - C28 Fraction	----	100	mg/kg		**320**	<100	<100	**18000**	<100
C29 - C36 Fraction	----	100	mg/kg		**240**	<100	<100	**7280**	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		**560**	<50	<50	**30700**	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	**7320**	<50
>C16 - C34 Fraction	----	100	mg/kg		**540**	**120**	<100	**24100**	<100
>C34 - C40 Fraction	----	100	mg/kg		**170**	<100	<100	**3770**	<100
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	**14.0**	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	**10.7**	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	**1.5**	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	**17.2**	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	**7.5**	<0.5
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**88.9**	**85.8**	**79.3**	**57.4**	**76.2**
2-Chlorophenol-D4	93951-73-6	0.1	%		**89.5**	**96.3**	**89.6**	**63.0**	**87.0**
2.4.6-Tribromophenol	118-79-6	0.1	%		**86.1**	**81.8**	**75.3**	**46.0**	**73.7**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**94.8**	**95.9**	**88.3**	**81.8**	**86.5**
Anthracene-d10	1719-06-8	0.1	%		**90.0**	**92.7**	**85.2**	**85.0**	**78.7**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH10 (0.2-0.3)	BH10 (1-1.1)	BH10 (1.6-1.7)	BH11 (0.5-0.6)	BH11 (1.3-1.4)
				Client sampling date / time: 28-JAN-2011 15:00	28-JAN-2011 15:00	28-JAN-2011 15:00	28-JAN-2011 15:00	28-JAN-2011 15:00
				EM1100937-001	EM1100937-002	EM1100937-003	EM1100937-004	EM1100937-005
EP075(SIM)T: PAH Surrogates - Continued								
4-Terphenyl-d14	1718-51-0	0.1	%	**86.4**	**89.1**	**84.8**	**117**	**82.9**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**96.1**	**107**	**90.8**	**99.0**	**77.5**
Toluene-D8	2037-26-5	0.1	%	**98.8**	**85.6**	**71.8**	**76.2**	**83.9**
4-Bromofluorobenzene	460-00-4	0.1	%	**76.6**	**86.4**	**78.9**	**84.1**	**85.4**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	BH15 (0-0.1)	BH15 (0.4-0.5)	BH15 (0.8-0.9)	----	----
				Client sampling date / time	28-JAN-2011 15:00	28-JAN-2011 15:00	28-JAN-2011 15:00	----	----
					EM1100937-008	EM1100937-009	EM1100937-010	----	----
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**4.4**	**10.8**	**14.8**	----	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**6**	<5	**25**	----	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	----	----
Chromium	7440-47-3	2	mg/kg		**2**	**4**	**6**	----	----
Copper	7440-50-8	5	mg/kg		<5	**8**	<5	----	----
Lead	7439-92-1	5	mg/kg		<5	**40**	**12**	----	----
Nickel	7440-02-0	2	mg/kg		<2	**6**	**5**	----	----
Zinc	7440-66-6	5	mg/kg		**6**	**42**	**30**	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	**0.2**	<0.1	----	----
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		----	**8**	----	----	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	<0.5	**7.4**	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	<0.5	<2.5	----	----
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	<0.5	**6.2**	----	----
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg		<1.0	<1.0	**12.3**	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	<0.5	<2.5	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	<0.5	**6.6**	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	<0.5	<2.5	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	<0.5	<2.5	----	----
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		<0.5	<0.5	<2.5	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	<0.5	<2.5	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<0.5	<2.5	----	----
Pentachlorophenol	87-86-5	2.0	mg/kg		<2.0	<2.0	<10.0	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	**1.0**	**527**	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	**2.8**	**214**	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	**61.9**	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	**1.0**	**292**	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	**10.9**	**1580**	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	**3.8**	**513**	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	**27.6**	**1180**	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	**27.8**	**1130**	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	**16.6**	**524**	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	**13.1**	**404**	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: BH15 (0-0.1)	BH15 (0.4-0.5)	BH15 (0.8-0.9)	----	----
				Client sampling date / time: 28-JAN-2011 15:00	28-JAN-2011 15:00	28-JAN-2011 15:00	----	----
				EM1100937-008	EM1100937-009	EM1100937-010	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	**19.6**	**479**	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	**6.6**	**170**	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	**16.9**	**416**	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	**8.2**	**101**	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	**2.8**	**33.9**	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	**9.8**	**103**	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	**21**	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	**1050**	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	**440**	**10600**	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	**410**	**4730**	----	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	<50	**850**	**16400**	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	**2030**	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	**790**	**14700**	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	**250**	**2420**	----	----
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	**0.6**	----	----
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	**9.1**	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	**4.9**	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**76.8**	**74.5**	**92.0**	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	**87.2**	**84.5**	**94.0**	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%	**76.3**	**75.8**	**72.0**	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**86.7**	**85.4**	**104**	----	----
Anthracene-d10	1719-06-8	0.1	%	**80.0**	**78.1**	**108**	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	**85.9**	**75.9**	**112**	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**94.4**	**92.9**	**88.7**	----	----
Toluene-D8	2037-26-5	0.1	%	**79.0**	**80.5**	**82.1**	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	**77.0**	**89.1**	**84.6**	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	48.5	123.5
2-Chlorophenol-D4	93951-73-6	51.8	129.7
2.4.6-Tribromophenol	118-79-6	26.8	126.6
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	57.9	125.2
Anthracene-d10	1719-06-8	62.6	135.5
4-Terphenyl-d14	1718-51-0	63.7	135.2
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	59.0	126.2
Toluene-D8	2037-26-5	59.5	128.6
4-Bromofluorobenzene	460-00-4	56.4	129.9

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ **Sydney**: 277 Woodpark Rd. Smithfield NSW 2176 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: Environmental Earth Sciences	**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):**	**FOR LABORATORY USE ONLY (Circle)** Custody Seal Intact? Yes No (N/A)
OFFICE: P.O.BOX 2253, FOOTSCRAY , VIC, 3011		Free Ice / Frozen Ice Bricks present upon receipt? Yes (No) N/A
PROJECT: ALBERT PARK GAS WORKS	**ALS QUOTE NO.: ME/015/11**	**COC SEQUENCE NUMBER (Circle)** COC: 1 2 3 4 5 7 OF: 1 2 3 4 5 7
ORDER NUMBER: 210074		Random Sample Temperature on Receipt: 10-12 °C
PROJECT MANAGER: DAVID JAMES	**CONTACT PH: 0437 033 796**	Observations/comments:
SAMPLER: JI	**SAMPLER MOBILE: 0437 033 796**	
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default): ENMRG & ESDAT**	
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):		

RELINQUISHED BY:	**RECEIVED BY:**	**RELINQUISHED BY:**	**RECEIVED BY:**
DATE/TIME:	DATE/TIME: 1/2/11 5-23PM	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		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).							Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	S-27 PACKAGE - 8 metals, TPH/BTEX/PAH/Phenols	Total Cyanide - EK026G	Sulphate - NEPM - ED040N	Sulphide - EK085 (Leco S to ALS Brisbane)	Ammonia as N			
1	BH10 (0:2-0.3)	28/01/2011	Soil		1	1	1	1	1				
2	BH10 (1-1.1)	28/01/2011	Soil		1	1							
3	BH10 (1.6-1.7)	28/01/2011	Soil		1	1							
4	BH11 (0.5-0.6)	28/01/2011	Soil		1	1							
5	BH11 (1.3-1.4)	28/01/2011	Soil		1	1							
6	BH11 (2.3-2.4)	28/01/2011	Soil		1								HOLD
7	BH11 (2.5-2.6)	28/01/2011	Soil		1								HOLD
8	BH15 (0-0.1)	28/01/2011	Soil		1	1							
9	BH15 (0.4-0.5)	28/01/2011	Soil		1	1	1						
10	BH15 (0.8-0.9)	28/01/2011	Soil		1	1							
11	BH15 (1.2-1.3)	28/01/2011	Soil		1								HOLD
12	BH15 (2.4-2.5)	28/01/2011	Soil		1								HOLD
				TOTAL	12	8	2	1	1				

Environmental Division Melbourne Work Order **EM1100937**

Telephone : +61-3-8549 9600

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.

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order : **EM1100937**

Client	: **ENVIRONMENTAL EARTH SCIENCES**	Laboratory	: Environmental Division Melbourne
Contact	: MR DAVID JAMES	Contact	: Carol Walsh
Address	: P.O.BOX 2253 FOOTSCRAY VIC, AUSTRALIA 3011	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: djames@eesi.biz	E-mail	: carol.walsh@alsenviro.com
Telephone	: +61 96871666	Telephone	: +61-3-8549 9608
Facsimile	: +61 03 96871844	Facsimile	: +61-3-8549 9601
Project	: ALBERT PARK GAS WORKS	Page	: 1 of 2
Order number	: 210074		
C-O-C number	: ----	Quote number	: EM2011ENVEAR0210 (ME/015/11)
Site	: ----		
Sampler	: JI	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 01-FEB-2011	Issue Date	: 02-FEB-2011 17:50
Client Requested Due Date	: 17-FEB-2011	Scheduled Reporting Date	: **17-FEB-2011**

Delivery Details

Mode of Delivery	: Carrier	Temperature	: 10-12 - Ice present
No. of coolers/boxes	: 1	No. of samples received	: 12
Security Seal	: Intact.	No. of samples analysed	: 8

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Requested Deliverables
- **Samples received in appropriately pretreated and preserved containers.**
- **Sample(s) have been received within recommended holding times**
- **Please direct any queries related to sample condition / numbering / breakages to Peter Ravlic.**
- **Analytical work for this work order will be conducted at ALS Melbourne and Brisbane.**
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.

Sample Container(s)/Preservation Non-Compliances

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

- **No sample container / preservation non-compliance exist.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process neccessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
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.

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	(On Hold) SOIL No analysis requested	SOIL - ED040N Calcium Phosphate Extractable Sulfate	SOIL - EK026G (Solids) Total Cyanide By Discrete Analyser	SOIL - EK085 Sulfide as S	SOIL - S-27 TPH/BTEX/PAH/Phenols/8Metals
EM1100937-001	28-JAN-2011 15:00	BH10 (0.2-0.3)		✓	✓	✓	✓
EM1100937-002	28-JAN-2011 15:00	BH10 (1-1.1)					✓
EM1100937-003	28-JAN-2011 15:00	BH10 (1.6-1.7)					✓
EM1100937-004	28-JAN-2011 15:00	BH11 (0.5-0.6)					✓
EM1100937-005	28-JAN-2011 15:00	BH11 (1.3-1.4)					✓
EM1100937-006	28-JAN-2011 15:00	BH11 (2.3-2.4)	✓				
EM1100937-007	28-JAN-2011 15:00	BH11 (2.5-2.6)	✓				
EM1100937-008	28-JAN-2011 15:00	BH15 (0-0.1)					✓
EM1100937-009	28-JAN-2011 15:00	BH15 (0.4-0.5)			✓		✓
EM1100937-010	28-JAN-2011 15:00	BH15 (0.8-0.9)					✓
EM1100937-011	28-JAN-2011 15:00	BH15 (1.2-1.3)	✓				
EM1100937-012	28-JAN-2011 15:00	BH15 (2.4-2.5)	✓				

Requested Deliverables

ALL INVOICES MELB ADDRESS

- A4 - AU Tax Invoice (INV)	Email	eesvic@eesi.biz

MR DAVID JAMES

- *AU Certificate of Analysis - NATA (COA)	Email	djames@eesi.biz
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	djames@eesi.biz
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	djames@eesi.biz
- A4 - AU Sample Receipt Notification - Environmental (SRN)	Email	djames@eesi.biz
- Chain of Custody (CoC) (COC)	Email	djames@eesi.biz
- EDI Format - ENMRG (ENMRG)	Email	djames@eesi.biz
- EDI Format - ESDAT (ESDAT)	Email	djames@eesi.biz

MS CAROL WALSH

- Chain of Custody (CoC) (COC)	Email	carol.walsh@alsenviro.com

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **EM1101106**	Page	: 1 of 12
Client	: **ENVIRONMENTAL EARTH SCIENCES**	Laboratory	: Environmental Division Melbourne
Contact	: MR DAVID JAMES	Contact	: Carol Walsh
Address	: P.O.BOX 2253 FOOTSCRAY VIC, AUSTRALIA 3011	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: djames@eesi.biz	E-mail	: carol.walsh@alsenviro.com
Telephone	: +61 96871666	Telephone	: +61-3-8549 9608
Facsimile	: +61 03 96871844	Facsimile	: +61-3-8549 9601
Project	: ALBERT PARK GAS WORKS REBATCH OF EM1100639 EM1100640 & EM1100641	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: 210074		
C-O-C number	: ----	Date Samples Received	: 04-FEB-2011
Sampler	: JI	Issue Date	: 15-FEB-2011
Site	: ----		
		No. of samples received	: 23
Quote number	: ME/015/11	No. of samples analysed	: 22

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

This document is issued in accordance with NATA accreditation requirements.

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*
Eric Chau	Senior Inorganic Instrument Chemist	Inorganics
Nancy Wang	Senior Semivolatile Instrument Chemist	Organics

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 insuffient 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

- **EP070: Poor matrix spike recovery for sample EM1101106-003 due to matrix effects.**
- **EP075(SIM): EM1101106_14 Particular samples required dilution due to the presence of high level contaminants. LOR values have been adjusted accordingly.**
- **Samples were requested outside of recommended ALS holding times for the extraction and analysis of (EP070). Results should be scrutinised accordingly.**

Analytical Results

Sub-Matrix: **ASLP LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: TP1 (0.3-0.35)	TP6 (0.25-0.3)	TP6 (1.75-1.8)	TP7 (0-0.1)	TP7 (0.3-0.4)
				Client sampling date / time: 09-FEB-2011 12:41	09-FEB-2011 12:41	09-FEB-2011 12:41	09-FEB-2011 12:41	09-FEB-2011 12:41
				EM1101106-001	EM1101106-003	EM1101106-004	EM1101106-005	EM1101106-006
EG005C: Leachable Metals by ICPAES								
Nickel	7440-02-0	0.1	mg/L	**0.2**	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	----	**2.0**	**2.4**	<1.0	**1.2**
Acenaphthylene	208-96-8	1.0	µg/L	----	<1.0	**6.1**	<1.0	<1.0
Acenaphthene	83-32-9	1.0	µg/L	----	<1.0	**1.9**	<1.0	<1.0
Fluorene	86-73-7	1.0	µg/L	----	<1.0	**8.3**	<1.0	<1.0
Phenanthrene	85-01-8	1.0	µg/L	----	**1.4**	**18.2**	<1.0	**1.4**
Anthracene	120-12-7	1.0	µg/L	----	<1.0	**3.5**	<1.0	<1.0
Fluoranthene	206-44-0	1.0	µg/L	----	<1.0	**5.4**	**1.1**	<1.0
Pyrene	129-00-0	1.0	µg/L	----	<1.0	**4.1**	**1.8**	<1.0
Benz(a)anthracene	56-55-3	1.0	µg/L	----	<1.0	**1.3**	<1.0	<1.0
Chrysene	218-01-9	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Benzo(b)fluoranthene	205-99-2	1.0	µg/L	----	<1.0	**1.3**	<1.0	<1.0
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Benzo(a)pyrene	50-32-8	0.5	µg/L	----	<0.5	**1.0**	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	----	**46.0**	**19.7**	**23.2**	**25.0**
2-Chlorophenol-D4	93951-73-6	0.1	%	----	**55.5**	**29.9**	**50.4**	**40.9**
2.4.6-Tribromophenol	118-79-6	0.1	%	----	**79.5**	**76.0**	**76.9**	**50.3**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	----	**70.5**	**51.1**	**48.3**	**42.6**
Anthracene-d10	1719-06-8	0.1	%	----	**73.3**	**61.4**	**71.3**	**65.3**
4-Terphenyl-d14	1718-51-0	0.1	%	----	**67.6**	**54.9**	**68.8**	**49.4**

