

1A V

KAMER VAN KOOPHANDEL
ROTTERDAM

To whom it may concern

► KANTOOR ROTTERDAM
BEURSPLEIN 37
POSTBUS 30025, 3001 DA ROTTERDAM
T (010) 405 77 77 F (010) 414 57 54

ONS KERMERK

--
BETREFFENDE
verklaring

UW KERMERK

--
BIJLAGEN
--

DATUM

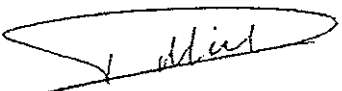
21 januari 2002
DOORKIESNUMMER
010-4027871

DECLARATION

The Chamber of Commerce for Rotterdam declares that the name of the corporation of **Duracarb B.V.** by deed of amendment of articles of association on March 8th 1996 has been changed in: **Iscar International B.V.** and secondly by deed of amendment of the articles of association on May 7th 2001 before Mr. M Bijkerk, notary at Amsterdam, in: **IMC Holdings B.V.** and further on the name of the company has been changed again by deed of amendment of the articles of association on July 23th 2001 before Mr. M. Bijkerk, notary at Amsterdam in: **IMC International Metalworking Companies B.V.**

IMC International Metalworking Companies B.V. is statutory situated at Gouda, business address 2803 PS Gouda, Zwolleweg 6 and is entered into our Commercial Register under number: 13010867.

Chamber of Commerce


R. van Vliet
Manager Registerproducten

KANTOREN IN: DORDRECHT, GOUDA, ROTTERDAM

RABOBANK 36.21.75.063
POSTBANK 689 40

INZAGE HANDELSREGISTER: T 0900 - 1234567 (f1.50 p/m)
INTERNET: WWW.KVK.NL
E-MAIL: POST@ROTTERDAM.KVK.NL

ALLE INKENTINGEN WORDEN ZO NAUWKEURIG MOGELIJK GECEVEN, ZONDER AANSPRAKELAARDE ONZELFZIGS.
KAMER VAN KOOPHANDEL EN FABRIEKEN VOOR ROTTERDAM



KAMER VAN KOOPHANDEL
ROTTERDAM

File number: 13010867

Page 00001

English translation of an extract from the commercial register of the
Chamber of Commerce and Industries for Rotterdam

Legal person:

Legal form	:Besloten Vennootschap (Private Limited Liability Company)
Name	:IMC International Metalworking Companies B.V.
Statutory seat	:Gouda
First registration in the commercial register	:02-07-1962
Incorporation deed	:21-02-1962
Deed of latest amendment of articles	:23-07-2001
Authorized capital	:EUR 435.629,01
Issued capital	:EUR 399.326,59
Paid up capital	:EUR 399.326,59 (Capital converted into euro acc. to art. 2:178c B.W.)

Undertaking:

Tradename(s)	:IMC International Metalworking Companies B.V.
Address	:Zwolleweg 6, 2803PS Gouda
Mailing address	:Postbus 198, 2800AD Gouda
Telephone number	:0182-559992
Fax number	:0182-570278
Date of establishment	:21-02-1962
The private company conducts the undertaking since	:16-03-1972
Description of business conducted	:Holding and finance company
Employees	:2

Single shareholder:

Name	:Iscar Ltd.
Registered in	:Midgal Tefen te Israël
Single shareholder since	:21-11-1991

Director(s):

Name	:Harpaz, Jacob
Date and place of birth	:13-03-1951, Haifa, Israel

27,32 13-05-2003

Page 00002 follows.



KAMER VAN KOOPHANDEL
ROTTERDAM

File number: 13010867

Page 00002

Address	:Kvar Vradim 25147, Hiram st. 5, Israel
Date of entry into office	:01-01-1996
Title	:Directeur
Powers	:Authorised jointly (with other directors, see articles)
Date of (present) representative authority	:01-05-2000
Name	:Buchner, Hans-Jurgen
Date and place of birth	:06-01-1954, Munden, Federal Republic of Germany
Address	:Gartenstrasse 21, Bischweier 76476, Germany
Date of entry into office	:01-05-2000
Title	:Directeur
Powers	:Authorised jointly (with other directors, see articles)
Name	:Vandenbruggen, Johnny
Date and place of birth	:19-12-1960, Ixelles, Belgium
Address	:Rue des platanes 6 1421 Ophain, Bois-Seigneur-Isaac, Belgium
Date of entry into office	:01-04-2001
Title	:Directeur
Powers	:Authorised jointly (with other directors, see articles)

Authorized signatory(signatories):

Name	:van Houwelingen, Stephanus
Date and place of birth	:28-11-1969, Gouda
Address	:Westeinde 40, 2841BW Moordrecht
Date of entry into office	:29-05-2002
Powers	:Restricted power of attorney

Issued by the chamber of commerce

12/00 13-05-2003

Page 00003 follows.

KAMER VAN KOOPHANDEL ROTTERDAM
BLAAK 40, 3011 TA ROTTERDAM
T (010) 402 77 77 F (010) 414 57 54
INZAGE HANDELSREGISTER
T 0900-1234567 (€ 0,70 PER MINUUT)
INTERNET: WWW.KVK.NL



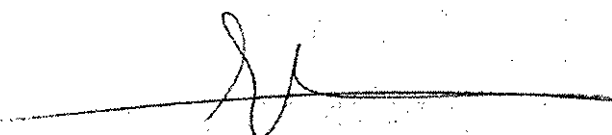
KAMER VAN KOOPHANDEL
ROTTERDAM

File number: 13010867

Page 00003

39,32

Rotterdam, 13-05-2003



E. Theodossiou-Teetenburg

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INZAGE HANDELSREGISTER
T 0900-1234567 (€ 0,70 PER MINUUT)
INTERNET: WWW.KVK.NL

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

11/8/2014 8:37AM

FOLIO: 2/818038

First Title(s): OLD SYSTEM
Prior Title(s): 232-233/1039 A-B/376165

Recorded	Number	Type of Instrument	C.T. Issue
14/7/1992	DP818038	DEPOSITED PLAN	FOLIO CREATED EDITION 1
27/4/1993	I282195	DISCHARGE OF MORTGAGE	
27/4/1993	I282196	TRANSFER	
27/4/1993	I282197	MORTGAGE	EDITION 2
14/12/1999	6421781	CHANGE OF NAME	EDITION 3
10/12/2002	9202234	DISCHARGE OF MORTGAGE	
10/12/2002	9202235	TRANSFER	
10/12/2002	9202236	MORTGAGE	EDITION 4
8/6/2005	AB536880	DISCHARGE OF MORTGAGE	
8/6/2005	AB536881	MORTGAGE	EDITION 5
9/8/2011	AG420612	CAVEAT	
27/9/2011	AG450076	APPLICATION FOR PREPARATION OF LAPSING NOTICE	

*** END OF SEARCH ***

PRINTED ON 11/8/2014

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

8/8/2014 12:59PM

FOLIO: 3/818038

First Title(s): OLD SYSTEM
Prior Title(s): 232-233/1039

Recorded	Number	Type of Instrument	C.T. Issue
14/7/1992	DP818038	DEPOSITED PLAN	FOLIO CREATED EDITION 1
13/4/1993	I251745	TRANSFER	EDITION 2
20/9/1993	I657528	MORTGAGE	EDITION 3
1/2/1995	U982287	DISCHARGE OF MORTGAGE	
1/2/1995	U982288	TRANSFER	EDITION 4
3/9/1997	3381069	REQUEST	EDITION 5
18/3/2005	AB358154	TRANSFER	EDITION 6
3/12/2009	AF142218	APPLICATION FOR REPLACEMENT CERTIFICATE OF TITLE	EDITION 7
21/1/2010	AF264732	TRANSFER	
21/1/2010	AF264733	MORTGAGE	EDITION 8
9/8/2011	AG420612	CAVEAT	
27/9/2011	AG450076	APPLICATION FOR PREPARATION OF LAPSING NOTICE	
19/10/2012	AH311434	DISCHARGE OF MORTGAGE	
19/10/2012	AH311435	MORTGAGE	EDITION 9

*** END OF SEARCH ***

PRINTED ON 8/8/2014

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 2/818038

SEARCH DATE -----	TIME -----	EDITION NO -----	DATE -----
8/8/2014	1:00 PM	5	8/6/2005

LAND

LOT 2 IN DEPOSITED PLAN 818038
AT VILLAWOOD
LOCAL GOVERNMENT AREA FAIRFIELD
PARISH OF ST JOHN COUNTY OF CUMBERLAND
TITLE DIAGRAM DP818038

FIRST SCHEDULE

NKM HOLDINGS PTY LIMITED (T 9202235)

SECOND SCHEDULE (4 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 EASEMENT(S) AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE
DIAGRAM CREATED BY:
S720377 EASEMENT FOR ELECTRICITY PURPOSES
DP818038 EASEMENT TO DRAIN WATER 1 WIDE, 1.23 WIDE AND
VARIABLE
- 3 EASEMENT(S) APPURTENANT TO THE LAND ABOVE DESCRIBED CREATED BY:
DP818038 EASEMENT TO DRAIN WATER ONE WIDE AND VARIABLE
- 4 AB536881 MORTGAGE TO NATIONAL AUSTRALIA BANK LIMITED

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

PRINTED ON 8/8/2014

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register.