Analytical Results

Sub-Matrix: **ASLP LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: TP9 (0.7-0.8)	TP10 (1-1.1)	TP11 (1.2-1.3)	TP12 (0.6-0.7)	TP13 (0.8-0.85)
				Client sampling date / time: 09-FEB-2011 12:41	09-FEB-2011 12:41	09-FEB-2011 12:41	09-FEB-2011 12:41	09-FEB-2011 12:41
				EM1101106-007	EM1101106-008	EM1101106-009	EM1101106-011	EM1101106-013
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	**1.2**	**10.3**	**1.4**	**1.6**	**7.8**
Acenaphthylene	208-96-8	1.0	µg/L	**1.5**	**5.9**	<1.0	<1.0	**11.4**
Acenaphthene	83-32-9	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	**1.5**
Fluorene	86-73-7	1.0	µg/L	<1.0	**1.8**	**1.5**	<1.0	**6.4**
Phenanthrene	85-01-8	1.0	µg/L	**3.6**	**12.3**	**6.8**	**2.7**	**41.2**
Anthracene	120-12-7	1.0	µg/L	<1.0	**2.3**	**1.5**	<1.0	**13.5**
Fluoranthene	206-44-0	1.0	µg/L	**3.6**	**10.4**	**4.0**	**1.9**	**47.6**
Pyrene	129-00-0	1.0	µg/L	**2.7**	**8.7**	**3.4**	**2.1**	**38.0**
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	**5.0**	**1.3**	<1.0	**22.2**
Chrysene	218-01-9	1.0	µg/L	<1.0	**3.2**	<1.0	<1.0	**17.3**
Benzo(b)fluoranthene	205-99-2	1.0	µg/L	<1.0	**5.2**	**1.2**	<1.0	**18.4**
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	**1.5**	<1.0	<1.0	**9.2**
Benzo(a)pyrene	50-32-8	0.5	µg/L	**0.5**	**3.6**	**0.9**	**0.6**	**17.6**
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	<1.0	**2.1**	<1.0	<1.0	**14.0**
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	**4.3**
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L	<1.0	**2.7**	<1.0	<1.0	**15.3**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**23.4**	**35.4**	**28.7**	**23.2**	**23.7**
2-Chlorophenol-D4	93951-73-6	0.1	%	**49.0**	**61.3**	**58.5**	**44.5**	**45.9**
2.4.6-Tribromophenol	118-79-6	0.1	%	**68.3**	**66.0**	**76.7**	**91.7**	**63.5**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**58.9**	**74.0**	**57.8**	**75.4**	**62.0**
Anthracene-d10	1719-06-8	0.1	%	**70.0**	**48.8**	**71.3**	**88.7**	**68.2**
4-Terphenyl-d14	1718-51-0	0.1	%	**69.2**	**77.3**	**65.3**	**75.6**	**70.3**

Analytical Results

Sub-Matrix: **ASLP LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: TP14 (0.85-0.9)	TP15 (1-1.1)	TP16 (1-1.1)	TP18 (0.7-0.8)	TP22 (0.3-0.4)
				Client sampling date / time: 09-FEB-2011 12:41	09-FEB-2011 12:41	09-FEB-2011 12:41	09-FEB-2011 12:41	09-FEB-2011 12:41
				EM1101106-014	EM1101106-015	EM1101106-016	EM1101106-018	EM1101106-021
EG005C: Leachable Metals by ICPAES								
Arsenic	7440-38-2	0.1	mg/L	----	----	----	----	<0.1
Lead	7439-92-1	0.1	mg/L	----	----	----	**27.1**	----
Zinc	7440-66-6	0.1	mg/L	----	----	----	**1.9**	----
EG035C: Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0010	mg/L	----	----	----	<0.0010	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	**654**	**6.8**	<1.0	----	----
Acenaphthylene	208-96-8	1.0	µg/L	**100**	<1.0	<1.0	----	----
Acenaphthene	83-32-9	1.0	µg/L	**28.4**	<1.0	<1.0	----	----
Fluorene	86-73-7	1.0	µg/L	**76.0**	<1.0	<1.0	----	----
Phenanthrene	85-01-8	1.0	µg/L	**284**	**1.9**	**3.9**	----	----
Anthracene	120-12-7	1.0	µg/L	**65.5**	<1.0	**1.1**	----	----
Fluoranthene	206-44-0	1.0	µg/L	**170**	**2.8**	**3.7**	----	----
Pyrene	129-00-0	1.0	µg/L	**125**	**2.6**	**3.1**	----	----
Benz(a)anthracene	56-55-3	1.0	µg/L	**54.4**	**1.3**	**1.5**	----	----
Chrysene	218-01-9	1.0	µg/L	**37.9**	<1.0	<1.0	----	----
Benzo(b)fluoranthene	205-99-2	1.0	µg/L	**53.2**	**1.4**	**1.5**	----	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	**33.3**	<1.0	<1.0	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L	**51.8**	**1.3**	**1.3**	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	**35.2**	**1.2**	**1.0**	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L	**10.4**	<1.0	<1.0	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L	**36.3**	**1.4**	**1.1**	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	**35.4**	**38.5**	**28.0**	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	**79.6**	**80.6**	**58.5**	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%	**93.1**	**82.8**	**53.8**	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**111**	**55.8**	**86.9**	----	----
Anthracene-d10	1719-06-8	0.1	%	**106**	**82.4**	**86.6**	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	**111**	**72.0**	**73.6**	----	----

Analytical Results

Sub-Matrix: **ASLP LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID	TP24 (1.1-1.2)	TP26 (0.5-0.6)	----	----	----
				Client sampling date / time	09-FEB-2011 12:41	09-FEB-2011 12:41	----	----	----
					EM1101106-022	EM1101106-023	----	----	----
EG005C: Leachable Metals by ICPAES									
Arsenic	7440-38-2	0.1	mg/L		----	<0.1	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	1.0	µg/L		**1.3**	**6.1**	----	----	----
Acenaphthylene	208-96-8	1.0	µg/L		**2.0**	**2.5**	----	----	----
Acenaphthene	83-32-9	1.0	µg/L		<1.0	**1.1**	----	----	----
Fluorene	86-73-7	1.0	µg/L		<1.0	**3.8**	----	----	----
Phenanthrene	85-01-8	1.0	µg/L		**7.9**	**11.0**	----	----	----
Anthracene	120-12-7	1.0	µg/L		**4.5**	**2.5**	----	----	----
Fluoranthene	206-44-0	1.0	µg/L		**12.0**	**6.0**	----	----	----
Pyrene	129-00-0	1.0	µg/L		**7.8**	**4.8**	----	----	----
Benz(a)anthracene	56-55-3	1.0	µg/L		**6.5**	**1.8**	----	----	----
Chrysene	218-01-9	1.0	µg/L		**4.2**	**1.3**	----	----	----
Benzo(b)fluoranthene	205-99-2	1.0	µg/L		**4.6**	**1.6**	----	----	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L		**2.2**	<1.0	----	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L		**3.3**	**1.3**	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L		**4.0**	<1.0	----	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L		**1.4**	<1.0	----	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L		**4.3**	<1.0	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**21.4**	**24.0**	----	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%		**45.3**	**55.6**	----	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%		**72.8**	**83.2**	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**71.2**	**76.2**	----	----	----
Anthracene-d10	1719-06-8	0.1	%		**76.4**	**89.4**	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%		**50.6**	**91.5**	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP1 (0.3-0.35)	TP4 (0.5)	TP6 (0.25-0.3)	TP6 (1.75-1.8)	TP7 (0-0.1)
				Client sampling date / time: 18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00	18-JAN-2011 15:00
				EM1101106-001	EM1101106-002	EM1101106-003	EM1101106-004	EM1101106-005
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	----	1.0	%	----	**11.6**	**8.3**	----	**6.6**
EN60: ASLP Leaching Procedure								
Initial pH	----	0.1	pH Unit	**7.4**	----	**7.1**	**8.7**	**8.0**
After HCl pH	----	0.1	pH Unit	**1.9**	----	**1.9**	**2.0**	**1.9**
Extraction Fluid pH	----	0.1	pH Unit	**5.0**	----	**5.0**	**5.0**	**5.0**
Final pH	----	0.1	pH Unit	**5.6**	----	**4.9**	**5.4**	**5.1**
EP070: Total Petroleum Hydrocarbons - Speciation								
Aliphatic C16-C35	----	100	mg/kg	----	<100	<100	----	<100
Aliphatic > C35	----	100	mg/kg	----	<100	<100	----	<100
Aromatic C16-C35	----	90	mg/kg	----	**690**	**810**	----	**150**
Aromatic > C35	----	100	mg/kg	----	**200**	**200**	----	<100
EP070: Total Petroleum Hydrocarbons - Speciation								
2-Bromonaphthalene	580-13-2	0.1	%	----	**116**	**122**	----	**117**
2-Fluorobiphenyl	321-60-8	0.1	%	----	**99.8**	**111**	----	**92.2**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP7 (0.3-0.4)	TP9 (0.7-0.8)	TP10 (1-1.1)	TP11 (1.2-1.3)	TP12 (0.2-0.3)
				Client sampling date / time: 18-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00
				EM1101106-006	EM1101106-007	EM1101106-008	EM1101106-009	EM1101106-010
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	----	1.0	%	**11.6**	----	----	----	**11.6**
EN60: ASLP Leaching Procedure								
Initial pH	----	0.1	pH Unit	**8.3**	**8.9**	**8.4**	**8.3**	----
After HCl pH	----	0.1	pH Unit	**1.9**	**1.9**	**1.9**	**1.8**	----
Extraction Fluid pH	----	0.1	pH Unit	**5.0**	**5.0**	**5.0**	**5.0**	----
Final pH	----	0.1	pH Unit	**5.3**	**6.4**	**5.3**	**4.9**	----
EP070: Total Petroleum Hydrocarbons - Speciation								
Aliphatic C16-C35	----	100	mg/kg	<100	----	----	----	<100
Aliphatic > C35	----	100	mg/kg	<100	----	----	----	<100
Aromatic C16-C35	----	90	mg/kg	**1140**	----	----	----	**710**
Aromatic > C35	----	100	mg/kg	**400**	----	----	----	**300**
EP070: Total Petroleum Hydrocarbons - Speciation								
2-Bromonaphthalene	580-13-2	0.1	%	**122**	----	----	----	**120**
2-Fluorobiphenyl	321-60-8	0.1	%	**110**	----	----	----	**83.5**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP12 (0.6-0.7)	TP13 (0.3-0.35)	TP13 (0.8-0.85)	TP14 (0.85-0.9)	TP15 (1-1.1)
				Client sampling date / time: 19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00	19-JAN-2011 15:00
				EM1101106-011	EM1101106-012	EM1101106-013	EM1101106-014	EM1101106-015
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	----	1.0	%	----	**12.3**	**16.1**	----	----
EN60: ASLP Leaching Procedure								
Initial pH	----	0.1	pH Unit	**6.0**	----	**8.3**	**6.3**	**6.8**
After HCl pH	----	0.1	pH Unit	**1.9**	----	**1.9**	**1.9**	**1.9**
Extraction Fluid pH	----	0.1	pH Unit	**5.0**	----	**5.0**	**5.0**	**5.0**
Final pH	----	0.1	pH Unit	**5.0**	----	**5.1**	**4.9**	**5.1**
EP070: Total Petroleum Hydrocarbons - Speciation								
Aliphatic C16-C35	----	100	mg/kg	----	<100	<100	----	----
Aliphatic > C35	----	100	mg/kg	----	<100	<100	----	----
Aromatic C16-C35	----	90	mg/kg	----	**360**	**3520**	----	----
Aromatic > C35	----	100	mg/kg	----	**200**	**600**	----	----
EP070: Total Petroleum Hydrocarbons - Speciation								
2-Bromonaphthalene	580-13-2	0.1	%	----	**120**	**109**	----	----
2-Fluorobiphenyl	321-60-8	0.1	%	----	**91.8**	**90.6**	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: TP16 (1-1.1)	TP16 (0.4-0.5)	TP18 (0.7-0.8)	TP19 (0.3-0.4)	TP22 (0.3-0.4)
				Client sampling date / time: 19-JAN-2011 15:00	19-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00	20-JAN-2011 15:00
				EM1101106-016	EM1101106-017	EM1101106-018	EM1101106-019	EM1101106-021
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	----	1.0	%	----	**10.7**	**18.4**	**8.9**	----
EG005T: Total Metals by ICP-AES								
Lead	7439-92-1	5	mg/kg	----	----	**6690**	----	----
EN60: ASLP Leaching Procedure								
Initial pH	----	0.1	pH Unit	**8.2**	----	**7.3**	----	**7.4**
After HCl pH	----	0.1	pH Unit	**1.9**	----	**2.0**	----	**1.9**
Extraction Fluid pH	----	0.1	pH Unit	**5.0**	----	**5.0**	----	**5.0**
Final pH	----	0.1	pH Unit	**5.5**	----	**5.2**	----	**5.1**
EP070: Total Petroleum Hydrocarbons - Speciation								
Aliphatic C16-C35	----	100	mg/kg	----	<100	<100	<100	----
Aliphatic > C35	----	100	mg/kg	----	<100	<100	<100	----
Aromatic C16-C35	----	90	mg/kg	----	**740**	**1220**	**260**	----
Aromatic > C35	----	100	mg/kg	----	**300**	**300**	**200**	----
EP070: Total Petroleum Hydrocarbons - Speciation								
2-Bromonaphthalene	580-13-2	0.1	%	----	**116**	**119**	**115**	----
2-Fluorobiphenyl	321-60-8	0.1	%	----	**97.1**	**97.1**	**102**	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	TP24 (1.1-1.2)	TP26 (0.5-0.6)	----	----	----
				Client sampling date / time	20-JAN-2011 15:00	20-JAN-2011 15:00	----	----	----
					EM1101106-022	EM1101106-023	----	----	----
EA055: Moisture Content									
^ Moisture Content (dried @ 103°C)	----	1.0	%		----	**12.1**	----	----	----
EN60: ASLP Leaching Procedure									
Initial pH	----	0.1	pH Unit		**8.6**	**7.8**	----	----	----
After HCl pH	----	0.1	pH Unit		**2.0**	**1.9**	----	----	----
Extraction Fluid pH	----	0.1	pH Unit		**5.0**	**5.0**	----	----	----
Final pH	----	0.1	pH Unit		**5.3**	**5.0**	----	----	----
EP070: Total Petroleum Hydrocarbons - Speciation									
Aliphatic C16-C35	----	100	mg/kg		----	<100	----	----	----
Aliphatic > C35	----	100	mg/kg		----	<100	----	----	----
Aromatic C16-C35	----	90	mg/kg		----	**10600**	----	----	----
Aromatic > C35	----	100	mg/kg		----	**1100**	----	----	----
EP070: Total Petroleum Hydrocarbons - Speciation									
2-Bromonaphthalene	580-13-2	0.1	%		----	**117**	----	----	----
2-Fluorobiphenyl	321-60-8	0.1	%		----	**104**	----	----	----

Surrogate Control Limits

Sub-Matrix: **ASLP LEACHATE**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	58
2-Chlorophenol-D4	93951-73-6	10	124
2.4.6-Tribromophenol	118-79-6	26	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	32	122
Anthracene-d10	1719-06-8	34	136
4-Terphenyl-d14	1718-51-0	34	140

Sub-Matrix: **SOIL**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP070: Total Petroleum Hydrocarbons - Speciation			
2-Bromonaphthalene	580-13-2	70	130
2-Fluorobiphenyl	321-60-8	70	130

CHAIN OF CUSTODY

ALS Laboratory: **please tick** →

REBATCH

CLIENT: Environmental Earth Sciences	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)	☐ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)
OFFICE: P.O.BOX 2253, FOOTSCRAY , VIC, 3011		☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes No N/A
PROJECT: ALBERT PARK GAS WORKS	ALS QUOTE NO.: ME/015/11	COC SEQUENCE NUMBER (Circle)	Presence / Absence of HCs present upon receipt? Yes No N/A
ORDER NUMBER: 210074		COC: 1 2 3 4 5 7	Random Sample Temperature on Receipt °C
PROJECT MANAGER: DAVID JAMES	CONTACT PH: 0437 033 796	OF: 1 2 3 4 5 7	Other comment:
SAMPLER: JI	SAMPLER MOBILE: 0437 033 796	RELINQUISHED BY:	RECEIVED BY: Peter
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default): ENMRG & ESDAT	DATE/TIME:	DATE/TIME: 9/2/11 3:30
Email Reports to (will default to PM if no other addresses are listed):		RELINQUISHED BY:	RECEIVED BY:
Email Invoice to (will default to PM if no other addresses are listed):		DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

MS 218-220 4N 7/2

	ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		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).								Additional Information	
	LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL JARS	TPH Speciation (Aliphatic/Aromatic)	Heavy metal - Lead (Pb)	ASLP (acetate) - PAH	ASLP (acetate) - Hg, Zn and Pb	ASLP (acetate) - Ni	ASLP (acetate) - As				
1	EM1100639-003	TP1(0.3-0.35)	18/01/2011	Soil		1					1					
2	EM1100639-013	TP4(0.5)	18/01/2011	Soil		1	1								* 19/1/11 - as per original batch & jars. R.L. 7/2/11.	
3	EM1100639-019	TP6(0.25-0.3)	18/01/2011	Soil		1	1		1							
4	EM1100639-021	TP6(1.75-1.8)	18/01/2011	Soil		1			1							
5	EM1100639-022	TP7(0-0.1)	18/01/2011	Soil		1	1		1							
6	EM1100639-023	TP7(0.3-0.4)	18/01/2011	Soil		1	1		1							
7	EM1100639-030	TP9 (0.7-0.8)	19/01/2011	Soil		1			1							
8	EM1100639-033	TP10 (1-1.1)	19/01/2011	Soil		1			1							
9	EM1100639-036	TP11 (1.2-1.3)	19/01/2011	Soil		1			1							
10	EM1100640-003	TP12(0.2-0.3)	19/01/2011	Soil		1	1									
11	EM1100640-004	TP12 (0.6-0.7)	19/01/2011	Soil		1			1							
12	EM1100640-007	TP13(0.3-0.35)	19/01/2011	Soil		1	1									
13	EM1100640-008	TP13(0.8-0.85)	19/01/2011	Soil		1	1		1							
14	EM1100640-012	TP14(0.85-0.9)	19/01/2011	Soil		1			1							
15	EM1100640-016	TP15 (1-1.1)	19/01/2011	Soil		1			1							
16	EM1100640-020	TP16 (1-1.1)	19/01/2011	Soil		1			1							
17	EM1100640-019	TP16(0.4-0.5)	19/01/2011	Soil		1	1									
18	EM1100640-028	TP18(0.7-0.8)	20/01/2011	Soil		1	1	1		1						
19	EM1100640-030	TP19(0.3-0.4)	20/01/2011	Soil		1	1									
20	EM1100640-033	TP20 (0.6-0.7)	20/01/2011	Soil		1			1							
21	EM1100641-003	TP22(0.3-0.4)	20/01/2011	Soil		1						1*				
22	EM1100641-011	TP24 (1.1-1.2)	20/01/2011	Soil		1			1							
23	EM1100641-017	TP26(0.5-0.6)	20/01/2011	Soil		1	1		1			1				
					TOTAL	23	11	1	15	1	1	1				

Environmental Division Melbourne Work Order RL

EM1101106

Telephone : +61-3-8549 9600

* analysis added as per Carol Walsh. MP. 7/2

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.

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order	: **EM1101106**		
Client	: **ENVIRONMENTAL EARTH SCIENCES**	Laboratory	: Environmental Division Melbourne
Contact	: MR DAVID JAMES	Contact	: Carol Walsh
Address	: P.O.BOX 2253 FOOTSCRAY VIC, AUSTRALIA 3011	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: djames@eesi.biz	E-mail	: carol.walsh@alsenviro.com
Telephone	: +61 96871666	Telephone	: +61-3-8549 9608
Facsimile	: +61 03 96871844	Facsimile	: +61-3-8549 9601
Project	: ALBERT PARK GAS WORKS REBATCH OF EM1100639 EM1100640 & EM1100641	Page	: 1 of 2
Order number	: 210074		
C-O-C number	: ----	Quote number	: EM2011ENVEAR0210 (ME/015/11)
Site	: ----		
Sampler	: JI	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 04-FEB-2011	Issue Date	: 07-FEB-2011 15:55
Client Requested Due Date	: 15-FEB-2011	Scheduled Reporting Date	: **15-FEB-2011**

Delivery Details

Mode of Delivery	: Samples on hand	Temperature	: ----
No. of coolers/boxes	: N/A	No. of samples received	: 23
Security Seal	: Intact.	No. of samples analysed	: 23

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Requested Deliverables
- **Samples received in appropriately pretreated and preserved containers.**
- **Sample(s) have been received within recommended holding times**
- **Please direct any queries related to sample condition / numbering / breakages to Peter Ravlic.**
- **Analytical work for this work order will be conducted at ALS Melbourne.**
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.

Sample Container(s)/Preservation Non-Compliances

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

- **No sample container / preservation non-compliance exist.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process neccessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
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.

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	SOIL - EA055-103 Moisture Content	SOIL - EG005C-EM Leachable Metals by ICPAES (Melbourne)	SOIL - EG005T (solids) Total Metals by ICP-AES	SOIL - EG035C Leachable Mercury by FIMS	SOIL - EP070 (solids) TPH Speciation - Aliphatic & Aromatic Hydrocarbons C16 - C35	SOIL - EP075 SIM PAH only SIM - PAH only
EM1101106-001	18-JAN-2011 15:00	TP1 (0.3-0.35)		✓				
EM1101106-002	18-JAN-2011 15:00	TP4 (0.5)	✓				✓	
EM1101106-003	18-JAN-2011 15:00	TP6 (0.25-0.3)	✓				✓	✓
EM1101106-004	18-JAN-2011 15:00	TP6 (1.75-1.8)						✓
EM1101106-005	18-JAN-2011 15:00	TP7 (0-0.1)	✓				✓	✓
EM1101106-006	18-JAN-2011 15:00	TP7 (0.3-0.4)	✓				✓	✓
EM1101106-007	19-JAN-2011 15:00	TP9 (0.7-0.8)						✓
EM1101106-008	19-JAN-2011 15:00	TP10 (1-1.1)						✓
EM1101106-009	19-JAN-2011 15:00	TP11 (1.2-1.3)						✓
EM1101106-010	19-JAN-2011 15:00	TP12 (0.2-0.3)	✓				✓	
EM1101106-011	19-JAN-2011 15:00	TP12 (0.6-0.7)						✓
EM1101106-012	19-JAN-2011 15:00	TP13 (0.3-0.35)	✓				✓	
EM1101106-013	19-JAN-2011 15:00	TP13 (0.8-0.85)	✓				✓	✓
EM1101106-014	19-JAN-2011 15:00	TP14 (0.85-0.9)						✓
EM1101106-015	19-JAN-2011 15:00	TP15 (1-1.1)						✓
EM1101106-016	19-JAN-2011 15:00	TP16 (1-1.1)						✓
EM1101106-017	19-JAN-2011 15:00	TP16 (0.4-0.5)	✓				✓	
EM1101106-018	20-JAN-2011 15:00	TP18 (0.7-0.8)	✓	✓	✓	✓	✓	
EM1101106-019	20-JAN-2011 15:00	TP19 (0.3-0.4)	✓				✓	
EM1101106-020	20-JAN-2011 15:00	TP20 (0.6-0.7)						✓
EM1101106-021	20-JAN-2011 15:00	TP22 (0.3-0.4)		✓				
EM1101106-022	20-JAN-2011 15:00	TP24 (1.1-1.2)						✓
EM1101106-023	20-JAN-2011 15:00	TP26 (0.5-0.6)	✓	✓			✓	✓

Requested Deliverables

ALL INVOICES MELB ADDRESS

- A4 - AU Tax Invoice (INV)	Email	eesvic@eesi.biz

MR DAVID JAMES

- *AU Certificate of Analysis - NATA (COA)	Email	djames@eesi.biz
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	djames@eesi.biz
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	djames@eesi.biz
- A4 - AU Sample Receipt Notification - Environmental (SRN)	Email	djames@eesi.biz
- Chain of Custody (CoC) (COC)	Email	djames@eesi.biz
- EDI Format - ENMRG (ENMRG)	Email	djames@eesi.biz
- EDI Format - ESDAT (ESDAT)	Email	djames@eesi.biz

MS CAROL WALSH

- Chain of Custody (CoC) (COC)	Email	carol.walsh@alsenviro.com

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **EM1101370**	Page	: 1 of 7
Amendment	: **1**		
Client	: **ENVIRONMENTAL EARTH SCIENCES**	Laboratory	: Environmental Division Melbourne
Contact	: MR DAVID JAMES	Contact	: Carol Walsh
Address	: P.O.BOX 2253 FOOTSCRAY VIC, AUSTRALIA 3011	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: djames@eesi.biz	E-mail	: carol.walsh@alsenviro.com
Telephone	: +61 96871666	Telephone	: +61-3-8549 9608
Facsimile	: +61 03 96871844	Facsimile	: +61-3-8549 9601
Project	: ALBERT PARK GAS WORKS	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: 210074		
C-O-C number	: ----	Date Samples Received	: 11-FEB-2011
Sampler	: JF, VR	Issue Date	: 07-NOV-2011
Site	: ----		
		No. of samples received	: 9
Quote number	: ME/015/11 V3	No. of samples analysed	: 8

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

This document is issued in accordance with NATA accreditation requirements.

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*
Herman Lin	Laboratory Coordinator	Melbourne Inorganics
Xingbin Lin	Senior Organic Chemist	Melbourne Organics

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 insuffient 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

- **3/11/11 - This report has been amended and re-released to allow the reporting of additional analytical data.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	BH16(0.2-0.3)	BH16(0.7-0.8)	BH13(0.1-0.4)	BH13(0.6-0.7)	BH13(1.1-1.3)
				Client sampling date / time	10-FEB-2011 15:00	10-FEB-2011 15:00	10-FEB-2011 15:00	10-FEB-2011 15:00	10-FEB-2011 15:00
					EM1101370-001	EM1101370-002	EM1101370-003	EM1101370-004	EM1101370-005
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**11.3**	**12.0**	**12.0**	**11.3**	**16.7**
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**16**	**26**	**5**	**26**	**12**
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**13**	**14**	**36**	**17**	**13**
Copper	7440-50-8	5	mg/kg		**22**	**12**	**20**	**13**	**18**
Lead	7439-92-1	5	mg/kg		**87**	**90**	**41**	**146**	**84**
Nickel	7440-02-0	2	mg/kg		**14**	**27**	**29**	**15**	**15**
Zinc	7440-66-6	5	mg/kg		**285**	**556**	**87**	**124**	**59**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	**0.4**	**0.8**	**0.3**
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		**3**	----	**4**	----	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	<0.5	<0.5	**0.7**	<2.5
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<2.5
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<2.5
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg		<1.0	<1.0	<1.0	**1.3**	<5.0
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<2.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<2.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<2.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<2.5
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<2.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<2.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<2.5
Pentachlorophenol	87-86-5	2.0	mg/kg		<2.0	<2.0	<2.0	<2.0	<10.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		**2.8**	**2.6**	<0.5	**4.3**	**22.7**
Acenaphthylene	208-96-8	0.5	mg/kg		**2.6**	**6.7**	**1.0**	**8.8**	**45.0**
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	**0.9**	<0.5	**1.7**	**6.5**
Fluorene	86-73-7	0.5	mg/kg		**1.0**	**4.3**	<0.5	**6.1**	**28.7**
Phenanthrene	85-01-8	0.5	mg/kg		**28.0**	**46.4**	**3.2**	**49.3**	**362**
Anthracene	120-12-7	0.5	mg/kg		**8.5**	**11.9**	**1.1**	**13.4**	**86.5**
Fluoranthene	206-44-0	0.5	mg/kg		**35.1**	**84.2**	**6.2**	**68.0**	**477**
Pyrene	129-00-0	0.5	mg/kg		**31.9**	**71.9**	**5.9**	**61.8**	**440**
Benz(a)anthracene	56-55-3	0.5	mg/kg		**18.0**	**35.8**	**3.1**	**31.4**	**199**
Chrysene	218-01-9	0.5	mg/kg		**13.6**	**25.6**	**2.4**	**22.8**	**142**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	BH16(0.2-0.3)	BH16(0.7-0.8)	BH13(0.1-0.4)	BH13(0.6-0.7)	BH13(1.1-1.3)
				Client sampling date / time	10-FEB-2011 15:00	10-FEB-2011 15:00	10-FEB-2011 15:00	10-FEB-2011 15:00	10-FEB-2011 15:00
					EM1101370-001	EM1101370-002	EM1101370-003	EM1101370-004	EM1101370-005
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		20.9	41.1	3.7	38.1	206
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		7.2	12.7	1.5	8.9	55.8
Benzo(a)pyrene	50-32-8	0.5	mg/kg		15.8	33.4	3.2	29.8	157
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		7.6	16.1	1.6	13.9	71.0
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		2.6	5.2	<0.5	4.3	21.4
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		9.0	17.9	1.9	16.2	78.9
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	140
C15 - C28 Fraction	----	100	mg/kg		400	1460	<100	960	6060
C29 - C36 Fraction	----	100	mg/kg		280	1060	140	700	3820
^ C10 - C36 Fraction (sum)	----	50	mg/kg		680	2520	140	1660	10000
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	60	<50	80	410
>C16 - C34 Fraction	----	100	mg/kg		700	2400	250	1610	9450
>C34 - C40 Fraction	----	100	mg/kg		180	640	190	440	2090
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	0.3
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
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		87.8	100	91.8	91.5	73.4
2-Chlorophenol-D4	93951-73-6	0.1	%		90.4	103	95.0	94.4	83.0
2.4.6-Tribromophenol	118-79-6	0.1	%		92.9	94.2	94.9	97.0	62.8
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		95.6	107	99.5	98.1	97.4
Anthracene-d10	1719-06-8	0.1	%		85.0	94.0	91.3	86.3	85.5
4-Terphenyl-d14	1718-51-0	0.1	%		87.9	98.7	95.0	90.5	92.6
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		105	99.0	99.0	99.5	117
Toluene-D8	2037-26-5	0.1	%		99.4	92.0	97.2	96.3	107
4-Bromofluorobenzene	460-00-4	0.1	%		98.4	89.4	96.6	91.0	106