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 3/818038

SEARCH DATE -----	TIME -----	EDITION NO -----	DATE -----
8/8/2014	1:00 PM	9	19/10/2012

LAND

LOT 3 IN DEPOSITED PLAN 818038
AT VILLAWOOD
LOCAL GOVERNMENT AREA FAIRFIELD
PARISH OF ST JOHN COUNTY OF CUMBERLAND
TITLE DIAGRAM DP818038

FIRST SCHEDULE

NKM HOLDINGS PTY LIMITED (T AF264732)

SECOND SCHEDULE (5 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 EASEMENT(S) APPURTENANT TO THE LAND ABOVE DESCRIBED CREATED BY:
DP818038 EASEMENT TO DRAIN WATER ONE WIDE AND VARIABLE
DP818038 EASEMENT TO DRAIN WATER 1 WIDE, 1.23 WIDE &
VARIABLE
- 3 3381069 RESTRICTION(S) ON THE USE OF LAND
- 4 3381069 POSITIVE COVENANT
- 5 AH311435 MORTGAGE TO NATIONAL AUSTRALIA BANK LIMITED

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

PRINTED ON 8/8/2014

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APPENDIX D

WORKCOVER NSW INFORMATION



WorkCover

WorkCover NSW
92-100 Donnison Street, Gosford, NSW 2250
Locked Bag 2906, Lisarow, NSW 2252
T 02 4321 5000 F 02 4325 4145
Customer Service Centre 13 10 50
DX 731 Sydney workcover.nsw.gov.au

Our Ref: D14/100055
Your Ref: David Yonge

7 August 2014

Attention: David Yonge
SMEC Testing Services Pty Ltd
PO BOX 6989
Wetherill Park NSW 2164

Dear Mr Yonge,

RE SITE: 61-63 & 65-67 Mandarin St Fairfield East NSW

I refer to your site search request received by WorkCover NSW on 5 August 2014 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

If you have any further queries please contact the Dangerous Goods Licensing Team on (02) 4321 5500.

Yours Sincerely

Brent Jones
Senior Licensing Officer
Dangerous Goods Team



APPENDIX E

SOIL PROFILE LOG SHEETS

Client: Merhis Pty Limited			Project No. 19852/4618C		BOREHOLE NO.: BH 1		
Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood			Date : August 19, 2014				
Location: Refer to Drawing No. 14/1786/2			Logged: JK/AC		Sheet 1 of 1		
W A T E R L E V E L	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)		S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	BH1_0.2	0.5	SILTY SANDY CLAY: dark brown with oragne brown, fine to medium grained, low plasticity, gravel PID = 0.5				
	BH1_0.7	1.0	FILL SILTY CLAY: yellow brown with light grey, medium to high plasticity PID = 0.3				
		1.5	BOREHOLE DISCONTINUED AT 1.0 M				
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample					Contractor: STS		
WT - level of water table or free water N - Standard Penetration Test (SPT)					Equipment: Edson RP70		
See explanation sheets for meaning of all descriptive terms and symbols					Hole Diameter (mm): 100		
					Angle from Vertical (°) 0		

Client: Merhis Pty Limited			Project No. 19852/4618C		BOREHOLE NO.: BH 2		
Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood			Date : August 19, 2014				
Location: Refer to Drawing No. 14/1786/2			Logged: JK/AC		Sheet 1 of 1		
W A T E R L E V E L	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)		S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	BH2_0.2	0.5	GRAVELLY SILTY CLAY: dark brown with orange brown and light grey, medium plasticity, gravel/brick PID = 0.6				
			FILL				
	BH2_1.0	1.0	CLAYEY GRAVEL: dark grey with orange brown, gravel/brick PID = 0.4				
			FILL				
			BOREHOLE DISCONTINUED AT 1.0 M				
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample					Contractor: STS		
WT - level of water table or free water N - Standard Penetration Test (SPT)					Equipment: Edson RP70		
See explanation sheets for meaning of all descriptive terms and symbols					Hole Diameter (mm): 100		
					Angle from Vertical (°) 0		

[illegible]

SMEC Testing Services Pty Ltd			GEOTECHNICAL LOG - NON CORE BOREHOLE				
Client: Merhis Pty Limited			Project No. 19852/4618C		BOREHOLE NO.: BH 4		
Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood			Date : August 19, 2014				
Location: Refer to Drawing No. 14/1786/2			Logged: JK/AC		Sheet 1 of 1		
W A T E R L E	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)		S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	BH4_0.2		SILTY SANDY CLAY: dark brown, low plasticity, fine grained				
			PID = 0.1				
			TOPSOIL				
			BOREHOLE DISCONTINUED AT 0.2 M				
		0.5					
		1.0					
		1.5					
		2.0					
		2.5					
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample					Contractor: STS		
WT - level of water table or free water N - Standard Penetration Test (SPT)					Equipment: Edson RP70		
See explanation sheets for meaning of all descriptive terms and symbols					Hole Diameter (mm): 100		
					Angle from Vertical (°) 0		

Client: Merhis Pty Limited Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood Location: Refer to Drawing No. 14/1786/2				Project No. 19852/4618C Date : August 19, 2014 Logged: JK/AC		BOREHOLE NO.: BH 5	
						Sheet 1 of 1	
W A T E R L E V E	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E	
	BH5_0.2	</					

Client: Merhis Pty Limited Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood Location: Refer to Drawing No. 14/1786/2				Project No. 19852/4618C Date : August 19, 2014 Logged: JK/AC		BOREHOLE NO.: BH 6		
						Sheet 1 of 1		
W A T E R L E V E	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)			S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	BH6_0.2 BH6_0.4		ASPHALTIC CONCRETE: (150 mm thick)					
			CLAYEY SAND: orange brown, fine to medium grained, trace of gravel (sandstone) PID = 0.2					
			FILL					
			SILTY CLAY: light grey brown, low plasticity PID = 0.1					
			BOREHOLE DISCONTINUED AT 0.4 M					
		0.5						
							</	

[illegible]

Client: Merhis Pty Limited			Project No. 19852/4618C		BOREHOLE NO.: BH 8		
Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood			Date : August 19, 2014				
Location: Refer to Drawing No. 14/1786/2			Logged: JK/AC		Sheet 1 of 1		
W A T E R L E V E L	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)		S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	BH8_0.2		GRAVELLY SANDY CLAY: dark grey, fine to medium grained, low plasticity, gravel/brick/concrete PID = 0.4 FILL				
	BH8_0.4		SILTY CLAY: light grey, low plasticity PID = 0.1				
		0.5	BOREHOLE DISCONTINUED AT 0.5 M				
		1.0					
		1.5					
		2.0					
		2.5					
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample					Contractor: STS		
WT - level of water table or free water N - Standard Penetration Test (SPT)					Equipment: Edson RP70		
See explanation sheets for meaning of all descriptive terms and symbols					Hole Diameter (mm): 100		
					Angle from Vertical (°) 0		

Client: Merhis Pty Limited			Project No. 19852/4618C		BOREHOLE NO.: BH 9	
Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood			Date : August 19, 2014			
Location: Refer to Drawing No. 14/1786/2			Logged: JK/AC		Sheet 1 of 1	
W A T E R L E V E L	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	BH9_0.2		GRAVELLY SANDY CLAY: dark grey with orange brown, fine to medium grained, low plasticity, some gravel PID = 0.5 FILL			
	BH9_0.5	0.5	SILTY CLAY: light grey with orange brown, medium to high plasticity PID = 0.1			
			BOREHOLE DISCONTINUED AT 0.6 M			
		1.0				
		1.5				
		2.0				
		2.5				
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample				Contractor: STS		
WT - level of water table or free water N - Standard Penetration Test (SPT)				Equipment: Edson RP70		
See explanation sheets for meaning of all descriptive terms and symbols				Hole Diameter (mm): 100		
				Angle from Vertical (°) 0		

Client: Merhis Pty Limited				Project No. 19852/4618C		BOREHOLE NO.: BH 10	
Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood				Date : August 19, 2014			
Location: Refer to Drawing No. 14/1786/2				Logged: JK/AC		Sheet 1 of 1	
W A T E R L E	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)		S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	BH10_0.2		ASPHALTIC CONCRETE: (140 mm thick)				
			SILTY CLAY; yellow brown with light grey, medium to high plasticity PID = 0.3				
			BOREHOLE DISCONTINUED AT 0.2 M				
		0.5					
		1.0					
		1.5					
		2.0					
		2.5					
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample					Contractor: STS		
WT - level of water table or free water N - Standard Penetration Test (SPT)					Equipment: Edson RP70		
See explanation sheets for meaning of all descriptive terms and symbols					Hole Diameter (mm): 100		
					Angle from Vertical (°) 0		

Client: Merhis Pty Limited				Project No. 19852/4618C		BOREHOLE NO.: BH 11	
Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood				Date : August 19, 2014			
Location: Refer to Drawing No. 14/1786/2				Logged: JK/AC		Sheet 1 of 1	
W A T E R L E	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)		S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	BH11_0.2		CONCRETE: (180 mm thick)				
			SILTY CLAY: light grey with orange brown, medium to high plasticity PID = 0.8				
			BOREHOLE DISCONTINUED AT 0.3 M				
		0.5					
		1.0					
		1.5					
		2.0					
		2.5					
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample					Contractor: STS		
WT - level of water table or free water N - Standard Penetration Test (SPT)					Equipment: Edson RP70		
See explanation sheets for meaning of all descriptive terms and symbols					Hole Diameter (mm): 100		
					Angle from Vertical (°) 0		

SMEC Testing Services Pty Ltd

GEOTECHNICAL LOG - NON CORE BOREHOLE

Client: Merhis Pty Limited

Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood

Location: Refer to Drawing No. 14/1786/2

Project No. 19852/4618C

Date : August 19, 2014

Logged: JK/AC

BOREHOLE NO.: BH 13

Sheet 1 of 1

W A T E R L E	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	BH13_0.1		SANDY GRAVEL: grey PID = 0.6 BOREHOLE DISCONTINUED AT 0.1 M			
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample WT - level of water table or free water N - Standard Penetration Test (SPT)				Contractor: STS Equipment: Edson RP70 Hole Diameter (mm): 100 Angle from Vertical (°) 0		
See explanation sheets for meaning of all descriptive terms and symbols						

Form I1

Date of Issue 05/03/99

Revision 4

Client: Merhis Pty Limited			Project No. 19852/4618C		BOREHOLE NO.: BH 14		
Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood			Date : August 19, 2014				
Location: Refer to Drawing No. 14/1786/2			Logged: JK/AC		Sheet 1 of 1		
W A T E R L E V E L	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)		S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	BH14_0.1		SANDY GRAVEL: grey PID = 0.1				
			BOREHOLE DISCONTINUED AT 0.1 M				
		0.5					
		1.0					
		1.5					
		2.0					
		2.5					
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample					Contractor: STS		
WT - level of water table or free water N - Standard Penetration Test (SPT)					Equipment: Edson RP70		
See explanation sheets for meaning of all descriptive terms and symbols					Hole Diameter (mm): 100		
					Angle from Vertical (°) 0		

Client: Merhis Pty Limited			Project No. 19852/4618C		BOREHOLE NO.: BH 15	
Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood			Date : August 19, 2014			
Location: Refer to Drawing No. 14/1786/2			Logged: JK/AC		Sheet 1 of 1	
W A T E R L E V E L	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
			ASPHALTIC CONCRETE: (100 mm thick)			
	BH15_0.2 A+B		SANDY GRAVEL: dark grey, fine to medium grained, dark grey gravel PID = 1.4			
			FILL			
	BH15_0.4		SILTY CLAY: orange brown, medium to high plasticity PID = 0.2			
		0.5	BOREHOLE DISCONTINUED AT 0.5 M			
		1.0				
		1.5				
		2.0				
		2.5				
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample				Contractor: STS		
WT - level of water table or free water N - Standard Penetration Test (SPT)				Equipment: Edson RP70		
See explanation sheets for meaning of all descriptive terms and symbols				Hole Diameter (mm): 100		
				Angle from Vertical (°) 0		

Client: Merhis Pty Limited			Project No. 19852/4618C		BOREHOLE NO.: BH 16	
Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood			Date : August 19, 2014			
Location: Refer to Drawing No. 14/1786/2			Logged: JK/AC		Sheet 1 of 1	
W A T E R L E V E L	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	BH16_0.2		ASPHALTIC CONCRETE: (100 mm thick)			
			SANDY GRAVEL: dark grey, fine to medium grained, dark grey gravel + (asbestos) PID = 1.5			
			FILL			
	BH16_0.4		SILTY CLAY: orange brown with light grey, medium to high plasticity PID = 0.9			
		0.5	BOREHOLE DISCONTINUED AT 0.5 M			
		1.0				
		1.5				
		2.0				
		2.5				
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample WT - level of water table or free water N - Standard Penetration Test (SPT)				Contractor: STS Equipment: Edson RP70		
See explanation sheets for meaning of all descriptive terms and symbols				Hole Diameter (mm): 100 Angle from Vertical (°) 0		

Client: Merhis Pty Limited			Project No. 19852/4618C		BOREHOLE NO.: BH 17	
Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood			Date : August 19, 2014			
Location: Refer to Drawing No. 14/1786/1			Logged: JK/AC		Sheet 1 of 1	
W A T E R L E	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)		S Y M B O L	M O I S T U R E CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)
	BH17_0.2		SILTY SANDY CLAY: dark brown, fine grained, low plasticity PID = 0.4			
			BOREHOLE DISCONTINUED AT 0.3 M			
		0.5				
		1.0				
		1.5				
		2.0				
		2.5				
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample WT - level of water table or free water N - Standard Penetration Test (SPT)					Contractor: STS Equipment: Edson RP70	
See explanation sheets for meaning of all descriptive terms and symbols					Hole Diameter (mm): 100 Angle from Vertical (°) 0	

Client: Merhis Pty Limited			Project No. 19852/4618C		BOREHOLE NO.: BH 18	
Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood			Date : August 19, 2014			
Location: Refer to Drawing No. 14/1786/1			Logged: JK/AC		Sheet 1 of 1	
W A T E R L E	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)		S Y M B O L	M O I S T U R E CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)
	BH18_0.2		SILTY SANDY CLAY: dark brown, fine grained, low plasticity PID = 0.7			
			BOREHOLE DISCONTINUED AT 0.3 M			
		0.5				
		1.0				
		1.5				
		2.0				
		2.5				
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample WT - level of water table or free water N - Standard Penetration Test (SPT)					Contractor: STS Equipment: Edson RP70	
See explanation sheets for meaning of all descriptive terms and symbols					Hole Diameter (mm): 100 Angle from Vertical (°) 0	

Client: Merhis Pty Limited			Project No. 19852/4618C		BOREHOLE NO.: BH 19	
Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood			Date : August 19, 2014			
Location: Refer to Drawing No. 14/1786/2			Logged: JK/AC		Sheet 1 of 1	
W A T E R L E V E L	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	BH19_0.2		ASPHALTIC CONCRETE: (100 mm thick)			
			SANDY GRAVE; dark grey, mine grained, dark grey gravel/wire PID = 0.5			
		0.5	FILL			
	BH19_0.6		SILTY CLAY: orange brown, medium to high plasticity PID = 0.4			
			BOREHOLE DISCONTINUED AT 0.7 M			
		1.0				
		1.5				
		2.0				
		2.5				
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample WT - level of water table or free water N - Standard Penetration Test (SPT)				Contractor: STS Equipment: Edson RP70		
See explanation sheets for meaning of all descriptive terms and symbols				Hole Diameter (mm): 100 Angle from Vertical (°) 0		

Client: Merhis Pty Limited			Project No. 19852/4618C		BOREHOLE NO.: BH 20	
Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood			Date : August 19, 2014			
Location: Refer to Drawing No. 14/1786/2			Logged: JK/AC		Sheet 1 of 1	
W A T E R L E V E L	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	BH20_0.2		ASPHALTIC CONCRETE: (150 mm thick)			
			SANDY GRAVEL: dark grey, fine grained, dark gravel/wire PID = 0.9			
		0.5	FILL			
	BH20_0.7		SILTY CLAY: dark grey with light grey and orange brown, medium plasticity, trace of gravel/wood/metal PID = 0.6			
			FILL			
	BH20_1.0	1.0	SILTY CLAY: orange brown with light grey, medium to high plasticity PID = 0.1			
			BOREHOLE DISCONTINUED AT 1.3 M			
		1.5				
		2.0				
		2.5				
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample				Contractor: STS		
WT - level of water table or free water N - Standard Penetration Test (SPT)				Equipment: Edson RP70		
See explanation sheets for meaning of all descriptive terms and symbols				Hole Diameter (mm): 100		
				Angle from Vertical (°) 0		

Client: Merhis Pty Limited			Project No. 19852/4618C		BOREHOLE NO.: BH 21	
Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood			Date : August 19, 2014			
Location: Refer to Drawing No. 14/1786/2			Logged: JK/AC		Sheet 1 of 1	
W A T E R L E	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)		S Y M B O L	M O I S T U R E CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)
	BH21_0.2 BH21_0.3		ASPHALTIC CONCRETE: (100 mm thick)			
			SANDY GRAVEL: dark grey, fine grained, dark grey gravel/wire PID = 0.2 FILL			
			SILTY CLAY: orange brown with light grey, medium to high plasticity PID = 0.2			
			BOREHOLE DISCONTINUED AT 0.4 M			
		0.5				
		1.0				
		1.5				
		2.0				
		2.5				
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample					Contractor: STS	
WT - level of water table or free water N - Standard Penetration Test (SPT)					Equipment: Edson RP70	
See explanation sheets for meaning of all descriptive terms and symbols					Hole Diameter (mm): 100	
					Angle from Vertical (°) 0	

Client: Merhis Pty Limited			Project No. 19852/4618C		BOREHOLE NO.: BH 22		
Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood			Date : August 19, 2014				
Location: Refer to Drawing No. 14/1786/2			Logged: JK/AC		Sheet 1 of 1		
W A T E R L E V E L	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)		S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	BH22_0.1		SILTY SANDY CLAY: brown				
			PID = 0.3 TOPSOIL				
	BH22_0.2		SILTY CLAY: grey with orange brown				
			PID = 0.1				
			BOREHOLE DISCONTINUED AT 0.2 M				
		0.5					
		1.0					
		1.5					
		2.0					
		2.5					
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample					Contractor: STS		
WT - level of water table or free water N - Standard Penetration Test (SPT)					Equipment: Edson RP70		
See explanation sheets for meaning of all descriptive terms and symbols					Hole Diameter (mm): 100		
					Angle from Vertical (°) 0		

Client: Merhis Pty Limited			Project No. 19852/4618C		BOREHOLE NO.: BH 23	
Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood			Date : August 19, 2014			
Location: Refer to Drawing No. 14/1786/2			Logged: JK/AC		Sheet 1 of 1	
W A T T A E B R L E	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)		S Y M B O L	M O I S T U R E CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)
	BH23_0.1		GRAVELLY SAND: dark grey			
			BOREHOLE DISCONTINUED AT 0.1 M			
		0.5				
		1.0				
		1.5				
		2.0				
		2.5				
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample					Contractor: STS	
WT - level of water table or free water N - Standard Penetration Test (SPT)					Equipment: Edson RP70	
See explanation sheets for meaning of all descriptive terms and symbols					Hole Diameter (mm): 100	
					Angle from Vertical (°) 0	