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	BH14(0.7-0.8)	BH14(0.4-0.5)	BH14(1.3-1.4)	----	----
				Client sampling date / time	10-FEB-2011 15:00	10-FEB-2011 15:00	10-FEB-2011 15:00	----	----
					EM1101370-006	EM1101370-007	EM1101370-008	----	----
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**13.6**	**14.3**	**15.8**	----	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**23**	**22**	**13**	----	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	----	----
Chromium	7440-47-3	2	mg/kg		**112**	**116**	**123**	----	----
Copper	7440-50-8	5	mg/kg		**24**	**14**	**7**	----	----
Lead	7439-92-1	5	mg/kg		**273**	**484**	**95**	----	----
Nickel	7440-02-0	2	mg/kg		**67**	**68**	**26**	----	----
Zinc	7440-66-6	5	mg/kg		**233**	**293**	**110**	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		**1.3**	**3.8**	**0.5**	----	----
EK026G: Total Cyanide By Discrete Analyser									
Total Cyanide	57-12-5	1	mg/kg		----	**763**	----	----	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<2.5	**2.6**	**4.1**	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg		<2.5	<0.5	<2.5	----	----
2-Methylphenol	95-48-7	0.5	mg/kg		<2.5	**1.3**	**2.7**	----	----
3- & 4-Methylphenol	1319-77-3	1.0	mg/kg		<5.0	**3.9**	**8.0**	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg		<2.5	<0.5	<2.5	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<2.5	**1.6**	<2.5	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<2.5	<0.5	<2.5	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<2.5	<0.5	<2.5	----	----
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		<2.5	<0.5	<2.5	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<2.5	<0.5	<2.5	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<2.5	<0.5	<2.5	----	----
Pentachlorophenol	87-86-5	2.0	mg/kg		<10.0	<2.0	<10.0	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		**30.2**	**24.9**	**69.3**	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		**57.2**	**52.7**	**40.3**	----	----
Acenaphthene	83-32-9	0.5	mg/kg		**6.2**	**5.0**	**6.2**	----	----
Fluorene	86-73-7	0.5	mg/kg		**33.2**	**25.9**	**30.8**	----	----
Phenanthrene	85-01-8	0.5	mg/kg		**388**	**172**	**171**	----	----
Anthracene	120-12-7	0.5	mg/kg		**90.5**	**73.1**	**59.2**	----	----
Fluoranthene	206-44-0	0.5	mg/kg		**521**	**267**	**229**	----	----
Pyrene	129-00-0	0.5	mg/kg		**508**	**251**	**224**	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		**270**	**143**	**125**	----	----
Chrysene	218-01-9	0.5	mg/kg		**182**	**104**	**92.6**	----	----

Analytical Results

Sub-Matrix: SOIL				Client sample ID	BH14(0.7-0.8)	BH14(0.4-0.5)	BH14(1.3-1.4)	----	----
				Client sampling date / time	10-FEB-2011 15:00	10-FEB-2011 15:00	10-FEB-2011 15:00	----	----
Compound	CAS Number	LOR	Unit		EM1101370-006	EM1101370-007	EM1101370-008	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		292	156	140	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		78.4	27.4	43.6	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		194	128	104	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		85.2	55.7	43.8	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		26.6	21.5	13.6	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		91.0	62.3	48.8	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	----	----
C10 - C14 Fraction	----	50	mg/kg		270	280	300	----	----
C15 - C28 Fraction	----	100	mg/kg		7290	4900	4580	----	----
C29 - C36 Fraction	----	100	mg/kg		5240	3550	3110	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		12800	8730	7990	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	----	----
>C10 - C16 Fraction	----	50	mg/kg		580	570	580	----	----
>C16 - C34 Fraction	----	100	mg/kg		11800	7910	7240	----	----
>C34 - C40 Fraction	----	100	mg/kg		2910	1970	1740	----	----
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		0.3	0.3	0.5	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	0.6	----	----
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	0.9	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		85.7	95.4	79.0	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%		92.6	93.3	85.2	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%		64.6	101	67.5	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		108	97.9	97.7	----	----
Anthracene-d10	1719-06-8	0.1	%		103	88.2	98.4	----	----
4-Terphenyl-d14	1718-51-0	0.1	%		103	97.4	90.9	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		112	104	112	----	----
Toluene-D8	2037-26-5	0.1	%		99.8	93.2	102	----	----
4-Bromofluorobenzene	460-00-4	0.1	%		98.8	90.1	102	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	53	125
2-Chlorophenol-D4	93951-73-6	57	123
2.4.6-Tribromophenol	118-79-6	28	130
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	62	128
Anthracene-d10	1719-06-8	68	142
4-Terphenyl-d14	1718-51-0	67	135
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	59.0	126.2
Toluene-D8	2037-26-5	59.5	128.6
4-Bromofluorobenzene	460-00-4	56.4	129.9

COC received at 10:30 Am

CHAIN OF CUSTODY

ALS Laboratory: *please tick* →

☐ **Sydney**: 277 Woodpark Rd, Smithfield NSW 2176 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: Environmental Earth Sciences
OFFICE: P.O.BOX 2253, FOOTSCRAY , VIC, 3011
PROJECT: ALBERT PARK GAS WORKS
ORDER NUMBER: 210074
PROJECT MANAGER: DAVID JAMES — **CONTACT PH:** 0437 033 796
SAMPLER: JF/VR — **SAMPLER MOBILE:** 0437 033 796
COC emailed to ALS? (YES / NO) — **EDD FORMAT (or default):** ENMRG & ESDAT
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.: ME/015/11

COC SEQUENCE NUMBER (Circle)
COC: 1 2 3 4 5 7
OF: 1 2 3 4 5 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: 18-8-22.6

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
			RAwc
DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME: 11/2, 2pm

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		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).						Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL JARS	S-27 PACKAGE - 8 metals, TPH/BTEX/PAH/Phenols	Total Cyanide - EK026G	Sulphate - NEPM - ED040N	Sulphide - EK085 (Leco S to ALS Brisbane)	Ammonia as N		
1	BH16(0.2-0.3)	10/02/2011	Soil		2	1	1					
2	BH16(0.7-0.8)	10/02/2011	Soil		1	1						
3	BH13(0.1-0.4)	10/02/2011	Soil		1	1	1					
4	BH13(0.6-0.7)	10/02/2011	Soil		1	1						
5	BH13(1.1-1.3)	10/02/2011	Soil		1	1						
6	BH14(0.7-0.8)	10/02/2011	Soil		1	1						
7	BH14(0.4-0.5)	10/02/2011	Soil		1	1	1					
8	BH14(1.3-1.4)	10/02/2011	Soil		1	1						
9 [illegible]				TOTAL	9	8	3	0	0	0	0	

Environmental Division
Melbourne
Work Order
EM1101370
Telephone : + 61-3-8549 9600

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.

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order : **EM1101370**

Client	: **ENVIRONMENTAL EARTH SCIENCES**	Laboratory	: Environmental Division Melbourne
Contact	: MR DAVID JAMES	Contact	: Carol Walsh
Address	: P.O.BOX 2253 FOOTSCRAY VIC, AUSTRALIA 3011	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: djames@eesi.biz	E-mail	: carol.walsh@alsenviro.com
Telephone	: +61 96871666	Telephone	: +61-3-8549 9608
Facsimile	: +61 03 96871844	Facsimile	: +61-3-8549 9601
Project	: ALBERT PARK GAS WORKS	Page	: 1 of 2
Order number	: 210074		
C-O-C number	: ----	Quote number	: EM2011ENVEAR0210 (ME/015/11)
Site	: ----		
Sampler	: JF, VR	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 11-FEB-2011	Issue Date	: 14-FEB-2011 13:04
Client Requested Due Date	: 18-FEB-2011	Scheduled Reporting Date	: **18-FEB-2011**

Delivery Details

Mode of Delivery	: Carrier	Temperature	: 18.8-22.6
No. of coolers/boxes	: 1	No. of samples received	: 9
Security Seal	: Intact.	No. of samples analysed	: 8

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Requested Deliverables
- **Samples received in appropriately pretreated and preserved containers.**
- **Sample(s) have been received within recommended holding times**
- **Please direct any queries related to sample condition / numbering / breakages to Peter Ravlic.**
- **Analytical work for this work order will be conducted at ALS Melbourne.**
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.

Sample Container(s)/Preservation Non-Compliances

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

- **No sample container / preservation non-compliance exist.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process neccessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
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.

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	(On Hold) SOIL No analysis requested	SOIL - EK026G (Solids) Total Cyanide By Discrete Analyser	SOIL - S-27 TPH/BTEX/PAH/Phenols/8Metals
EM1101370-001	10-FEB-2011 15:00	BH16(0.2-0.3)		✓	✓
EM1101370-002	10-FEB-2011 15:00	BH16(0.7-0.8)			✓
EM1101370-003	10-FEB-2011 15:00	BH13(0.1-0.4)		✓	✓
EM1101370-004	10-FEB-2011 15:00	BH13(0.6-0.7)			✓
EM1101370-005	10-FEB-2011 15:00	BH13(1.1-1.3)			✓
EM1101370-006	10-FEB-2011 15:00	BH14(0.7-0.8)			✓
EM1101370-007	10-FEB-2011 15:00	BH14(0.4-0.5)		✓	✓
EM1101370-008	10-FEB-2011 15:00	BH14(1.3-1.4)			✓
EM1101370-009	10-FEB-2011 15:00	DUP8	✓		

Requested Deliverables

ALL INVOICES MELB ADDRESS

- A4 - AU Tax Invoice (INV)	Email	eesvic@eesi.biz

MR DAVID JAMES

- *AU Certificate of Analysis - NATA (COA)	Email	djames@eesi.biz
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	djames@eesi.biz
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	djames@eesi.biz
- A4 - AU Sample Receipt Notification - Environmental (SRN)	Email	djames@eesi.biz
- Chain of Custody (CoC) (COC)	Email	djames@eesi.biz
- EDI Format - ENMRG (ENMRG)	Email	djames@eesi.biz
- EDI Format - ESDAT (ESDAT)	Email	djames@eesi.biz

MS CAROL WALSH

- Chain of Custody (CoC) (COC)	Email	carol.walsh@alsenviro.com

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **EM1101415**	Page	: 1 of 5
Amendment	: **1**		
Client	: **ENVIRONMENTAL EARTH SCIENCES**	Laboratory	: Environmental Division Melbourne
Contact	: MR DAVID JAMES	Contact	: Carol Walsh
Address	: P.O.BOX 2253 FOOTSCRAY VIC, AUSTRALIA 3011	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: djames@eesi.biz	E-mail	: carol.walsh@alsenviro.com
Telephone	: +61 96871666	Telephone	: +61-3-8549 9608
Facsimile	: +61 03 96871844	Facsimile	: +61-3-8549 9601
Project	: ALBERT PARK GAS WORKS	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: 210074		
C-O-C number	: ----	Date Samples Received	: 11-FEB-2011
Sampler	: JF/VR	Issue Date	: 10-NOV-2011
Site	: ----		
		No. of samples received	: 1
Quote number	: ME/015/11 V3	No. of samples analysed	: 1

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

This document is issued in accordance with NATA accreditation requirements.

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*
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics
Nancy Wang	Senior Semivolatile Instrument Chemist	Melbourne Inorganics
Nancy Wang	Senior Semivolatile Instrument Chemist	Melbourne Organics
Xingbin Lin	Senior Organic Chemist	Melbourne Organics

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 insuffient 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

- **3/11/11 - This report has been amended and re-released to allow the reporting of additional analytical data.**

Analytical Results

Sub-Matrix: SOIL				Client sample ID	DUP8	----	----	----	----
				Client sampling date / time	10-FEB-2011 15:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EM1101415-001	----	----	----	----
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		13.9	----	----	----	----
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		27	----	----	----	----
Copper	7440-50-8	5	mg/kg		14	----	----	----	----
Lead	7439-92-1	5	mg/kg		61	----	----	----	----
Nickel	7440-02-0	2	mg/kg		21	----	----	----	----
Zinc	7440-66-6	5	mg/kg		65	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		0.2	----	----	----	----
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		0.8	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		3.2	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg		1.1	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		13.6	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg		4.6	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		21.2	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg		20.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		10.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		9.2	----	----	----	----
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		6.8	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		8.8	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		9.6	----	----	----	----

Analytical Results

Sub-Matrix: SOIL				Client sample ID	DUP8	----	----	----	----
				Client sampling date / time	10-FEB-2011 15:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EM1101415-001	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		**4.7**	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		**1.5**	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		**5.6**	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg		**350**	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		**210**	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		**560**	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		**560**	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		**140**	----	----	----	----
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**77.5**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%		**90.4**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%		**89.6**	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**101**	----	----	----	----
Anthracene-d10	1719-06-8	0.1	%		**95.3**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%		**98.7**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**99.4**	----	----	----	----
Toluene-D8	2037-26-5	0.1	%		**117**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%		**126**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	53	125
2-Chlorophenol-D4	93951-73-6	57	123
2.4.6-Tribromophenol	118-79-6	28	130
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	62	128
Anthracene-d10	1719-06-8	68	142
4-Terphenyl-d14	1718-51-0	67	135
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	59.0	126.2
Toluene-D8	2037-26-5	59.5	128.6
4-Bromofluorobenzene	460-00-4	56.4	129.9

COC Rcived :- 15/02/11 @ 10·15

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ **Sydney**: 277 Woodpark Rd, Smithfield NSW 2176 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: Environmental Earth Sciences	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g.. Ultra Trace Organics)	☐ Standard TAT **(List due date):**	**FOR LABORATORY USE ONLY (Circle)**		
OFFICE: P.O.BOX 2253, FOOTSCRAY , VIC, 3011		☐ Non Standard or urgent TAT **(List due date):**	Custody Seal Intact?	Yes	No	N/A
PROJECT: ALBERT PARK GAS WORKS	**ALS QUOTE NO.: ME/015/11**	**COC SEQUENCE NUMBER (Circle)**	Free ice / Frozen ice bricks present upon receipt?	Yes	No	N/A
ORDER NUMBER: 210074		COC: 1 2 3 4 5 7	Random Sample Temperature on Receipt:		°C	
PROJECT MANAGER: DAVID JAMES	**CONTACT PH: 0437 033 796**	OF: 1 2 3 4 5 7	Other comment:	18 8 - 22 · 6		

SAMPLER: JF/VR	**SAMPLER MOBILE: 0437 033 796**	**RELINQUISHED BY:**	**RECEIVED BY:** Rec'd	**RELINQUISHED BY:**	**RECEIVED BY:**
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default): ENMRG & ESDAT**		15/02/11		
Email Reports to (will default to PM if no other addresses are listed):		DATE/TIME:	DATE/TIME: 10·15	DATE/TIME:	DATE/TIME:
Email Invoice to (will default to PM if no other addresses are listed):					

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		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).							Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL JARS	S-27 PACKAGE - 8 metals, TPH/BTEX/PAH/Phenols	Total Cyanide - EK026G	Sulphate - NEPM - ED040N	Sulphide - EK085 (Leco S to ALS Brisbane)	Ammonia as N			
i	DUP8	10/02/2011	Soil		1	1							
				TOTAL	1	1							

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 P
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

Environmental Division
Melbourne
Work Order
EM1101415

Telephone : +61-3-8549 9600

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order : **EM1101415**

Client	: **ENVIRONMENTAL EARTH SCIENCES**	Laboratory	: Environmental Division Melbourne
Contact	: MR DAVID JAMES	Contact	: Carol Walsh
Address	: P.O.BOX 2253 FOOTSCRAY VIC, AUSTRALIA 3011	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: djames@eesi.biz	E-mail	: carol.walsh@alsenviro.com
Telephone	: +61 96871666	Telephone	: +61-3-8549 9608
Facsimile	: +61 03 96871844	Facsimile	: +61-3-8549 9601
Project	: ALBERT PARK GAS WORKS	Page	: 1 of 2
Order number	: 210074		
C-O-C number	: ----	Quote number	: EM2011ENVEAR0210 (ME/015/11)
Site	: ----		
Sampler	: JF/VR	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 11-FEB-2011	Issue Date	: 15-FEB-2011 13:25
Client Requested Due Date	: 22-FEB-2011	Scheduled Reporting Date	: **22-FEB-2011**

Delivery Details

Mode of Delivery	: Carrier	Temperature	: 18.8-22.6
No. of coolers/boxes	: 1	No. of samples received	: 1
Security Seal	: Intact.	No. of samples analysed	: 1

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Requested Deliverables
- **Samples received in appropriately pretreated and preserved containers.**
- **Sample(s) have been received within recommended holding times**
- **Please direct any queries related to sample condition / numbering / breakages to Peter Ravlic.**
- **Analytical work for this work order will be conducted at ALS Melbourne.**
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.

Sample Container(s)/Preservation Non-Compliances

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

- **No sample container / preservation non-compliance exist.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process neccessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
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.

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	SOIL - S-27 TPH/BTEX/PAH/Phenols/8Metals
EM1101415-001	10-FEB-2011 15:00	DUP8	✓

Requested Deliverables

ALL INVOICES MELB ADDRESS

- A4 - AU Tax Invoice (INV)	Email	eesvic@eesi.biz

MR DAVID JAMES

- *AU Certificate of Analysis - NATA (COA)	Email	djames@eesi.biz
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	djames@eesi.biz
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	djames@eesi.biz
- A4 - AU Sample Receipt Notification - Environmental (SRN)	Email	djames@eesi.biz
- Chain of Custody (CoC) (COC)	Email	djames@eesi.biz
- EDI Format - ENMRG (ENMRG)	Email	djames@eesi.biz
- EDI Format - ESDAT (ESDAT)	Email	djames@eesi.biz

MS CAROL WALSH

- Chain of Custody (CoC) (COC)	Email	carol.walsh@alsenviro.com

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order	: **EM1101775**		
Client	: **ENVIRONMENTAL EARTH SCIENCES**	Laboratory	: Environmental Division Melbourne
Contact	: MR DAVID JAMES	Contact	: Carol Walsh
Address	: P.O.BOX 2253 FOOTSCRAY VIC, AUSTRALIA 3011	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: djames@eesi.biz	E-mail	: carol.walsh@alsenviro.com
Telephone	: +61 96871666	Telephone	: +61-3-8549 9608
Facsimile	: +61 03 96871844	Facsimile	: +61-3-8549 9601
Project	: 210074 REBATCH EM1101370 EM1100937	Page	: 1 of 2
Order number	: ----		
C-O-C number	: ----	Quote number	: ES2010ENVEAR0204 (EN/010/10)
Site	: ----		
Sampler	: ----	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 21-FEB-2011	Issue Date	: 23-FEB-2011 17:03
Client Requested Due Date	: 28-FEB-2011	Scheduled Reporting Date	: **28-FEB-2011**

Delivery Details

Mode of Delivery	: Samples on hand	Temperature	: ----
No. of coolers/boxes	: ----	No. of samples received	: 2
Security Seal	: Intact.	No. of samples analysed	: 2

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Requested Deliverables
- **Samples received in appropriately pretreated and preserved containers.**
- **Sample(s) have been received within recommended holding times**
- **Please direct any queries related to sample condition / numbering / breakages to Peter Ravlic.**
- **Analytical work for this work order will be conducted at ALS Melbourne.**
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.

Sample Container(s)/Preservation Non-Compliances

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

- **No sample container / preservation non-compliance exist.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process neccessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
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.

Matrix: **SOIL**

Laboratory sample ID	Client sampling date / time	Client sample ID	SOIL - EP070 (Water) TPH Speciation - Aliphatic & Aromatic Hydrocarbons C10-C35	SOIL - EP075 SIM PAH only SIM - PAH only
EM1101775-001	10-FEB-2011 15:00	BH14(0.4-0.5)		✓
EM1101775-002	10-FEB-2011 15:00	BH11(0.5-0.6)		✓
	28-JAN-2011 15:00	BH11(0.5-0.6)	✓	

Requested Deliverables

ALL INVOICES MELB ADDRESS

- A4 - AU Tax Invoice (INV)	Email	eesvic@eesi.biz

MR DAVID JAMES

- *AU Certificate of Analysis - NATA (COA)	Email	djames@eesi.biz
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	djames@eesi.biz
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	djames@eesi.biz
- A4 - AU Sample Receipt Notification - Environmental (SRN)	Email	djames@eesi.biz
- Chain of Custody (CoC) (COC)	Email	djames@eesi.biz
- EDI Format - ENMRG (ENMRG)	Email	djames@eesi.biz
- EDI Format - ESDAT (ESDAT)	Email	djames@eesi.biz

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **EM1102076**	Page	: 1 of 5
Amendment	: **1**		
Client	: **ENVIRONMENTAL EARTH SCIENCES**	Laboratory	: Environmental Division Melbourne
Contact	: MR DAVID JAMES	Contact	: Carol Walsh
Address	: P.O.BOX 2253 FOOTSCRAY VIC, AUSTRALIA 3011	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: djames@eesi.biz	E-mail	: carol.walsh@alsenviro.com
Telephone	: +61 96871666	Telephone	: +61-3-8549 9608
Facsimile	: +61 03 96871844	Facsimile	: +61-3-8549 9601
Project	: 210074	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 02-MAR-2011
Sampler	: SM, SF	Issue Date	: 07-NOV-2011
Site	: PORT MELBOURNE		
		No. of samples received	: 14
Quote number	: EN/010/10	No. of samples analysed	: 3

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

This document is issued in accordance with NATA accreditation requirements.

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*
Herman Lin	Laboratory Coordinator	Melbourne Inorganics
Nancy Wang	Senior Semivolatile Instrument Chemist	Melbourne Inorganics
Nancy Wang	Senior Semivolatile Instrument Chemist	Melbourne Organics
Xingbin Lin	Senior Organic Chemist	Melbourne Organics

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 insuffient 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

- **3/11/11 - This report has been amended and re-released to allow the reporting of additional analytical data.**

Analytical Results

Sub-Matrix: SOIL			Client sample ID	GW38(11.0-11.1)	GW37(11.0-11.1)	GW39(11.4-11.5)	----	----
			Client sampling date / time	01-MAR-2011 15:00	01-MAR-2011 15:00	01-MAR-2011 15:00	----	----
Compound	CAS Number	LOR	Unit	EM1102076-002	EM1102076-005	EM1102076-008	----	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**20.3**	**24.3**	**24.8**	----	----
EK055: Ammonia as N								
Ammonia as N	7664-41-7	20	mg/kg	<20	**510**	**410**	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	<10	<10	<10	----	----
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<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	----	----

Analytical Results

Sub-Matrix: SOIL				Client sample ID	GW38(11.0-11.1)	GW37(11.0-11.1)	GW39(11.4-11.5)	----	----
				Client sampling date / time	01-MAR-2011 15:00	01-MAR-2011 15:00	01-MAR-2011 15:00	----	----
Compound	CAS Number	LOR	Unit		EM1102076-002	EM1102076-005	EM1102076-008	----	----
EP080: BTEX - Continued									
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		88.9	90.2	85.1	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%		108	108	98.7	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%		88.7	102	108	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		111	114	105	----	----
Anthracene-d10	1719-06-8	0.1	%		103	93.7	77.8	----	----
4-Terphenyl-d14	1718-51-0	0.1	%		115	83.3	73.6	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		108	122	95.0	----	----
Toluene-D8	2037-26-5	0.1	%		102	111	92.2	----	----
4-Bromofluorobenzene	460-00-4	0.1	%		103	118	84.6	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	53	125
2-Chlorophenol-D4	93951-73-6	57	123
2.4.6-Tribromophenol	118-79-6	28	130
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	62	128
Anthracene-d10	1719-06-8	68	142
4-Terphenyl-d14	1718-51-0	67	135
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	57	129
Toluene-D8	2037-26-5	58	120
4-Bromofluorobenzene	460-00-4	56	126

CHAIN OF CUSTODY - ANALYSIS REQUEST FORM

ENVIRONMENTAL EARTH SCIENCES
THE KNOW AND THE HOW

Job #: 210074 Site Location: Port Melbourne SCANNED Sampler: Simon Meich/Shane I

Date: 2/03/2011 Laboratory: ALS Report To: Djames@eesi.biz and Sfur

	Sample ID	pH	Sample Description: SOIL	WATER	Dark SEDIMENT	Analysis Required: BTEX	TPH/BTEX	PAH	Ammonia				TPH/BTEX	PAH	Ammonia	ANTICIPATED RESULTS/ TURNAROUND TIME
1	GW38(8.0-8.1)		x		2											Hold
2	GW38(11.0-11.1)		x		1		✓	✓	✓							Hold
3	GW38(12.0)		x		1		Send to SAL									Hold
4	GW38(1.3-1.5)		x		2											Hold
	GW38(11.0-11.1)	(2)	x		1											Hold
5	GW38(8.0-8.1)	(1)	x		2				URGENT							Hold
6	GW38(1.3-1.5)	(4)	x		1											Hold
	GW38(11.0-11.1)	(2)	x		1											Hold
5	GW37(11.0-11.1)		x		1		✓	✓	✓							Hold
6	GW37(11.0-11.1)	(5)	x													Hold
6	GW37(8m)		x		1											Hold
6	GW37(11.0-11.1)	(5)	x													Hold
7	GW39(8.0-8.1)		x		1											Hold
8	GW39(11.4-11.5)		x		1								✓	✓	✓	Hold
	GW39(11.4-11.5)	(8)	x													Hold
	GW39(11.4-11.5)	(8)	x													Hold
9	GW41(10.0-10.1)		x		2											Hold
10	GW41(0.1-0.2)		x		2											Hold
	GW41(10.0-10.1)	(9)	x				Send to SAL									Hold
12	GW42(D)(1.5-1.6)		x		2											Hold
			20													

Environmental Division Melbourne
Work Order
EM1102076
Telephone +61 3 8549 9600

Turn Around: **Normal** Sheet: 1 of 1

Comments: Samples kept in fridge at EES, prior to courier

ALS Quote EN/010/10

	Time	Date	Lab Supervisor:
Left EES Site:	3:30:00 AM	1-Mar-11	
Transported By:	Hunter	2-Mar-11	
Received Lab:	Bharathi	2/3/11 12 pm	
Fax Results Rec'd			
Typed Results Rec'd			

We can be contacted on:
Phone: (03) 9687 1666
Fax: (03) 9687 1844

mp 11/3

Megan Perrett

From: Carol Walsh
Sent: Friday, 11 March 2011 8:40 AM
To: Rosalinda Laria; Emily Sabatka; Danielle White; Megan Perrett
Cc: Herman Lin
Subject: FW: 210074 - work order EM1102076
Importance: High
Follow Up Flag: Follow up
Flag Status: Yellow
Attachments: EM1102076_COC.pdf

Peter / Herman

We have all these samples on hold for EM1102076.

Client has sent through analysis for these samples – see below and a request to send some of them to SAL in Sydney.

Some of these samples were sampled on the 28/2 and 1/3 so they are close to holding time for volatiles and semivolatiles.

Can you get this analysis added as soon as possible and see if they can be extracted to meet holding times.

Regards

How was your customer experience? Please send us your feedback

Carol Walsh
Senior Client Services Officer

ALS | Environmental (General Environmental Group)

Address
4 Westall Rd, Springvale, VIC, 3171
PHONE +61 3 8549 9600
FAX +61 3 8549 9601
www.alsglobal.com

From: David James [mailto:djames@environmentalearthsciences.com]
Sent: Thursday, 10 March 2011 6:24 PM
To: Carol Walsh
Cc: Sylvia Tari
Subject: 210074 - work order EM1102076

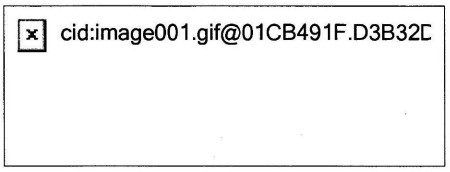
Hi Carol – can I get some analysis on batch EM1102076 for the following:

2. sample GW38(11.0-11.1) for TPH/PAH/BTEX and ammonia;
3. sample GW37(11.0-11.1) for TPH/PAH/BTEX and ammonia;
4. sample GW39(11.4-11.5) for TPH/PAH/BTEX and ammonia

Also, can I get samples GW38(12.0) and GW41(10.0-10.1) couriered to Sydney Analytical Laboratory (SAL) - 1/4 Abbott Road, Seven Hills, NSW 2147.

Let me know of any issues,

Thanks, Dave



David James – Environmental Engineer
PO Box 2253, Footscray, VIC 3011.
p: 03 9687 1666
d: 03 8398 4419
m: 0437 033 796
f: 03 9687 1844
djames@eesi.biz
www.environmentalearthsciences.com

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order	: **EM1102076**		
Client	: **ENVIRONMENTAL EARTH SCIENCES**	Laboratory	: Environmental Division Melbourne
Contact	: MR SHANE FURLONG	Contact	: Carol Walsh
Address	: P.O.BOX 2253 FOOTSCRAY VIC, AUSTRALIA 3011	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: sfurlong@eesi.biz	E-mail	: carol.walsh@alsenviro.com
Telephone	: +61 03 96871666	Telephone	: +61-3-8549 9608
Facsimile	: +61 03 96871844	Facsimile	: +61-3-8549 9601
Project	: 210074	Page	: 1 of 2
Order number	: ----		
C-O-C number	: ----	Quote number	: ES2010ENVEAR0204 (EN/010/10)
Site	: PORT MELBOURNE		
Sampler	: SM, SF	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 02-MAR-2011	Issue Date	: 11-MAR-2011 16:54
Client Requested Due Date	: 21-MAR-2011	Scheduled Reporting Date	: **21-MAR-2011**

Delivery Details

Mode of Delivery	: Carrier	Temperature	: 5.2-5.4 - Ice present
No. of coolers/boxes	: 1	No. of samples received	: 14
Security Seal	: Intact.	No. of samples analysed	: 3

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Requested Deliverables
- **Samples received in appropriately pretreated and preserved containers.**
- **Sample(s) have been received within recommended holding times**
- **Please direct any queries related to sample condition / numbering / breakages to Peter Ravlic.**
- **Analytical work for this work order will be conducted at ALS Melbourne.**
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.

Sample Container(s)/Preservation Non-Compliances

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

- **No sample container / preservation non-compliance exist.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process neccessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
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.