Client: Merhis Pty Limited			Project No. 19852/4618C		BOREHOLE NO.: BH 24		
Project: 65-67 Mandarin Street & 38-42 Seville Street Villawood			Date : August 19, 2014				
Location: Refer to Drawing No. 14/1786/2			Logged: JK/AC		Sheet 1 of 1		
W A T E R L E	S A M P L E S	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)		S Y M B O L	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	M O I S T U R E
	BH24_0.1		SILTY SANDY CLAY: dark brown				
			BOREHOLE DISCONTINUED AT 0.1 M				
		0.5					
		1.0					
		1.5					
		2.0					
		2.5					
NOTES: D - disturbed sample U - undisturbed tube sample B - bulk sample					Contractor: STS		
WT - level of water table or free water N - Standard Penetration Test (SPT)					Equipment: Edson RP70		
See explanation sheets for meaning of all descriptive terms and symbols					Hole Diameter (mm): 100		
					Angle from Vertical (°) 0		



APPENDIX F

CHAIN OF CUSTODY DOCUMENTATION

CHAIN OF CUSTODY RECORD

Page 1 of 3

SMEC Testing Services Pty Ltd Job No: 19852/4618C Order No: 11372

PO Box 6989 (postal)

14/1 Cowpasture Place (office), Wetherill Park NSW 2164

Telephone: (02) 9756 2166 Fax: (02) 9756 1137

E-Mail: nryan@smectesting.com.au

Contact: Natasha Ryan



Laboratory: ALS Laboratory Group - Sydney Environmental Division

277-289 Woodpark Road, SMITHFIELD NSW 2164

Telephone: (02) 8784 8555 Fax: (02) 8784 8500 Contact: Jacob Waugh

Laboratory number	Sample number	jar/bottle	bag	Date sampled	Composite number	Sample type	Comments	ANALYSIS											
								S2	S5	S12	S19	S26	S27	ASBESTOS	CYANIDE	HOLD			
1	BH23_0.1		1	19/08/2014		soil								X					
2	BH24_0.1		1	19/08/2014		soil								X					
3	BH22_0.1	1	1	19/08/2014		soil						X		X					
4	BH22_0.2	1		19/08/2014		soil										X			
5	BH13_0.1	1		19/08/2014		soil							X						
—	BH14_0.1	1		19/08/2014		soil	Please forward to ALS Brisbane					X							
6	BH05_0.2	1	1	19/08/2014		soil							X	X					
7	BH05_0.8	1		19/08/2014		soil					X								
8	BH05_1.0	1		19/08/2014		soil						X							
9	BH05_1.5	1		19/08/2014		soil			X										
10	BH02_0.2	1		19/08/2014		soil	Subcon / Forward Lab / Split WO	X		X									
11	BH02_1.0	1		19/08/2014		soil	Lab / Analysis: _____					X							
12	BH01_0.2	1		19/08/2014		soil	Organised By / Date: _____					X							
13	BH01_0.7	1		19/08/2014		soil	Relinquished By / Date: _____									X			
14	BH03_0.2	1		19/08/2014		soil	Connote / Courier: _____					X							
15	BH04_0.2	1		19/08/2014		soil	WO No: _____					X							
16	BH08_0.2	1	1	19/08/2014		soil	Attach By PO / Internal Sheet: _____				X			X					
17	BH08_0.4	1		19/08/2014		soil										X			
TOTAL		18	5					1	1	1	2	7	2	5	3				

Environmental Division
Sydney

Work Order

ES1418787

Telephone: +61-2-8784 8555

Released by SMEC Testing Services

Natasha Ryan

Signed:

Date:

21/08/2014

Time:

CoC Number: P19852 - COC1

Your quotation: SMEC 2014 (SY/593/14)

Received by: *Soz Sep*

Signed:

Date:

22/8/14

Time:

15:15

14:15

Preliminary results by:

28-Aug-14

Final results by:

28-Aug-14

Comments:

Standard Detection Limits Apply, Standard Turnaround Required on Results

Page 3 of 3



SMEC
Testing
Services

Telephone: (02) 8784 8555 Fax: (02) 8784 8500 Contact: Jacob Waugh

[illegible]



APPENDIX G

ANALYTICAL LABORATORY REPORTS

CERTIFICATE OF ANALYSIS

Work Order	: ES1418787	Page	: 1 of 30
Client	: SMEC TESTING SERVICES PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: NATASHA RYAN	Contact	: Client Services
Address	: P O BOX 6989 WETHERILL PARK NSW, AUSTRALIA 2164	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: nryan@smectesting.com.au	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 9756 2166	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 19852 4618C	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Order number	: 11372	Date Samples Received	: 22-AUG-2014
C-O-C number	: P19852 - COC 1	Issue Date	: 28-AUG-2014
Sampler	: ----	No. of samples received	: 39
Site	: ----	No. of samples analysed	: 28
Quote number	: SY/593/14		

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



NATA Accredited Laboratory 825

Accredited for compliance with
ISO/IEC 17025.

Signatories

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

Signatories	Position	Accreditation Category
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Dian Dao		Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Organics
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics



General Comments

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

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

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

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

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

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

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

- **Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.**
- **EA200 Legend**
- **EA200 'Am' Amosite (brown asbestos)**
- **EA200 'Ch' Chrysotile (white asbestos)**
- **EA200 'Cr' Crocidolite (blue asbestos)**
- **EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres**
- **EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.**
- **EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.**
- **EA200: Negative results for vinyl tiles should be confirmed by an independent analytical technique.**
- **EG005T: Poor precision was obtained for Chromium on sample ES1418370 #001, due to sample heterogeneity. Results have been confirmed by re-extraction and reanalysis.**



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH22_0.1	BH13_0.1	BH05_0.2	BH05_0.8	BH05_1.0
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-003	ES1418787-005	ES1418787-006	ES1418787-007	ES1418787-008
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	21.8	15.2	14.4	20.0	23.3
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	10	10
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	11	10	57	18	18
Copper	7440-50-8	5	mg/kg	10	15	24	15	14
Lead	7439-92-1	5	mg/kg	13	24	66	23	41
Nickel	7440-02-0	2	mg/kg	16	39	11	17	8
Zinc	7440-66-6	5	mg/kg	41	61	108	24	63
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	----	<0.1	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	----	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	----	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg	----	----	----	<0.05	----
gamma-BHC	58-89-9	0.05	mg/kg	----	----	----	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg	----	----	----	<0.05	----
Heptachlor	76-44-8	0.05	mg/kg	----	----	----	<0.05	----
Aldrin	309-00-2	0.05	mg/kg	----	----	----	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	----	<0.05	----
^ Total Chlordane (sum)	----	0.05	mg/kg	----	----	----	<0.05	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	----	<0.05	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	----	<0.05	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	----	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg	----	----	----	<0.05	----
4,4'-DDE	72-55-9	0.05	mg/kg	----	----	----	<0.05	----
Endrin	72-20-8	0.05	mg/kg	----	----	----	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	----	<0.05	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	----	----	<0.05	----
4,4'-DDD	72-54-8	0.05	mg/kg	----	----	----	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	----	<0.05	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH22_0.1	BH13_0.1	BH05_0.2	BH05_0.8	BH05_1.0
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-003	ES1418787-005	ES1418787-006	ES1418787-007	ES1418787-008
EP068A: Organochlorine Pesticides (OC) - Continued								
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	----	<0.05	----
4,4'-DDT	50-29-3	0.2	mg/kg	----	----	----	<0.2	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	----	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg	----	----	----	<0.2	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	----	----	<0.05	----
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg	----	----	----	<0.05	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	----	----	<0.05	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	----	----	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	----	----	<0.2	----
Dimethoate	60-51-5	0.05	mg/kg	----	----	----	<0.05	----
Diazinon	333-41-5	0.05	mg/kg	----	----	----	<0.05	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	----	----	<0.05	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	----	----	<0.2	----
Malathion	121-75-5	0.05	mg/kg	----	----	----	<0.05	----
Fenthion	55-38-9	0.05	mg/kg	----	----	----	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	----	----	<0.05	----
Parathion	56-38-2	0.2	mg/kg	----	----	----	<0.2	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	----	----	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	----	----	<0.05	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	----	----	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	----	----	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg	----	----	----	<0.05	----
Ethion	563-12-2	0.05	mg/kg	----	----	----	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg	----	----	----	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	----	----	<0.05	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	<0.5	<0.5	<0.5	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	<0.5	<0.5	<0.5	----
2-Methylphenol	95-48-7	0.5	mg/kg	----	<0.5	<0.5	<0.5	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	<1	<1	<1	----
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	----

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

EP080/071: Total Recoverable Hydrocarbons - NEPM 2013



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH22_0.1	BH13_0.1	BH05_0.2	BH05_0.8	BH05_1.0
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-003	ES1418787-005	ES1418787-006	ES1418787-007	ES1418787-008
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 - Continued								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	>C10_C16	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
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
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
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	----	88.9	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	----	----	----	94.6	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	----	----	----	82.0	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	102	101	96.6	98.4	101
2-Chlorophenol-D4	93951-73-6	0.1	%	92.9	96.1	90.8	91.9	92.6
2,4,6-Tribromophenol	118-79-6	0.1	%	88.6	87.1	86.0	83.8	89.6
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	96.4	99.1	92.2	98.3	98.3
Anthracene-d10	1719-06-8	0.1	%	107	109	100	105	107
4-Terphenyl-d14	1718-51-0	0.1	%	101	101	92.7	97.8	99.0
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	87.2	81.7	83.1	83.1	84.2



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH22_0.1	BH13_0.1	BH05_0.2	BH05_0.8	BH05_1.0
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-003	ES1418787-005	ES1418787-006	ES1418787-007	ES1418787-008
EP080S: TPH(V)/BTEX Surrogates - Continued								
Toluene-D8	2037-26-5	0.1	%	101	100	99.7	101	99.9
4-Bromofluorobenzene	460-00-4	0.1	%	109	106	102	105	107