Matrix: **SOIL**

Laboratory sample ID	Client sampling date / time	Client sample ID	(On Hold) SOIL No analysis requested	SOIL - EK055 (solids) Ammonia as N	SOIL - S-07 TPH/BTEX/PAH (SIM)
EM1102076-001	28-FEB-2011 15:00	GW38(8.0-8.1)	✓		
EM1102076-002	01-MAR-2011 15:00	GW38(11.0-11.1)		✓	✓
EM1102076-004	28-FEB-2011 15:00	GW38(1.3-1.5)	✓		
EM1102076-005	01-MAR-2011 15:00	GW37(11.0-11.1)		✓	✓
EM1102076-006	01-MAR-2011 15:00	GW37(8m)	✓		
EM1102076-007	01-MAR-2011 15:00	GW39(8.0-8.1)	✓		
EM1102076-008	01-MAR-2011 15:00	GW39(11.4-11.5)		✓	✓
EM1102076-010	28-FEB-2011 15:00	GW41(0.1-0.2)	✓		
EM1102076-011	28-FEB-2011 15:00	GW42(D)(1.5-1.6)	✓		
EM1102076-012	28-FEB-2011 15:00	GW43(D)(4.0-4.1)	✓		
EM1102076-013	28-FEB-2011 15:00	GW40(11.1-11.2)	✓		
EM1102076-014	28-FEB-2011 15:00	GW40(10-10.1)	✓		
EM1102076-015	28-FEB-2011 15:00	GW40(10-10.5)	✓		
EM1102076-016	28-FEB-2011 15:00	GW41(11.0-11.1)	✓		

Requested Deliverables

ALL INVOICES MELB ADDRESS

- A4 - AU Tax Invoice (INV)	Email	eesvic@eesi.biz

MR DAVID JAMES

- *AU Certificate of Analysis - NATA (COA)	Email	djames@eesi.biz
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	djames@eesi.biz
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	djames@eesi.biz
- A4 - AU Sample Receipt Notification - Environmental (SRN)	Email	djames@eesi.biz
- Chain of Custody (CoC) (COC)	Email	djames@eesi.biz
- EDI Format - ENMRG (ENMRG)	Email	djames@eesi.biz
- EDI Format - ESDAT (ESDAT)	Email	djames@eesi.biz

MR SHANE FURLONG

- *AU Certificate of Analysis - NATA	Email	sfurlong@eesi.biz
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep)	Email	sfurlong@eesi.biz
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA	Email	sfurlong@eesi.biz
- A4 - AU Sample Receipt Notification - Environmental	Email	sfurlong@eesi.biz
- Chain of Custody (CoC)	Email	sfurlong@eesi.biz
- EDI Format - ENMRG	Email	sfurlong@eesi.biz
- EDI Format - ESDAT	Email	sfurlong@eesi.biz

ANALYTICAL REPORT

9 February 2011

Environmental Earth Sciences
Level 1
98 Maribyrnong St
FOOTSCRAY
VIC 3011

Attention: D James

Your Reference: 210074- Albert Park
Report Number: ME105140

SAMPLE TYPE:	7 Soils
SAMPLES RECEIVED:	25/01/2011
PRELIMINARY REPORT EMAILED:	Not Issued

NOTE : This is an INTERIM REPORT.
Preliminary results supplied as advance advice only and await final QA/QC clearance.

For and on behalf of:
SGS AUSTRALIA PTY LTD

Business Manager:	Sue Durukan	Sue.Durukan@sgs.com
Laboratory Manager:	Dr Aaron D. Stott	Aaron.Stott@sgs.com

This report has been authorised by the undersigned:

AN410 - BTEX Our Reference: Your Reference Date Sampled Sample Type Container Type	LOR --------- ---------	UNITS --------- ---------	ME105140-1 Split 1 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-2 Split 2 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-3 Split 3 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-4 Split 4 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-5 Split 5 21/01/2011 Soil 250mL Clear Glass Jar
Date Extracted			25/01/2011	25/01/2011	25/01/2011	25/01/2011	25/01/2011
Date Analysed			31/01/2011	31/01/2011	31/01/2011	31/01/2011	31/01/2011
Benzene	0.1	mg/Kg	<0.10	<0.10	<0.10	<0.10	<0.10
Toluene	0.1	mg/Kg	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	0.1	mg/Kg	<0.10	<0.10	<0.10	<0.10	<0.10
meta- & para-Xylene	0.2	mg/Kg	<0.2	<0.2	<0.2	<0.2	<0.2
ortho-Xylene	0.1	mg/Kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibromofluoromethane (Surrogate)	0	% Recovery	100	82	97	108	94
1,2-Dichloroethane-d4 (Surrogate)	0	% recovery	94	82	93	97	88
Toluene-*d8 (Surrogate)*	0	% recovery	92	74	89	97	81
4-Bromofluorobenzene (Surrogate)	0	% recovery	92	73	88	99	81

AN410 - BTEX Our Reference: Your Reference Date Sampled Sample Type Container Type	LOR --------- ---------	UNITS --------- ---------	ME105140-7 Split 7 21/01/2011 Soil 250mL Clear Glass Jar
Date Extracted			25/01/2011
Date Analysed			31/01/2011
Benzene	0.1	mg/Kg	<0.10
Toluene	0.1	mg/Kg	<0.10
Ethylbenzene	0.1	mg/Kg	<0.10
meta- & para-Xylene	0.2	mg/Kg	<0.2
ortho-Xylene	0.1	mg/Kg	<0.1
Dibromofluoromethane (Surrogate)	0	% Recovery	103
1,2-Dichloroethane-d4 (Surrogate)	0	% recovery	97
Toluene-*d8 (Surrogate)*	0	% recovery	94
4-Bromofluorobenzene (Surrogate)	0	% recovery	89

AN403 - TRH C_6 - C_9 Our Reference: Your Reference Date Sampled Sample Type Container Type	LOR --------- ---------	UNITS --------- ---------	ME105140-1 Split 1 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-2 Split 2 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-3 Split 3 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-4 Split 4 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-5 Split 5 21/01/2011 Soil 250mL Clear Glass Jar
Date Extracted (C_6 - C_9)			25/01/2011	25/01/2011	25/01/2011	25/01/2011	25/01/2011
Date Analysed (C_6 - C_9)			31/01/2011	31/01/2011	31/01/2011	31/01/2011	31/01/2011
TRH C_6 - C_9	20	mg/Kg	<20	<20	<20	<20	<20

AN403 - TRH C_6 - C_9 Our Reference: Your Reference Date Sampled Sample Type Container Type	LOR --------- ---------	UNITS --------- ---------	ME105140-7 Split 7 21/01/2011 Soil 250mL Clear Glass Jar
Date Extracted (C_6 - C_9)			25/01/2011
Date Analysed (C_6 - C_9)			31/01/2011
TRH C_6 - C_9	20	mg/Kg	<20

AN403 - TRH C_{10} - C_{36} Our Reference: Your Reference Date Sampled Sample Type Container Type	LOR --------- ---------	UNITS --------- ---------	ME105140-1 Split 1 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-2 Split 2 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-3 Split 3 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-4 Split 4 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-5 Split 5 21/01/2011 Soil 250mL Clear Glass Jar
Date Extracted (C_{10} - C_{36})			25/01/2011	25/01/2011	25/01/2011	25/01/2011	25/01/2011
Date Analysed (C_{10} - C_{36})			27/01/2011	27/01/2011	27/01/2011	27/01/2011	27/01/2011
TRH C_{10} - C_{14}	50	mg/Kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	100	mg/Kg	160	<100	<100	<100	<100
TRH C_{29} - C_{36}	100	mg/Kg	<100	<100	<100	<100	<100

AN403 - TRH C_{10} - C_{36} Our Reference: Your Reference Date Sampled Sample Type Container Type	LOR --------- ---------	UNITS --------- ---------	ME105140-7 Split 7 21/01/2011 Soil 250mL Clear Glass Jar
Date Extracted (C_{10} - C_{36})			25/01/2011
Date Analysed (C_{10} - C_{36})			27/01/2011
TRH C_{10} - C_{14}	50	mg/Kg	<50
TRH C_{15} - C_{28}	100	mg/Kg	<100
TRH C_{29} - C_{36}	100	mg/Kg	<100

AN420 - PAHs in soils Our Reference: Your Reference Date Sampled Sample Type Container Type	LOR --------- ---------	UNITS --------- ---------	ME105140-1 Split 1 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-2 Split 2 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-3 Split 3 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-4 Split 4 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-5 Split 5 21/01/2011 Soil 250mL Clear Glass Jar
Date Extracted			25/01/2011	25/01/2011	25/01/2011	25/01/2011	25/01/2011
Date Analysed			27/01/2011	27/01/2011	27/01/2011	27/01/2011	27/01/2011
Naphthalene	0.2	mg/Kg	0.35	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	0.2	mg/Kg	1.9	<0.20	<0.20	0.60	<0.20
Acenaphthene	0.2	mg/Kg	<0.20	<0.20	<0.20	<0.20	<0.20
Fluorene	0.2	mg/Kg	<0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	0.2	mg/Kg	2.8	<0.20	<0.20	0.83	<0.20
Anthracene	0.2	mg/Kg	1.3	<0.20	<0.20	0.42	<0.20
Fluoranthene	0.2	mg/Kg	6.1	<0.20	<0.20	2.6	<0.20
Pyrene	0.2	mg/Kg	6.6	<0.20	<0.20	2.4	<0.20
Benz(a)anthracene	0.2	mg/Kg	3.1	<0.20	<0.20	1.4	<0.20
Chrysene	0.2	mg/Kg	2.9	<0.20	<0.20	1.2	<0.20
Benzo(b)fluoranthene	0.2	mg/Kg	4.2	<0.20	<0.20	1.6	<0.20
Benzo(k)fluoranthene	0.2	mg/Kg	1.6	<0.20	<0.20	0.79	<0.20
Benzo(a)pyrene	0.2	mg/Kg	3.9	<0.20	<0.20	1.3	<0.20
Indeno(1,2,3-cd)pyrene	0.2	mg/Kg	2.0	<0.20	<0.20	0.75	<0.20
Dibenz(a,h)anthracene	0.2	mg/Kg	0.46	<0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	0.2	mg/Kg	2.5	<0.2	<0.2	0.9	<0.2
Total PAHs	2	mg/Kg	39.56	<2.00	<2.00	14.76	<2.00
2-Fluorobiphenyl (Surrogate)	0.1	% Recovery	95	100	99	96	97
Anthracene-d10 (Surrogate)	0.1	% Recovery	108	116	115	110	112
4-Terphenyl-d14 (Surrogate)	0.1	% Recovery	91	97	95	91	93

AN420 - PAHs in soils Our Reference: Your Reference Date Sampled Sample Type Container Type	LOR --------- ---------	UNITS --------- ---------	ME105140-7 Split 7 21/01/2011 Soil 250mL Clear Glass Jar
Date Extracted			25/01/2011
Date Analysed			27/01/2011
Naphthalene	0.2	mg/Kg	3.9
Acenaphthylene	0.2	mg/Kg	0.38
Acenaphthene	0.2	mg/Kg	<0.20
Fluorene	0.2	mg/Kg	0.42
Phenanthrene	0.2	mg/Kg	1.1
Anthracene	0.2	mg/Kg	0.47
Fluoranthene	0.2	mg/Kg	1.2
Pyrene	0.2	mg/Kg	0.94
Benz(a)anthracene	0.2	mg/Kg	0.45
Chrysene	0.2	mg/Kg	0.42
Benzo(b)fluoranthene	0.2	mg/Kg	0.40
Benzo(k)fluoranthene	0.2	mg/Kg	0.24
Benzo(a)pyrene	0.2	mg/Kg	0.38
Indeno(1,2,3-cd)pyrene	0.2	mg/Kg	<0.20
Dibenz(a,h)anthracene	0.2	mg/Kg	<0.20
Benzo(g,h,i)perylene	0.2	mg/Kg	<0.2
Total PAHs	2	mg/Kg	10.30
2-Fluorobiphenyl (Surrogate)	0.1	% Recovery	96
Anthracene-d10 (Surrogate)	0.1	% Recovery	110
4-Terphenyl-d14 (Surrogate)	0.1	% Recovery	91

AN420 - Phenols in soils Our Reference: Your Reference Date Sampled Sample Type Container Type	LOR --------- ---------	UNITS --------- ---------	ME105140-1 Split 1 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-2 Split 2 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-3 Split 3 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-4 Split 4 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-5 Split 5 21/01/2011 Soil 250mL Clear Glass Jar
Date Extracted			25/01/2011	25/01/2011	25/01/2011	25/01/2011	25/01/2011
Date Analysed			27/01/2011	27/01/2011	27/01/2011	27/01/2011	27/01/2011
Phenol	0.2	mg/Kg	<0.20	<0.20	<0.20	<0.20	<0.20
2-Chlorophenol	0.2	mg/Kg	<0.20	<0.20	<0.20	<0.20	<0.20
2-Methylphenol	0.2	mg/Kg	<0.20	<0.20	<0.20	<0.20	<0.20
3- & 4-Methylphenol	0.2	mg/Kg	<0.20	<0.20	<0.20	<0.20	<0.20
2-Nitrophenol	0.2	mg/Kg	<0.20	<0.20	<0.20	<0.20	<0.20
2,4-Dimethylphenol	0.2	mg/Kg	<0.20	<0.20	<0.20	<0.20	<0.20
2,4-Dichlorophenol	0.5	mg/Kg	<0.50	<0.50	<0.50	<0.50	<0.50
2,6-Dichlorophenol	0.2	mg/Kg	<0.20	<0.20	<0.20	<0.20	<0.20
4-Chloro-3-methylphenol	0.2	mg/Kg	<0.20	<0.20	<0.20	<0.20	<0.20
2,4,6-Trichlorophenol	0.5	mg/Kg	<0.50	<0.50	<0.50	<0.50	<0.50
2,4,5-Trichlorophenol	0.5	mg/Kg	<0.50	<0.50	<0.50	<0.50	<0.50
2,4-Dinitrophenol	1	mg/Kg	<1.0	<1.0	<1.0	<1.0	<1.0
4-Nitrophenol	0.5	mg/Kg	<0.50	<0.50	<0.50	<0.50	<0.50
2,3,4,6-Tetrachlorophenol	0.2	mg/Kg	<0.20	<0.20	<0.20	<0.20	<0.20
4,6-Dinitro-2-methylphenol	1	mg/Kg	<1.0	<1.0	<1.0	<1.0	<1.0
Pentachlorophenol	0.2	mg/Kg	<0.20	<0.20	<0.20	<0.20	<0.20
2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	1	mg/Kg	<1.0	<1.0	<1.0	<1.0	<1.0
Phenol-d6 (Surrogate)	0.1	% Recovery	106	111	108	106	93
2-Chlorophenol-d4 (Surrogate)	0.1	% Recovery	108	113	112	107	109
2,4,6-Tribromophenol (Surrogate)	0.1	% Recovery	91	96	98	88	90

AN420 - Phenols in soils Our Reference: Your Reference Date Sampled Sample Type Container Type	LOR --------- ---------	UNITS --------- ---------	ME105140-7 Split 7 21/01/2011 Soil 250mL Clear Glass Jar
Date Extracted			25/01/2011
Date Analysed			27/01/2011
Phenol	0.2	mg/Kg	<0.20
2-Chlorophenol	0.2	mg/Kg	<0.20
2-Methylphenol	0.2	mg/Kg	<0.20
3- & 4-Methylphenol	0.2	mg/Kg	<0.20
2-Nitrophenol	0.2	mg/Kg	<0.20
2,4-Dimethylphenol	0.2	mg/Kg	<0.20
2,4-Dichlorophenol	0.5	mg/Kg	<0.50
2,6-Dichlorophenol	0.2	mg/Kg	<0.20
4-Chloro-3-methylphenol	0.2	mg/Kg	<0.20
2,4,6-Trichlorophenol	0.5	mg/Kg	<0.50
2,4,5-Trichlorophenol	0.5	mg/Kg	<0.50
2,4-Dinitrophenol	1	mg/Kg	<1.0
4-Nitrophenol	0.5	mg/Kg	<0.50
2,3,4,6-Tetrachlorophenol	0.2	mg/Kg	<0.20
4,6-Dinitro-2-methylphenol	1	mg/Kg	<1.0
Pentachlorophenol	0.2	mg/Kg	<0.20
2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	1	mg/Kg	<1.0
Phenol-d6 (Surrogate)	0.1	% Recovery	93
2-Chlorophenol-d4 (Surrogate)	0.1	% Recovery	106
2,4,6-Tribromophenol (Surrogate)	0.1	% Recovery	85

Cyanide in Soil Our Reference: Your Reference Date Sampled Sample Type Container Type	LOR --------- ---------	UNITS --------- ---------	ME105140-1 Split 1 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-2 Split 2 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-3 Split 3 21/01/2011 Soil 250mL Clear Glass Jar
Date Extracted			31/01/2011	31/01/2011	31/01/2011
Date Analysed			31/01/2011	31/01/2011	31/01/2011
Total Cyanide	0.1	mg/kg	0.2	0.1	1.1

Inorganics Our Reference: Your Reference Date Sampled Sample Type Container Type	LOR --------- ---------	UNITS --------- ---------	ME105140-2 Split 2 21/01/2011 Soil 250mL Clear Glass Jar
Date Extracted			31/01/2011
Date Analysed			31/01/2011
Sulphate as SO_4	0.5	mg/Kg	71
Sulphide	0.1	mg/L	

Moisture Content Our Reference: Your Reference Date Sampled Sample Type Container Type	LOR --------- ---------	UNITS --------- ---------	ME105140-1 Split 1 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-2 Split 2 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-3 Split 3 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-4 Split 4 21/01/2011 Soil 250mL Clear Glass Jar	ME105140-5 Split 5 21/01/2011 Soil 250mL Clear Glass Jar
Date Extracted			25/01/2011	25/01/2011	25/01/2011	25/01/2011	25/01/2011
Date Analysed			27/01/2011	27/01/2011	27/01/2011	27/01/2011	27/01/2011
Moisture Content	0.1	%	9.0	8.0	21	4.0	17

Moisture Content Our Reference: Your Reference Date Sampled Sample Type Container Type	LOR --------- ---------	UNITS --------- ---------	ME105140-7 Split 7 21/01/2011 Soil 250mL Clear Glass Jar
Date Extracted			25/01/2011
Date Analysed			27/01/2011
Moisture Content	0.1	%	15

Method ID	Methodology Summary
AN410	The analysis of BTEX compounds in soils, sediments, sludges and waters by gas chromatography with mass spectrometric (GCMS) detection based on USEPA SW-846 method 8260B.
AN403	The analysis of C_6 - C_9 TRH compounds in soils, sediments, sludges and waters by gas chromatography with mass spectrometric (GC/MS) detection based on USEPA SW-846 method 8260B. The analysis of C_{10} - C_{40} TRH compounds in soils, sediments, sludges and waters by gas chromatography with flame ionisation (GC/FID) detection based on USEPA SW-846 method 8015C.
AN420	The analysis of SVOC including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols by GC/MS based on USEPA Method 8270C.
AN149	Sulphide - determined titrimetrically using an iodometric titration following a zinc acetate treatment to overcome interferences. Based on APHA 20th ED, 4500-S2-F.
AN002	Preparation of soils, sediments and sludges undergo analysis by either air drying, compositing, subsampling and 1:5 soil water extraction where required. Moisture content is determined by drying the sample at 105 ± 5°C.

QUALITY CONTROL AN410 - BTEX	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate %RPD	Spike Sm#	Matrix Spike % Recovery %RPD
Date Extracted				25/01/11	ME105140-1	25/01/2011 || 25/01/2011	LCS	25/01/11
Date Analysed				31/01/11	ME105140-1	31/01/2011 || 31/01/2011	LCS	31/01/11
Benzene	mg/Kg	0.1	AN410	<0.10	ME105140-1	<0.10 || <0.10	LCS	123%
Toluene	mg/Kg	0.1	AN410	<0.10	ME105140-1	<0.10 || <0.10	LCS	118%
Ethylbenzene	mg/Kg	0.1	AN410	<0.10	ME105140-1	<0.10 || <0.10	LCS	103%
meta- & para-Xylene	mg/Kg	0.2	AN410	<0.2	ME105140-1	<0.2 || <0.2	LCS	107%
ortho-Xylene	mg/Kg	0.1	AN410	<0.1	ME105140-1	<0.1 || <0.1	LCS	93%
Dibromofluoromethane (Surrogate)	% Recovery	0	AN410	80	ME105140-1	100 || 100 || RPD: 0	LCS	109%
1,2-Dichloroethane-d4 (Surrogate)	% recovery	0	AN410	90	ME105140-1	94 || 96 || RPD: 2	LCS	95%
Toluene-*d8 (Surrogate)*	% recovery	0	AN410	111	ME105140-1	92 || 93 || RPD: 1	LCS	104%
4-Bromofluorobenzene (Surrogate)	% recovery	0	AN410	84	ME105140-1	92 || 91 || RPD: 1	LCS	94%

QUALITY CONTROL AN403 - TRH C_6 - C_9	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate %RPD	Spike Sm#	Matrix Spike % Recovery %RPD
Date Extracted (C_6 - C_9)				25/01/11	ME105140 -1	25/01/2011 || 25/01/2011	LCS	25/01/11
Date Analysed (C_6 - C_9)				31/01/11	ME105140 -1	31/01/2011 || 31/01/2011	LCS	31/01/11
TRH C_6 - C_9	mg/Kg	20	AN403	<20	ME105140 -1	<20 || <20	LCS	131%

QUALITY CONTROL AN403 - TRH C_{10} - C_{36}	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate %RPD	Spike Sm#	Matrix Spike % Recovery %RPD
Date Extracted (C_{10} - C_{36})				25/01/11	ME105140 -1	25/01/2011 || 25/01/2011	LCS	25/01/11
Date Analysed (C_{10} - C_{36})				27/01/11	ME105140 -1	27/01/2011 || 27/01/2011	LCS	27/01/11
TRH C_{10} - C_{14}	mg/Kg	50	AN403	<50	ME105140 -1	<50 || <50	LCS	102%
TRH C_{15} - C_{28}	mg/Kg	100	AN403	<100	ME105140 -1	160 || <100	LCS	102%
TRH C_{29} - C_{36}	mg/Kg	100	AN403	<100	ME105140 -1	<100 || <100	LCS	106%

QUALITY CONTROL AN420 - PAHs in soils	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate %RPD	Spike Sm#	Matrix Spike % Recovery %RPD
Date Extracted				25/01/11	[NT]	[NT]	LCS	25/01/11
Date Analysed				27/01/11	[NT]	[NT]	LCS	27/01/11
Naphthalene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	97%
Acenaphthylene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	100%
Acenaphthene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	96%
Fluorene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	97%
Phenanthrene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	91%
Anthracene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	92%
Fluoranthene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	92%
Pyrene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	92%
Benz(a)anthracene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	91%
Chrysene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	89%
Benzo(b)fluoranthene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	95%
Benzo(k)fluoranthene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	98%
Benzo(a)pyrene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	96%
Indeno(1,2,3-cd)pyrene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	94%
Dibenz(a,h)anthracene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	94%
Benzo(g,h,i)perylene	mg/Kg	0.2	AN420	<0.2	[NT]	[NT]	LCS	93%
Total PAHs	mg/Kg	2	AN420	<2.00	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL AN420 - PAHs in soils	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate %RPD	Spike Sm#	Matrix Spike % Recovery %RPD
2-Fluorobiphenyl (Surrogate)	% Recovery	0.1	AN420	105	[NT]	[NT]	LCS	97%
Anthracene-d10 (Surrogate)	% Recovery	0.1	AN420	116	[NT]	[NT]	LCS	107%
4-Terphenyl-d14 (Surrogate)	% Recovery	0.1	AN420	97	[NT]	[NT]	LCS	88%

QUALITY CONTROL AN420 - Phenols in soils	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate %RPD	Spike Sm#	Matrix Spike % Recovery %RPD
Date Extracted				25/01/11	[NT]	[NT]	LCS	25/01/11
Date Analysed				27/01/11	[NT]	[NT]	LCS	27/01/11
Phenol	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	93%
2-Chlorophenol	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	90%
2-Methylphenol	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	101%
3- & 4-Methylphenol	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	102%
2-Nitrophenol	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	101%
2,4-Dimethylphenol	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	104%
2,4-Dichlorophenol	mg/Kg	0.5	AN420	<0.50	[NT]	[NT]	LCS	102%
2,6-Dichlorophenol	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	98%
4-Chloro-3-methylphenol	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	97%
2,4,6-Trichlorophenol	mg/Kg	0.5	AN420	<0.50	[NT]	[NT]	LCS	95%
2,4,5-Trichlorophenol	mg/Kg	0.5	AN420	<0.50	[NT]	[NT]	LCS	99%
2,4-Dinitrophenol	mg/Kg	1	AN420	<1.0	[NT]	[NT]	[NR]	[NR]
4-Nitrophenol	mg/Kg	0.5	AN420	<0.50	[NT]	[NT]	LCS	78%
2,3,4,6-Tetrachlorophenol	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	106%
4,6-Dinitro-2-methylphenol	mg/Kg	1	AN420	<1.0	[NT]	[NT]	LCS	72%
Pentachlorophenol	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	91%
2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	mg/Kg	1	AN420	<1.0	[NT]	[NT]	LCS	81%
Phenol-d6 (Surrogate)	% Recovery	0.1	AN420	74	[NT]	[NT]	LCS	104%
2-Chlorophenol-d4 (Surrogate)	% Recovery	0.1	AN420	98	[NT]	[NT]	LCS	95%
2,4,6-Tribromophenol (Surrogate)	% Recovery	0.1	AN420	93	[NT]	[NT]	LCS	100%

QUALITY CONTROL Cyanide in Soil	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate %RPD	Spike Sm#	Matrix Spike % Recovery %RPD
Date Extracted				31/01/2011	[NT]	[NT]	LCS	31/01/2011
Date Analysed				31/01/2011	[NT]	[NT]	LCS	31/01/2011
Total Cyanide	mg/kg	0.1		<0.1	[NT]	[NT]	LCS	82%

QUALITY CONTROL Inorganics	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate %RPD	Spike Sm#	Matrix Spike % Recovery %RPD
Date Extracted				31/01/2011	[NT]	[NT]	LCS	31/01/2011
Date Analysed				31/01/2011	[NT]	[NT]	LCS	31/01/2011
Sulphate as SO_4	mg/Kg	0.5		<0.5	[NT]	[NT]	LCS	101%
Sulphide	mg/L	0.1	AN149		[NT]	[NT]	LCS	[NT]

QUALITY CONTROL Moisture Content	UNITS	LOR	METHOD	Blank
Date Extracted				25/01/11
Date Analysed				26/01/11
Moisture Content	%	0.1	AN002	<0.1

QUALITY CONTROL AN410 - BTEX	UNITS	Dup. Sm#	Duplicate %RPD	Spike Sm#	Matrix Spike % Recovery %RPD
Date Extracted		[NT]	[NT]	ME105140-7	25/01/11
Date Analysed		[NT]	[NT]	ME105140-7	31/01/11
Benzene	mg/Kg	[NT]	[NT]	ME105140-7	120%
Toluene	mg/Kg	[NT]	[NT]	ME105140-7	112%
Ethylbenzene	mg/Kg	[NT]	[NT]	[NR]	[NR]
meta- & para-Xylene	mg/Kg	[NT]	[NT]	[NR]	[NR]
ortho-Xylene	mg/Kg	[NT]	[NT]	[NR]	[NR]
Dibromofluoromethane (Surrogate)	% Recovery	[NT]	[NT]	ME105140-7	98%
1,2-Dichloroethane-d4 (Surrogate)	% recovery	[NT]	[NT]	ME105140-7	101%
Toluene-*d8 (Surrogate)*	% recovery	[NT]	[NT]	ME105140-7	95%
4-Bromofluorobenzene (Surrogate)	% recovery	[NT]	[NT]	ME105140-7	73%

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QUALITY CONTROL AN403 - TRH C_6 - C_9	UNITS	Dup. Sm#	Duplicate %RPD	Spike Sm#	Matrix Spike % Recovery %RPD
Date Extracted (C_6 - C_9)		[NT]	[NT]	ME105140-7	25/01/11
Date Analysed (C_6 - C_9)		[NT]	[NT]	ME105140-7	31/01/11
TRH C_6 - C_9	mg/Kg	[NT]	[NT]	ME105140-7	115%

QUALITY CONTROL AN403 - TRH C_{10} - C_{36}	UNITS	Dup. Sm#	Duplicate %RPD	Spike Sm#	Matrix Spike % Recovery %RPD
Date Extracted (C_{10} - C_{36})		[NT]	[NT]	ME105140-7	25/01/11
Date Analysed (C_{10} - C_{36})		[NT]	[NT]	ME105140-7	27/01/11
TRH C_{10} - C_{14}	mg/Kg	[NT]	[NT]	ME105140-7	105%
TRH C_{15} - C_{28}	mg/Kg	[NT]	[NT]	ME105140-7	97%
TRH C_{29} - C_{36}	mg/Kg	[NT]	[NT]	ME105140-7	81%

Result Codes

[INS]	:	Insufficient Sample for this test	[RPD]	:	Relative Percentage Difference
[NR]	:	Not Requested	*	:	Not part of NATA Accreditation
[NT]	:	Not tested	[N/A]	:	Not Applicable

Report Comments

Cyanide, Sulphate and Sulphide analysed by SGS Sydney, report no. SE84937.
NATA Corporate Accreditation No. 2562, Site No 2076

Note: Test results are not corrected for recovery (excluding Dioxins/Furans* and PAH in XAD and PUF).
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This document is to be treated as an original within the meaning of UCP 600. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instructions, if any.
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Quality Control Protocol

Method Blank: An analyte free matrix to which all reagents are added in the same volume or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. A method blank is prepared every 20 samples.
Duplicate: A separate portion of a sample being analysed that is treated the same as the other samples in the batch. One duplicate is processed at least every 10 samples.
Surrogate Spike: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are added to samples before extraction to monitor extraction efficiency and percent recovery in each sample.
Internal Standard: Added to all samples requiring analysis for organics (where relevant) or metals by ICP after the extraction/digestion process; the compounds/elements serve to give a standard of retention time and/or response, which is invariant from run-to-run with the instruments.
Laboratory Control Sample: A known matrix spiked with compound(s) representative of the target analytes. It is used to document laboratory performance. When the results of the matrix spike analysis indicates a potential problem due to the sample matrix itself, the LCS results are used to verify that the laboratory can perform the analysis in a clean matrix.
Matrix Spike: An aliquot of sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Quality Acceptance Criteria

Unless otherwise specified in the test method, the following general acceptance criteria apply:

Method Blanks:	<LOR
Duplicates:	<5 x LOR: No RPD criteria applied.
	>5 x LOR: 0-30% RPD is accepted.
LCS's:	Determined by Control Charts.
	Where control charts have not been developed, the Matrix Spikes criteria apply.
Matrix Spikes:	70-130% recovery is accepted for metals / inorganics.
	60-140% is accepted for organics.
Surrogates:	60-130% recovery is accepted for BTEX.
	70-130% recovery is accepted for other organics.

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WORLD RECOGNISED ACCREDITATION

ANALYTICAL REPORT

21 February 2011

Environmental Earth Sciences
Level 1
98 Maribyrnong St
FOOTSCRAY
VIC 3011

Attention: dj

Your Reference: 210074 Albert Park
Report Number: ME105371

SAMPLE TYPE:	1 soil
SAMPLES RECEIVED:	15/02/2011
PRELIMINARY REPORT EMAILED:	Not Issued

These samples were analysed in accordance with your written instructions.
A copy of the instructions is attached with the analytical report.