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH05_1.5	BH02_0.2	BH02_1.0	BH01_0.2	BH03_0.2
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-009	ES1418787-010	ES1418787-011	ES1418787-012	ES1418787-014
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	22.4	21.0	13.4	12.7	16.1
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	6	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	3	1	<1	<1
Chromium	7440-47-3	2	mg/kg	16	9	15	11	10
Copper	7440-50-8	5	mg/kg	16	12	10	10	22
Lead	7439-92-1	5	mg/kg	13	167	60	32	66
Nickel	7440-02-0	2	mg/kg	6	7	8	5	8
Zinc	7440-66-6	5	mg/kg	7	97	37	67	102
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	<0.05	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	<0.05	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	----	<0.05	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	----	<0.05	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	----	<0.05	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	----	<0.05	----	----	----
Aldrin	309-00-2	0.05	mg/kg	----	<0.05	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	<0.05	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	----	<0.05	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	<0.05	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	<0.05	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	<0.05	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	----	----	----
4,4'-DDE	72-55-9	0.05	mg/kg	----	<0.05	----	----	----
Endrin	72-20-8	0.05	mg/kg	----	<0.05	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	<0.05	----	----	----
4,4'-DDD	72-54-8	0.05	mg/kg	----	<0.05	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	<0.05	----	----	----
4,4'-DDT	50-29-3	0.2	mg/kg	----	<0.2	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH05_1.5	BH02_0.2	BH02_1.0	BH01_0.2	BH03_0.2
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-009	ES1418787-010	ES1418787-011	ES1418787-012	ES1418787-014
EP068A: Organochlorine Pesticides (OC) - Continued								
Endrin ketone	53494-70-5	0.05	mg/kg	----	<0.05	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	----	<0.2	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	<0.05	----	----	----
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg	----	<0.05	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	----	----	----
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	----	----	----
Malathion	121-75-5	0.05	mg/kg	----	<0.05	----	----	----
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	----	----	----
Parathion	56-38-2	0.2	mg/kg	----	<0.2	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	----	----	----
Ethion	563-12-2	0.05	mg/kg	----	<0.05	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	----	----	----
EP075(SIM)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



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH05_1.5	BH02_0.2	BH02_1.0	BH01_0.2	BH03_0.2
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-009	ES1418787-010	ES1418787-011	ES1418787-012	ES1418787-014
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Chrysene	218-01-9	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	1.2	1.2	1.2
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	380	230
C29 - C36 Fraction	----	100	mg/kg	<100	----	<100	170	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	<50	550	230
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	<10	<10	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	----	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	----	<100	480	260
>C34 - C40 Fraction	----	100	mg/kg	<100	----	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	<50	480	260
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	<50	<50	<50
EP080: BTEXN								
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
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH05_1.5	BH02_0.2	BH02_1.0	BH01_0.2	BH03_0.2
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-009	ES1418787-010	ES1418787-011	ES1418787-012	ES1418787-014
EP080: BTEXN - Continued								
^ Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	----	<1	<1	<1
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	----	97.4	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	----	121	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	----	----	98.8	98.7	96.8
2-Chlorophenol-D4	93951-73-6	0.1	%	----	----	93.6	93.6	90.9
2,4,6-Tribromophenol	118-79-6	0.1	%	----	----	83.9	92.6	92.3
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	----	----	96.0	95.7	94.2
Anthracene-d10	1719-06-8	0.1	%	----	----	107	105	104
4-Terphenyl-d14	1718-51-0	0.1	%	----	----	98.1	95.2	95.4
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	81.4	----	85.7	89.2	88.8
Toluene-D8	2037-26-5	0.1	%	99.0	----	100	102	104
4-Bromofluorobenzene	460-00-4	0.1	%	108	----	106	109	110



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH04_0.2	BH08_0.2	BH09_0.2	BH07_0.2	BH11_0.2
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-015	ES1418787-016	ES1418787-018	ES1418787-020	ES1418787-022
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	12.1	9.1	9.8	8.2	14.8
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	5	5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	9	11	11	9	10
Copper	7440-50-8	5	mg/kg	17	22	19	13	13
Lead	7439-92-1	5	mg/kg	54	27	24	17	8
Nickel	7440-02-0	2	mg/kg	4	20	18	16	8
Zinc	7440-66-6	5	mg/kg	62	73	51	67	14
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	<0.1	----	----	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	<0.05	----	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	<0.05	----	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg	----	<0.05	----	----	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	----	<0.05	----	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg	----	<0.05	----	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg	----	<0.05	----	----	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	<0.05	----	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	<0.05	----	----	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	----	<0.05	----	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	----	<0.05	----	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	<0.05	----	----	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	----	<0.05	----	----	<0.05
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	----	----	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg	----	<0.05	----	----	<0.05
Endrin	72-20-8	0.05	mg/kg	----	<0.05	----	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	----	----	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	<0.05	----	----	<0.05
4,4'-DDD	72-54-8	0.05	mg/kg	----	<0.05	----	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	<0.05	----	----	<0.05



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH04_0.2	BH08_0.2	BH09_0.2	BH07_0.2	BH11_0.2
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-015	ES1418787-016	ES1418787-018	ES1418787-020	ES1418787-022
EP068A: Organochlorine Pesticides (OC) - Continued								
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	<0.05	----	----	<0.05
4,4'-DDT	50-29-3	0.2	mg/kg	----	<0.2	----	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	----	<0.05	----	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	----	<0.2	----	----	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	<0.05	----	----	<0.05
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg	----	<0.05	----	----	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	----	----	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	----	----	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	----	----	<0.2
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	----	----	<0.05
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	----	----	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	----	----	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	----	----	<0.2
Malathion	121-75-5	0.05	mg/kg	----	<0.05	----	----	<0.05
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	----	----	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	----	----	<0.05
Parathion	56-38-2	0.2	mg/kg	----	<0.2	----	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	----	----	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	----	----	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	----	----	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	----	----	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	----	----	<0.05
Ethion	563-12-2	0.05	mg/kg	----	<0.05	----	----	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	----	----	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	----	----	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5
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	mg/kg	----	<1	<1	<1	<1
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

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

EP080/071: Total Recoverable Hydrocarbons - NEPM 2013



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH04_0.2	BH08_0.2	BH09_0.2	BH07_0.2	BH11_0.2
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-015	ES1418787-016	ES1418787-018	ES1418787-020	ES1418787-022
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 - Continued								
C6 - C10 Fraction	C6_C10	10	mg/kg	50	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	50	<10	<10	<10	<10
>C10 - C16 Fraction	>C10_C16	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
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
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
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	92.4	----	----	90.9
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	----	86.2	----	----	96.8
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	----	92.0	----	----	109
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	92.7	99.8	100	102	97.4
2-Chlorophenol-D4	93951-73-6	0.1	%	88.6	94.5	92.1	98.1	92.7
2,4,6-Tribromophenol	118-79-6	0.1	%	84.6	83.3	88.2	90.4	87.3
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	89.2	98.4	97.8	99.4	94.0
Anthracene-d10	1719-06-8	0.1	%	101	104	107	103	107
4-Terphenyl-d14	1718-51-0	0.1	%	91.5	96.6	98.1	97.4	97.9
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	87.8	91.0	92.7	88.8	86.0



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH04_0.2	BH08_0.2	BH09_0.2	BH07_0.2	BH11_0.2
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-015	ES1418787-016	ES1418787-018	ES1418787-020	ES1418787-022
EP080S: TPH(V)/BTEX Surrogates - Continued								
Toluene-D8	2037-26-5	0.1	%	104	108	114	101	102
4-Bromofluorobenzene	460-00-4	0.1	%	111	107	115	101	107



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH06_0.2	BH15_0.2	BH16_0.2	BH16_0.4	BH17_0.2
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-023	ES1418787-025	ES1418787-027	ES1418787-028	ES1418787-029
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	6.9	6.3	9.7	17.7	24.1
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	6	6	5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	9	21	22	16	12
Copper	7440-50-8	5	mg/kg	12	50	52	20	14
Lead	7439-92-1	5	mg/kg	14	17	31	33	17
Nickel	7440-02-0	2	mg/kg	25	33	38	7	11
Zinc	7440-66-6	5	mg/kg	28	74	142	81	170
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	1	mg/kg	----	----	<1	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	<0.1	----	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	----	<0.05	<0.05	<0.05



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH06_0.2	BH15_0.2	BH16_0.2	BH16_0.4	BH17_0.2
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-023	ES1418787-025	ES1418787-027	ES1418787-028	ES1418787-029
EP068A: Organochlorine Pesticides (OC) - Continued								
4,4'-DDD	72-54-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
4,4'-DDT	50-29-3	0.2	mg/kg	----	----	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	----	----	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	----	----	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	----	----	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	----	----	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	----	----	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
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	mg/kg	<1	<1	<1	----	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH06_0.2	BH15_0.2	BH16_0.2	BH16_0.4	BH17_0.2
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-023	ES1418787-025	ES1418787-027	ES1418787-028	ES1418787-029
EP075(SIM)A: Phenolic Compounds - Continued								
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	mg/kg	<2	<2	<2	----	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<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	<0.5	<0.5	<0.5	----	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
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	<0.5	<0.5	<0.5	----	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	----	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	----	1.2
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	<100	<100	<100	----	<100



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH06_0.2	BH15_0.2	BH16_0.2	BH16_0.4	BH17_0.2
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-023	ES1418787-025	ES1418787-027	ES1418787-028	ES1418787-029
EP080/071: Total Petroleum Hydrocarbons - Continued								
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	----	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	----	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	----	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	<50	<50	----	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	----	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	----	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	----	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	----	<50
EP080: BTEXN								
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	1.4	<0.5	----	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	1.4	<0.2	----	<0.2
^ Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	1.4	<0.5	----	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	----	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	90.6	----	101
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	----	----	92.0	98.5	87.2
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	----	----	83.8	104	125
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	96.9	98.2	98.1	----	99.1
2-Chlorophenol-D4	93951-73-6	0.1	%	94.0	93.4	93.8	----	95.1
2,4,6-Tribromophenol	118-79-6	0.1	%	81.0	81.0	83.8	----	86.7
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	95.0	95.8	97.1	----	98.0
Anthracene-d10	1719-06-8	0.1	%	105	101	105	----	108
4-Terphenyl-d14	1718-51-0	0.1	%	96.2	95.0	96.4	----	98.4