For and on behalf of:
SGS AUSTRALIA PTY LTD

Business Manager:	Sue Durukan	Sue.Durukan@sgs.com
Laboratory Manager:	Dr Aaron D. Stott	Aaron.Stott@sgs.com

This report has been authorised by the undersigned:

Dr Aaron Stott
Site Manager

Analisa Mathrick
Organics Signatory

AN410 - BTEX Our Reference: Your Reference Date Sampled Sample Type Container Type	LOR --------- ---------	UNITS --------- ---------	ME105371-1 Split8 10/02/2011 Soil 250ml jar
Date Extracted			15/02/2011
Date Analysed			15/02/2011
Benzene	0.1	mg/Kg	<0.10
Toluene	0.1	mg/Kg	<0.10
Ethylbenzene	0.1	mg/Kg	<0.10
meta- & para-Xylene	0.2	mg/Kg	<0.2
ortho-Xylene	0.1	mg/Kg	<0.1
Dibromofluoromethane (Surrogate)	0	% Recovery	73
1,2-Dichloroethane-d4 (Surrogate)	0	% recovery	64
Toluene-*d8 (Surrogate)*	0	% recovery	75
4-Bromofluorobenzene (Surrogate)	0	% recovery	64

AN403 - TRH C_6 - C_9 Our Reference: Your Reference Date Sampled Sample Type Container Type	LOR --------- ---------	UNITS --------- ---------	ME105371-1 Split8 10/02/2011 Soil 250ml jar
Date Extracted (C_6 - C_9)			15/02/2011
Date Analysed (C_6 - C_9)			15/02/2011
TRH C_6 - C_9	20	mg/Kg	<20

AN403 - TRH C_{10} - C_{36} Our Reference: Your Reference Date Sampled Sample Type Container Type	LOR --------- ---------	UNITS --------- ---------	ME105371-1 Split8 10/02/2011 Soil 250ml jar
Date Extracted (C_{10} - C_{36})			15/02/2011
Date Analysed (C_{10} - C_{36})			15/02/2011
TRH C_{10} - C_{14}	50	mg/Kg	<100
TRH C_{15} - C_{28}	100	mg/Kg	<200
TRH C_{29} - C_{36}	100	mg/Kg	<200

AN420 - PAHs in soils Our Reference: Your Reference Date Sampled Sample Type Container Type	LOR --------- ---------	UNITS --------- ---------	ME105371-1 Split8 10/02/2011 Soil 250ml jar
Date Extracted			15/02/2011
Date Analysed			15/02/2011
Naphthalene	0.2	mg/Kg	<0.4
Acenaphthylene	0.2	mg/Kg	0.80
Acenaphthene	0.2	mg/Kg	<0.4
Fluorene	0.2	mg/Kg	<0.4
Phenanthrene	0.2	mg/Kg	2.6
Anthracene	0.2	mg/Kg	0.94
Fluoranthene	0.2	mg/Kg	5.6
Pyrene	0.2	mg/Kg	5.4
Benz(a)anthracene	0.2	mg/Kg	2.6
Chrysene	0.2	mg/Kg	2.4
Benzo(b)fluoranthene	0.2	mg/Kg	3.4
Benzo(k)fluoranthene	0.2	mg/Kg	1.2
Benzo(a)pyrene	0.2	mg/Kg	2.8
Indeno(1,2,3-cd)pyrene	0.2	mg/Kg	1.3
Dibenz(a,h)anthracene	0.2	mg/Kg	<0.4
Benzo(g,h,i)perylene	0.2	mg/Kg	1.7
Total PAHs	2	mg/Kg	30.68
2-Fluorobiphenyl (Surrogate)	0.1	% Recovery	[ND]
Anthracene-d10 (Surrogate)	0.1	% Recovery	[ND]
4-Terphenyl-d14 (Surrogate)	0.1	% Recovery	[ND]

Moisture Content Our Reference: Your Reference Date Sampled Sample Type Container Type	LOR --------- ---------	UNITS --------- ---------	ME105371-1 Split8 10/02/2011 Soil 250ml jar
Date Extracted			15/02/2011
Date Analysed			16/02/2011
Moisture Content	0.1	%	16

Method ID	Methodology Summary
AN410	The analysis of BTEX compounds in soils, sediments, sludges and waters by gas chromatography with mass spectrometric (GCMS) detection based on USEPA SW-846 method 8260B.
AN403	The analysis of C_6 - C_9 TRH compounds in soils, sediments, sludges and waters by gas chromatography with mass spectrometric (GC/MS) detection based on USEPA SW-846 method 8260B. The analysis of C_{10} - C_{40} TRH compounds in soils, sediments, sludges and waters by gas chromatography with flame ionisation (GC/FID) detection based on USEPA SW-846 method 8015C.
AN420	The analysis of SVOC including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols by GC/MS based on USEPA Method 8270C.
AN002	Preparation of soils, sediments and sludges undergo analysis by either air drying, compositing, subsampling and 1:5 soil water extraction where required. Moisture content is determined by drying the sample at 105 ± 5°C.

QUALITY CONTROL AN410 - BTEX	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate %RPD	Spike Sm#	Matrix Spike % Recovery %RPD
Date Extracted				15/02/11	[NT]	[NT]	LCS	15/02/11
Date Analysed				15/02/11	[NT]	[NT]	LCS	15/02/11
Benzene	mg/Kg	0.1	AN410	<0.10	[NT]	[NT]	LCS	110%
Toluene	mg/Kg	0.1	AN410	<0.10	[NT]	[NT]	LCS	109%
Ethylbenzene	mg/Kg	0.1	AN410	<0.10	[NT]	[NT]	LCS	99%
meta- & para-Xylene	mg/Kg	0.2	AN410	<0.2	[NT]	[NT]	LCS	100%
ortho-Xylene	mg/Kg	0.1	AN410	<0.1	[NT]	[NT]	LCS	89%
Dibromofluoromethane (Surrogate)	% Recovery	0	AN410	102	[NT]	[NT]	LCS	101%
1,2-Dichloroethane-d4 (Surrogate)	% recovery	0	AN410	95	[NT]	[NT]	LCS	102%
Toluene-*d8 (Surrogate)*	% recovery	0	AN410	94	[NT]	[NT]	LCS	108%
4-Bromofluorobenzene (Surrogate)	% recovery	0	AN410	111	[NT]	[NT]	LCS	93%

QUALITY CONTROL AN403 - TRH C_6 - C_9	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate %RPD	Spike Sm#	Matrix Spike % Recovery %RPD
Date Extracted (C_6 - C_9)				15/02/11	[NT]	[NT]	LCS	15/02/11
Date Analysed (C_6 - C_9)				15/02/11	[NT]	[NT]	LCS	15/02/11
TRH C_6 - C_9	mg/Kg	20	AN403	<20	[NT]	[NT]	LCS	116%

QUALITY CONTROL AN403 - TRH C_{10} - C_{36}	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate %RPD	Spike Sm#	Matrix Spike % Recovery %RPD
Date Extracted (C_{10} - C_{36})				15/02/11	[NT]	[NT]	LCS	15/02/11
Date Analysed (C_{10} - C_{36})				15/02/11	[NT]	[NT]	LCS	15/02/11
TRH C_{10} - C_{14}	mg/Kg	50	AN403	<50	[NT]	[NT]	LCS	106%
TRH C_{15} - C_{28}	mg/Kg	100	AN403	<100	[NT]	[NT]	LCS	102%
TRH C_{29} - C_{36}	mg/Kg	100	AN403	<100	[NT]	[NT]	LCS	86%

PROJECT: 210074 Albert Park **REPORT NO: ME105371**

QUALITY CONTROL AN420 - PAHs in soils	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate %RPD	Spike Sm#	Matrix Spike % Recovery %RPD
Date Extracted				15/02/11	[NT]	[NT]	LCS	15/02/11
Date Analysed				15/02/11	[NT]	[NT]	LCS	15/02/11
Naphthalene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	101%
Acenaphthylene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	102%
Acenaphthene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	110%
Fluorene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	111%
Phenanthrene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	96%
Anthracene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	94%
Fluoranthene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	95%
Pyrene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	92%
Benz(a)anthracene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	91%
Chrysene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	76%
Benzo(b)fluoranthene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	96%
Benzo(k)fluoranthene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	98%
Benzo(a)pyrene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	96%
Indeno(1,2,3-cd)pyrene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	95%
Dibenz(a,h)anthracene	mg/Kg	0.2	AN420	<0.20	[NT]	[NT]	LCS	88%
Benzo(g,h,i)perylene	mg/Kg	0.2	AN420	<0.2	[NT]	[NT]	LCS	96%
Total PAHs	mg/Kg	2	AN420	<2.00	[NT]	[NT]	[NR]	[NR]
2-Fluorobiphenyl (Surrogate)	% Recovery	0.1	AN420	96	[NT]	[NT]	LCS	106%
Anthracene-d10 (Surrogate)	% Recovery	0.1	AN420	84	[NT]	[NT]	LCS	130%
4-Terphenyl-d14 (Surrogate)	% Recovery	0.1	AN420	85	[NT]	[NT]	LCS	125%

PROJECT: 210074 Albert Park **REPORT NO: ME105371**

QUALITY CONTROL Moisture Content	UNITS	LOR	METHOD	Blank
Date Extracted				15/02/11
Date Analysed				16/02/11
Moisture Content	%	0.1	AN002	<0.1

Result Codes

[INS]	:	Insufficient Sample for this test	[RPD]	:	Relative Percentage Difference
[NR]	:	Not Requested	*	:	Not part of NATA Accreditation
[NT]	:	Not tested	[N/A]	:	Not Applicable

Report Comments

AN403/AN420- sample ME105371-1 was diluted prior to analysis due to matrix interference.
LOR levels were raised accordingly.
NATA Corporate Accreditation No. 2562, Site No 2076

Note: Test results are not corrected for recovery (excluding Dioxins/Furans* and PAH in XAD and PUF).

Quality Control Protocol

Method Blank: An analyte free matrix to which all reagents are added in the same volume or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. A method blank is prepared every 20 samples.
Duplicate: A separate portion of a sample being analysed that is treated the same as the other samples in the batch. One duplicate is processed at least every 10 samples.
Surrogate Spike: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are added to samples before extraction to monitor extraction efficiency and percent recovery in each sample.
Internal Standard: Added to all samples requiring analysis for organics (where relevant) or metals by ICP after the extraction/digestion process; the compounds/elements serve to give a standard of retention time and/or response, which is invariant from run-to-run with the instruments.
Laboratory Control Sample: A known matrix spiked with compound(s) representative of the target analytes. It is used to document laboratory performance. When the results of the matrix spike analysis indicates a potential problem due to the sample matrix itself, the LCS results are used to verify that the laboratory can perform the analysis in a clean matrix.
Matrix Spike: An aliquot of sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Quality Acceptance Criteria

Unless otherwise specified in the test method, the following general acceptance criteria apply:

Method Blanks:	<LOR
Duplicates:	<5 x LOR: No RPD criteria applied.
	>5 x LOR: 0-30% RPD is accepted.
LCS's:	Determined by Control Charts.
	Where control charts have not been developed, the Matrix Spikes criteria apply.
Matrix Spikes:	70-130% recovery is accepted for metals / inorganics.
	60-140% is accepted for organics.
Surrogates:	60-130% recovery is accepted for BTEX.
	70-130% recovery is accepted for other organics.

SAMPLE RECEIPT ADVICE (SRA)

27 January 2011

Client Details			**Laboratory Details**		
Requested By	:	**D James**			
Client	:	Environmental Earth Sciences	Laboratory	:	SGS Environmental Services
Contact	:	D James	Manager	:	Dr Aaron Stott
Address	:	Level 1 98 Maribyrnong St FOOTSCRAY VIC 3011	Address	:	34 Norfolk Court Coburg VIC 3058
Email	:	djames@eesi.biz	Email	:	au.multilab.receipt@sgs.com
Telephone	:	+61 3 9687 1666	Telephone	:	61 3 9350 4800
Facsimile	:	+61 3 9687 1844	Facsimile	:	61 3 9350 4871
Project	:	210074- Albert Park	Report No	:	**ME105140**
Order Number	:		No. of Samples	:	7
Samples	:	7 Soils	Due Date	:	2/02/2011

Date Instructions Received	:	25/01/2011
Sample Receipt Date	:	25/01/2011

Samples received in good order	:	YES	Samples received in correct containers	:	YES
Samples received without headspace	:	N/A	Sufficient quantity supplied	:	YES
Upon receipt sample temperature	:	Cool	Cooling Method	:	Ice Pack
Sample containers provided by	:	SGS	Samples clearly Labelled	:	YES
Turnaround time requested	:	Standard	Completed documentation received	:	YES

Samples will be held for 1 month from date of receipt of samples, unless otherwise instructed.

Comments

SGS Australia Pty Ltd | 34 Norfolk Court | Coburg Victoria 3058 | t +61 (0)3 9350 4800 | www.au.sgs.com

ABN 44 000 964 278 Member of SGS Group

SAMPLE RECEIPT ADVICE (SRA) - continued

Client : Environmental Earth Sciences
Project : 210074- Albert Park

Report No : ME105140

Summary of Samples and Requested Analysis

The table below represents SGS Environmental Service's understanding and interpretation of the customer supplied sample request.
Please indicate as soon as possible if your request differs from these details.
Testing shall commence immediately as per this table, unless the customer intervenes with a correction prior to testing.

Sample No.	Description	AN410 - BTEX	AN403 - TRH C6 - C9	AN403 - TRH C10 - C36	AN420 - PAHs in soils	AN420 - Phenols in soils	Cyanide in Soil	Inorganics	Moisture Content
1	Split 1	X	X	X	X	X	X		X
2	Split 2	X	X	X	X	X	X	X	X
3	Split 3	X	X	X	X	X	X		X
4	Split 4	X	X	X	X	X			X
5	Split 5	X	X	X	X	X			X
7	Split 7	X	X	X	X	X			X

SAMPLE RECEIPT ADVICE (SRA)

15 February 2011

Client Details

Requested By	:	**dj**
Client	:	Environmental Earth Sciences
Contact	:	David James
Address	:	Level 1 98 Maribyrnong St FOOTSCRAY VIC 3011
Email	:	djames@eesi.biz
Telephone	:	+61 3 9687 1666
Facsimile	:	+61 3 9687 1844
Project	:	210074 Albert Park
Order Number	:	
Samples	:	1 soil

Laboratory Details

Laboratory	:	SGS Environmental Services
Manager	:	Dr Aaron Stott
Address	:	34 Norfolk Court Coburg VIC 3058
Email	:	au.multilab.receipt@sgs.com
Telephone	:	61 3 9350 4800
Facsimile	:	61 3 9350 4871
Report No	:	**ME105371**
No. of Samples	:	1
Due Date	:	22/02/2011

Date Instructions Received	:	15/02/2011
Sample Receipt Date	:	15/02/2011

Samples received in good order	:	YES	Samples received in correct containers	:	YES
Samples received without headspace	:	YES	Sufficient quantity supplied	:	YES
Upon receipt sample temperature	:	Cool	Cooling Method	:	Ice
Sample containers provided by	:	SGS	Samples clearly Labelled	:	YES
Turnaround time requested	:	Standard	Completed documentation received	:	YES

Samples will be held for 1 month from date of receipt of samples, unless otherwise instructed.

Comments

SGS Australia Pty Ltd | 34 Norfolk Court | Coburg Victoria 3058 | t +61 (0)3 9350 4800 | www.au.sgs.com

ABN 44 000 964 278 Member of SGS Group

SAMPLE RECEIPT ADVICE (SRA) - continued

Client : Environmental Earth Sciences
Project : 210074 Albert Park

Report No : ME105371

Summary of Samples and Requested Analysis

The table below represents SGS Environmental Service's understanding and interpretation of the customer supplied sample request.
Please indicate as soon as possible if your request differs from these details.
Testing shall commence immediately as per this table, unless the customer intervenes with a correction prior to testing.

Sample No.	Description	AN410 - BTEX	AN403 - TRH C6 - C9	AN403 - TRH C10 - C36	AN420 - PAHs in soils	Moisture Content
1	Split8	X	X	X	X	X