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

				BH06_0.2	BH15_0.2	BH16_0.2	BH16_0.4	BH17_0.2
Client sampling date / time				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-023	ES1418787-025	ES1418787-027	ES1418787-028	ES1418787-029
EP075(SIM)T: PAH Surrogates - Continued								
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	88.6	84.8	82.5	----	79.6
Toluene-D8	2037-26-5	0.1	%	110	107	106	----	94.9
4-Bromofluorobenzene	460-00-4	0.1	%	112	104	106	----	98.5



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH18_0.2	BH20_0.2	BH20_0.7	BH20_1.0	BH19_0.2
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-030	ES1418787-031	ES1418787-032	ES1418787-033	ES1418787-034
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	20.4	8.4	22.9	22.8	6.1
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	6	<5	8	6
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	13	15	695	90	18
Copper	7440-50-8	5	mg/kg	28	40	97	130	47
Lead	7439-92-1	5	mg/kg	38	22	455	97	21
Nickel	7440-02-0	2	mg/kg	25	23	15	19	30
Zinc	7440-66-6	5	mg/kg	109	80	1480	487	82
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.3	<0.1	<0.1
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	1	mg/kg	----	<1	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	<0.1	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	<0.05	----	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg	----	<0.05	----	<0.05	----
gamma-BHC	58-89-9	0.05	mg/kg	----	<0.05	----	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Heptachlor	76-44-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Aldrin	309-00-2	0.05	mg/kg	----	<0.05	----	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	<0.05	----	<0.05	----
^ Total Chlordane (sum)	----	0.05	mg/kg	----	<0.05	----	<0.05	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	<0.05	----	<0.05	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	<0.05	----	<0.05	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	<0.05	----	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	----	<0.05	----
4,4'-DDE	72-55-9	0.05	mg/kg	----	<0.05	----	<0.05	----
Endrin	72-20-8	0.05	mg/kg	----	<0.05	----	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	----	<0.05	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	<0.05	----	<0.05	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH18_0.2	BH20_0.2	BH20_0.7	BH20_1.0	BH19_0.2
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-030	ES1418787-031	ES1418787-032	ES1418787-033	ES1418787-034
EP068A: Organochlorine Pesticides (OC) - Continued								
4,4'-DDD	72-54-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	<0.05	----	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	<0.05	----	<0.05	----
4,4'-DDT	50-29-3	0.2	mg/kg	----	<0.2	----	<0.2	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	<0.05	----	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg	----	<0.2	----	<0.2	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	<0.05	----	<0.05	----
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg	----	<0.05	----	<0.05	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	----	<0.05	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	----	<0.2	----
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	----	<0.05	----
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	----	<0.05	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	----	<0.05	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	----	<0.2	----
Malathion	121-75-5	0.05	mg/kg	----	<0.05	----	<0.05	----
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	----	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	----	<0.05	----
Parathion	56-38-2	0.2	mg/kg	----	<0.2	----	<0.2	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	----	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	----	<0.05	----
Ethion	563-12-2	0.05	mg/kg	----	<0.05	----	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	----	<0.05	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	<0.5	<0.5	----	<0.5
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	mg/kg	----	<1	<1	----	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	----	<0.5	<0.5	----	<0.5



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH18_0.2	BH20_0.2	BH20_0.7	BH20_1.0	BH19_0.2
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-030	ES1418787-031	ES1418787-032	ES1418787-033	ES1418787-034
EP075(SIM)A: Phenolic Compounds - Continued								
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	mg/kg	----	<2	<2	----	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	<0.5	0.8	----	<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+j)fluoranthene	205-99-2	0.5	mg/kg	----	<0.5	<0.5	----	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	<0.5	<0.5	----	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	<0.5	<0.5	----	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	<0.5	<0.5	----	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	----	<0.5	<0.5	----	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	----	<0.5	<0.5	----	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	<0.5	0.8	----	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	<0.5	<0.5	----	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	0.6	0.6	----	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	1.2	1.2	----	1.2
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	530	----	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	300	----	<100



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH18_0.2	BH20_0.2	BH20_0.7	BH20_1.0	BH19_0.2
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-030	ES1418787-031	ES1418787-032	ES1418787-033	ES1418787-034
EP080/071: Total Petroleum Hydrocarbons - Continued								
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	830	----	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	----	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	----	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	<50	<50	----	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	740	----	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	170	----	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	910	----	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	----	<50
EP080: BTEXN								
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	1.5	<0.5	----	1.2
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	1.5	<0.2	----	1.2
^ Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	1.5	<0.5	----	1.2
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	----	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	92.2	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	----	90.8	----	104	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	----	84.9	----	111	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	----	95.2	105	----	114
2-Chlorophenol-D4	93951-73-6	0.1	%	----	91.6	110	----	104
2,4,6-Tribromophenol	118-79-6	0.1	%	----	76.0	89.2	----	75.0
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	----	93.6	110	----	103
Anthracene-d10	1719-06-8	0.1	%	----	95.8	107	----	99.0
4-Terphenyl-d14	1718-51-0	0.1	%	----	90.6	102	----	94.9



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH18_0.2	BH20_0.2	BH20_0.7	BH20_1.0	BH19_0.2
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00
Compound	CAS Number	LOR	Unit	ES1418787-030	ES1418787-031	ES1418787-032	ES1418787-033	ES1418787-034
EP075(SIM)T: PAH Surrogates - Continued								
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	78.6	87.0	86.4	----	85.8
Toluene-D8	2037-26-5	0.1	%	94.3	107	89.3	----	83.9
4-Bromofluorobenzene	460-00-4	0.1	%	98.5	110	87.7	----	78.9



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH21_0.2	A	C	----	----
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	----	----
Compound	CAS Number	LOR	Unit	ES1418787-036	ES1418787-038	ES1418787-039	----	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	9.4	19.8	6.3	----	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	11	6	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	----	----
Chromium	7440-47-3	2	mg/kg	15	19	35	----	----
Copper	7440-50-8	5	mg/kg	44	16	56	----	----
Lead	7439-92-1	5	mg/kg	77	17	20	----	----
Nickel	7440-02-0	2	mg/kg	23	18	49	----	----
Zinc	7440-66-6	5	mg/kg	113	20	84	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.1	<0.1	<0.1	----	----
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	mg/kg	<1	----	----	----	----
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	mg/kg	<2	----	----	----	----
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	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				BH21_0.2	A	C	----	----
				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	----	----
Compound	CAS Number	LOR	Unit	ES1418787-036	ES1418787-038	ES1418787-039	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
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+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	----	----
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 2013								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	----	----
>C10 - C16 Fraction	>C10_C16	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	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	----	----
EP080: BTEXN								
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	1.0	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

				BH21_0.2	A	C	----	----
Client sampling date / time				19-AUG-2014 15:00	19-AUG-2014 15:00	19-AUG-2014 15:00	----	----
Compound	CAS Number	LOR	Unit	ES1418787-036	ES1418787-038	ES1418787-039	----	----
EP080: BTEXN - Continued								
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	1.0	----	----
^ Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	<0.5	1.0	----	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	106	98.8	108	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	96.1	89.8	111	----	----
2,4,6-Tribromophenol	118-79-6	0.1	%	70.2	60.4	77.4	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	88.5	94.5	99.3	----	----
Anthracene-d10	1719-06-8	0.1	%	100	95.9	107	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	92.9	91.0	103	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	84.6	87.9	81.4	----	----
Toluene-D8	2037-26-5	0.1	%	85.4	90.4	92.3	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	81.0	84.8	81.3	----	----



Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2,4,6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	72.8	133.2
Toluene-D8	2037-26-5	73.9	132.1
4-Bromofluorobenzene	460-00-4	71.6	130.0

QUALITY CONTROL REPORT

Work Order	: ES1418787	Page	: 1 of 22
Client	: SMEC TESTING SERVICES PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: NATASHA RYAN	Contact	: Client Services
Address	: P O BOX 6989 WETHERILL PARK NSW, AUSTRALIA 2164	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: nryan@smectesting.com.au	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 9756 2166	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 19852 4618C	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Site	: ----	Date Samples Received	: 22-AUG-2014
C-O-C number	: P19852 - COC 1	Issue Date	: 28-AUG-2014
Sampler	: ----	No. of samples received	: 39
Order number	: 11372	No. of samples analysed	: 28
Quote number	: SY/593/14		

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

This Quality Control Report contains the following information:

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



NATA Accredited
Laboratory 825

Accredited for
compliance with
ISO/IEC 17025.

Signatories

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

Signatories	Position	Accreditation Category
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Dian Dao		Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Organics
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics



General Comments

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

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

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

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

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



Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA055: Moisture Content (QC Lot: 3605433)									
ES1418729-026	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	24.8	25.3	2.2	0% - 20%
ES1418787-010	BH02_0.2	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	21.0	19.2	9.0	0% - 20%
EA055: Moisture Content (QC Lot: 3605434)									
ES1418787-023	BH06_0.2	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	6.9	6.7	3.7	No Limit
ES1418787-038	A	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	19.8	23.0	15.1	0% - 20%
EG005T: Total Metals by ICP-AES (QC Lot: 3604301)									
ES1418729-018	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	22	23	5.2	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	4	4	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	8	9	14.4	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	10	10	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	22	23	4.4	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	93	110	17.1	0% - 20%
ES1418794-013	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	12	9	32.1	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	7	7	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	7	8	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	9	9	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	19	24	20.2	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 3604832)									
ES1418370-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	101	139	# 32.1	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	24	24	0.0	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	6	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	60	65	8.2	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	15	16	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	216	254	16.4	0% - 20%
ES1418635-011	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	6	6	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	12	11	12.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	313	323	3.3	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	19	12	45.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	37	38	3.6	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG005T: Total Metals by ICP-AES (QC Lot: 3604835)									
ES1418787-028	BH16_0.4	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	16	15	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	7	7	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	5	5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	20	22	6.9	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	33	46	32.6	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	81	50	47.2	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3604302)									
ES1418729-018	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1418794-013	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3604833)									
ES1418370-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.1	0.0	No Limit
ES1418787-028	BH16_0.4	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 3606145)									
ES1418787-027	BH16_0.2	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3604806)									
ES1418787-007	BH05_0.8	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1418788-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3604807)									
ES1418787-007	BH05_0.8	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3604807) - continued									
ES1418787-007	BH05_0.8	EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES1418788-001	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3604807)									
ES1418787-007	BH05_0.8	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3604807) - continued									
ES1418787-007	BH05_0.8	EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES1418788-001	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 3603903)									
ES1418787-003	BH22_0.1	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
ES1418787-016	BH08_0.2	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)A: Phenolic Compounds (QC Lot: 3603903) - continued									
ES1418787-016	BH08_0.2	EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 3604933)									
ES1418787-032	BH20_0.7	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
ES1418843-002	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3603903)									
ES1418787-003	BH22_0.1	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3603903) - continued											
ES1418787-003	BH22_0.1	EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
ES1418787-016	BH08_0.2	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3604933)									
		ES1418787-032	BH20_0.7	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	0.8	0.6	25.8	No Limit
EP075(SIM): Acenaphthylene	208-96-8			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075(SIM): Acenaphthene	83-32-9			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075(SIM): Fluorene	86-73-7			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075(SIM): Phenanthrene	85-01-8			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075(SIM): Anthracene	120-12-7			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075(SIM): Fluoranthene	206-44-0			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075(SIM): Pyrene	129-00-0			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075(SIM): Benz(a)anthracene	56-55-3			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3604933) - continued											
ES1418787-032	BH20_0.7	EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	0.8	0.6	28.6	No Limit		
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
ES1418843-002	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3603897)									
		ES1418787-003	BH22_0.1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
		ES1418787-016	BH08_0.2	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3603902)											
ES1418787-003	BH22_0.1	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit		
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit		
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit		
ES1418787-016	BH08_0.2	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit		
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit		
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit		
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3604050)											



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3604050) - continued									
ES1418794-013	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES1418843-002	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3604932)									
ES1418787-032	BH20_0.7	EP071: C15 - C28 Fraction	----	100	mg/kg	530	470	11.4	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	300	310	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES1418843-002	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	120	110	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QC Lot: 3603897)									
ES1418787-003	BH22_0.1	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES1418787-016	BH08_0.2	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QC Lot: 3603902)									
ES1418787-003	BH22_0.1	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	<50	0.0	No Limit
ES1418787-016	BH08_0.2	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QC Lot: 3604050)									
ES1418794-013	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES1418843-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QC Lot: 3604932)									
ES1418787-032	BH20_0.7	EP071: >C16 - C34 Fraction	----	100	mg/kg	740	660	12.2	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	170	220	22.8	No Limit
		EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	60	21.8	No Limit
ES1418843-002	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	150	140	8.4	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	130	120	0.0	No Limit
		EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	<50	0.0	No Limit
EP080: BTEXN (QC Lot: 3603897)									
ES1418787-003	BH22_0.1	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
	EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
	EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit	
ES1418787-016	BH08_0.2	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

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 Work Order : ES1418787
 Client : SMEC TESTING SERVICES PTY LTD
 Project : 19852 4618C



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP080: BTEXN (QC Lot: 3603897) - continued									
ES1418787-016	BH08_0.2	EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		106-42-3							
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP080: BTEXN (QC Lot: 3604050)									
ES1418794-013	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		106-42-3							
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES1418843-002	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		106-42-3							
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit



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

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Spike (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EG005T: Total Metals by ICP-AES (QCLot: 3604301)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	107	92	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	103	87	121
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	104	80	136
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	108	93	127
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	106	86	124
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.0 mg/kg	112	93	131
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	106	81	133
EG005T: Total Metals by ICP-AES (QCLot: 3604832)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	106	92	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	99.4	87	121
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	107	80	136
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	111	93	127
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	101	86	124
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.0 mg/kg	108	93	131
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	114	81	133
EG005T: Total Metals by ICP-AES (QCLot: 3604835)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	101	92	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	94.2	87	121
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	104	80	136
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	105	93	127
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	96.8	86	124
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.0 mg/kg	103	93	131
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	97.0	81	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3604302)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	85.2	70	105
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3604833)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	87.8	70	105
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 3606145)								
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	110	70	122
				----	20 mg/kg	108	83	123
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3604806)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	79.0	57.4	117
EP068A: Organochlorine Pesticides (OC) (QCLot: 3604807)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.6	71	113



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP068A: Organochlorine Pesticides (OC) (QCLot: 3604807) - continued								
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	106	66	122
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	88.6	69	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	74.9	71	115
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	87.5	65	113
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	99.6	68	116
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	102	68	118
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	106	68	116
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	103	68	120
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.8	69	119
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	106	67	121
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	91.0	66	118
EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	97.5	69	117
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	95.6	67	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.8	76	120
EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	102	76	120
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	85.6	57.3	115
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.1	60	124
EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	79.3	67	127
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	82.2	65	123
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	86.4	65	129
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3604807)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	103	56	126
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	87.7	64	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	93.4	54	122
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	98.6	64	124
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	102	73	117
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	110	55	119
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	100	69	123
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	101	70	120
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	93.6	71	115
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	110	68	114
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	98.3	68	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	97.0	69	115
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	101	70	118
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	104	68	116
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	106	64	120
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	80.5	68	116
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	99.8	70	118
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	87.2	67	123



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3604807) - continued								
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	81.4	42	126
EP075(SIM)A: Phenolic Compounds (QCLot: 3603903)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	4 mg/kg	111	74	116
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	4 mg/kg	105	74	116
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	4 mg/kg	109	72	116
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1	8 mg/kg	111	69	123
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	4 mg/kg	86.6	60.3	117
EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	4 mg/kg	110	69	117
EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	4 mg/kg	100	68	112
EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	4 mg/kg	106	73	117
EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	4 mg/kg	102	76.4	114
EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	4 mg/kg	91.1	57	111
EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	4 mg/kg	94.6	68.9	112
EP075(SIM): Pentachlorophenol	87-86-5	1.0	mg/kg	<1	8 mg/kg	21.7	10	57
EP075(SIM)A: Phenolic Compounds (QCLot: 3604933)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	4 mg/kg	104	74	116
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	4 mg/kg	102	74	116
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	4 mg/kg	111	72	116
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1	8 mg/kg	99.5	69	123
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	4 mg/kg	80.8	60.3	117
EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	4 mg/kg	82.4	69	117
EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	4 mg/kg	82.3	68	112
EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	4 mg/kg	88.1	73	117
EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	4 mg/kg	90.7	76.4	114
EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	4 mg/kg	88.4	57	111
EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	4 mg/kg	95.8	68.9	112
EP075(SIM): Pentachlorophenol	87-86-5	1.0	mg/kg	<1	8 mg/kg	28.3	10	57
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3603903)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	4 mg/kg	111	80	124
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	4 mg/kg	113	77	123
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	4 mg/kg	114	79	123
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	4 mg/kg	114	77	123
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	4 mg/kg	106	79	123
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	4 mg/kg	109	79	123
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	4 mg/kg	112	79	123
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	4 mg/kg	112	79	125
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	4 mg/kg	104	73	121
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	4 mg/kg	110	81	123
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	4 mg/kg	104	70	118



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
Method: Compound	CAS Number	LOR	Unit		Result	Spike	Spike Recovery (%)	Recovery Limits (%)	
						Concentration	LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3603903) - continued									
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	4 mg/kg	111	77	123	
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	4 mg/kg	111	76	122	
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	4 mg/kg	90.4	71	113	
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	4 mg/kg	83.4	71.7	113	
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	4 mg/kg	91.4	72.4	114	
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3604933)									
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	4 mg/kg	99.6	80	124	
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	4 mg/kg	98.5	77	123	
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	4 mg/kg	107	79	123	
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	4 mg/kg	100	77	123	
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	4 mg/kg	99.9	79	123	
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	4 mg/kg	104	79	123	
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	4 mg/kg	106	79	123	
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	4 mg/kg	106	79	125	
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	4 mg/kg	83.8	73	121	
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	4 mg/kg	110	81	123	
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	4 mg/kg	83.8	70	118	
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	4 mg/kg	114	77	123	
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	4 mg/kg	108	76	122	
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	4 mg/kg	102	71	113	
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	4 mg/kg	97.0	71.7	113	
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	4 mg/kg	101	72.4	114	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3603897)									
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	107	68.4	128	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3603902)									
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	97.3	71	131	
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	98.0	74	138	
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	90.5	64	128	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3604050)									
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	103	68.4	128	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3604932)									
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	91.6	71	131	
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	95.6	74	138	
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	107	64	128	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3603897)									
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	102	68.4	128	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3603902)									
EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	250 mg/kg	93.4	70	130	



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3603902) - continued								
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	97.9	74	138
EP071: >C34 - C40 Fraction	----	50	mg/kg	<100	150 mg/kg	84.8	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3604050)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	106	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3604932)								
EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	250 mg/kg	93.2	70	130
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	101	74	138
EP071: >C34 - C40 Fraction	----	50	mg/kg	<100	150 mg/kg	87.4	63	131
EP080: BTEXN (QCLot: 3603897)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	109	62	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	103	62	128
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	98.4	58	118
EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	2 mg/kg	100	60	120
	106-42-3							
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	102	60	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	82.4	62	138
EP080: BTEXN (QCLot: 3604050)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	98.5	62	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	89.0	62	128
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	86.5	58	118
EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	2 mg/kg	85.6	60	120
	106-42-3							
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	90.1	60	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	81.6	62	138

Matrix Spike (MS) Report

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

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike Concentration	Spike Recovery (%) MS	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number			Low	High
EG005T: Total Metals by ICP-AES (QCLot: 3604301)							
ES1418729-018	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	106	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	102	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	106	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	107	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	104	70	130



Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 3604301) - continued							
ES1418729-018	Anonymous	EG005T: Nickel	7440-02-0	50 mg/kg	104	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	98.1	70	130
EG005T: Total Metals by ICP-AES (QCLot: 3604832)							
ES1418370-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	102	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	98.0	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	89.3	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	102	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	97.2	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	86.6	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	91.4	70	130
EG005T: Total Metals by ICP-AES (QCLot: 3604835)							
ES1418787-028	BH16_0.4	EG005T: Arsenic	7440-38-2	50 mg/kg	99.5	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	98.8	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	100	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	106	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	104	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	99.1	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	85.6	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3604302)							
ES1418729-018	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	98.1	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3604833)							
ES1418370-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	97.1	70	130
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 3606145)							
ES1418787-027	BH16_0.2	EK026SF: Total Cyanide	57-12-5	20 mg/kg	93.7	70	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3604806)							
ES1418787-007	BH05_0.8	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	105	70	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3604807)							
ES1418787-007	BH05_0.8	EP068: gamma-BHC	58-89-9	0.5 mg/kg	92.1	70	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	99.2	70	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	77.2	70	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	103	70	130
		EP068: Endrin	72-20-8	2 mg/kg	102	70	130
		EP068: 4,4`-DDT	50-29-3	2 mg/kg	88.2	70	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3604807)							
ES1418787-007	BH05_0.8	EP068: Diazinon	333-41-5	0.5 mg/kg	87.6	70	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	99.3	70	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	100	70	130



Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3604807) - continued							
ES1418787-007	BH05_0.8	EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	106	70	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	83.4	70	130
EP075(SIM)A: Phenolic Compounds (QCLot: 3603903)							
ES1418787-003	BH22_0.1	EP075(SIM): Phenol	108-95-2	10 mg/kg	120	70	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	113	70	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	110	60	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	112	70	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	93.5	20	130
EP075(SIM)A: Phenolic Compounds (QCLot: 3604933)							
ES1418787-032	BH20_0.7	EP075(SIM): Phenol	108-95-2	10 mg/kg	106	70	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	98.2	70	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	76.7	60	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	89.6	70	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	51.4	20	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3603903)							
ES1418787-003	BH22_0.1	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	114	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	125	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3604933)							
ES1418787-032	BH20_0.7	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	102	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	105	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3603897)							
ES1418787-003	BH22_0.1	EP080: C6 - C9 Fraction	----	32.5 mg/kg	101	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3603902)							
ES1418787-003	BH22_0.1	EP071: C10 - C14 Fraction	----	560 mg/kg	78.8	73	137
		EP071: C15 - C28 Fraction	----	2370 mg/kg	95.9	53	131
		EP071: C29 - C36 Fraction	----	1695 mg/kg	110	52	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3604050)							
ES1418794-013	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	110	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3604932)							
ES1418787-032	BH20_0.7	EP071: C10 - C14 Fraction	----	560 mg/kg	84.6	73	137
		EP071: C15 - C28 Fraction	----	2370 mg/kg	114	53	131
		EP071: C29 - C36 Fraction	----	1695 mg/kg	120	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3603897)							
ES1418787-003	BH22_0.1	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	95.8	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3603902)							
ES1418787-003	BH22_0.1	EP071: >C10 - C16 Fraction	>C10_C16	902 mg/kg	86.2	73	137

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

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report							
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)		
					Concentration	MS	MSD	Low	High	Value	Control Lim
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number								
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3603897)											
ES1418787-003	BH22_0.1	EP080: C6 - C9 Fraction	----	32.5 mg/kg	101	----	70	130	----	----	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3603897)											
ES1418787-003	BH22_0.1	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	95.8	----	70	130	----	----	
EP080: BTEXN (QCLot: 3603897)											



Sub-Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
					MS	MSD	Low	High	Value	Control Limit
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number							
EP080: BTEXN (QCLot: 3603897) - continued										
ES1418787-003	BH22_0.1	EP080: Benzene	71-43-2	2.5 mg/kg	95.8	----	70	130	----	----
		EP080: Toluene	108-88-3	2.5 mg/kg	91.4	----	70	130	----	----
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	90.6	----	70	130	----	----
		EP080: meta- & para-Xylene	108-38-3	2.5 mg/kg	91.4	----	70	130	----	----
		106-42-3								
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	92.8	----	70	130	----	----
		EP080: Naphthalene	91-20-3	2.5 mg/kg	74.2	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3603902)										
ES1418787-003	BH22_0.1	EP071: C10 - C14 Fraction	----	560 mg/kg	78.8	----	73	137	----	----
		EP071: C15 - C28 Fraction	----	2370 mg/kg	95.9	----	53	131	----	----
		EP071: C29 - C36 Fraction	----	1695 mg/kg	110	----	52	132	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3603902)										
ES1418787-003	BH22_0.1	EP071: >C10 - C16 Fraction	>C10_C16	902 mg/kg	86.2	----	73	137	----	----
		EP071: >C16 - C34 Fraction	----	3190 mg/kg	101	----	53	131	----	----
		EP071: >C34 - C40 Fraction	----	1087 mg/kg	118	----	52	132	----	----
EP075(SIM)A: Phenolic Compounds (QCLot: 3603903)										
ES1418787-003	BH22_0.1	EP075(SIM): Phenol	108-95-2	10 mg/kg	120	----	70	130	----	----
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	113	----	70	130	----	----
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	110	----	60	130	----	----
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	112	----	70	130	----	----
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	93.5	----	20	130	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3603903)										
ES1418787-003	BH22_0.1	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	114	----	70	130	----	----
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	125	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3604050)										
ES1418794-013	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	110	----	70	130	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3604050)										
ES1418794-013	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	101	----	70	130	----	----
EP080: BTEXN (QCLot: 3604050)										
ES1418794-013	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	92.2	----	70	130	----	----
		EP080: Toluene	108-88-3	2.5 mg/kg	89.2	----	70	130	----	----
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	88.2	----	70	130	----	----
		EP080: meta- & para-Xylene	108-38-3	2.5 mg/kg	86.9	----	70	130	----	----
		106-42-3								
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	88.8	----	70	130	----	----
		EP080: Naphthalene	91-20-3	2.5 mg/kg	76.0	----	70	130	----	----
EG005T: Total Metals by ICP-AES (QCLot: 3604301)										
ES1418729-018	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	106	----	70	130	----	----



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
					MS	MSD	Low	High	Value	Control Limit
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number							
EG005T: Total Metals by ICP-AES (QCLot: 3604301) - continued										
ES1418729-018	Anonymous	EG005T: Cadmium	7440-43-9	50 mg/kg	102	----	70	130	----	----
		EG005T: Chromium	7440-47-3	50 mg/kg	106	----	70	130	----	----
		EG005T: Copper	7440-50-8	250 mg/kg	107	----	70	130	----	----
		EG005T: Lead	7439-92-1	250 mg/kg	104	----	70	130	----	----
		EG005T: Nickel	7440-02-0	50 mg/kg	104	----	70	130	----	----
		EG005T: Zinc	7440-66-6	250 mg/kg	98.1	----	70	130	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3604302)										
ES1418729-018	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	98.1	----	70	130	----	----
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3604806)										
ES1418787-007	BH05_0.8	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	105	----	70	130	----	----
EP068A: Organochlorine Pesticides (OC) (QCLot: 3604807)										
ES1418787-007	BH05_0.8	EP068: gamma-BHC	58-89-9	0.5 mg/kg	92.1	----	70	130	----	----
		EP068: Heptachlor	76-44-8	0.5 mg/kg	99.2	----	70	130	----	----
		EP068: Aldrin	309-00-2	0.5 mg/kg	77.2	----	70	130	----	----
		EP068: Dieldrin	60-57-1	0.5 mg/kg	103	----	70	130	----	----
		EP068: Endrin	72-20-8	2 mg/kg	102	----	70	130	----	----
		EP068: 4,4'-DDT	50-29-3	2 mg/kg	88.2	----	70	130	----	----
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3604807)										
ES1418787-007	BH05_0.8	EP068: Diazinon	333-41-5	0.5 mg/kg	87.6	----	70	130	----	----
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	99.3	----	70	130	----	----
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	100	----	70	130	----	----
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	106	----	70	130	----	----
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	83.4	----	70	130	----	----
EG005T: Total Metals by ICP-AES (QCLot: 3604832)										
ES1418370-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	102	----	70	130	----	----
		EG005T: Cadmium	7440-43-9	50 mg/kg	98.0	----	70	130	----	----
		EG005T: Chromium	7440-47-3	50 mg/kg	89.3	----	70	130	----	----
		EG005T: Copper	7440-50-8	250 mg/kg	102	----	70	130	----	----
		EG005T: Lead	7439-92-1	250 mg/kg	97.2	----	70	130	----	----
		EG005T: Nickel	7440-02-0	50 mg/kg	86.6	----	70	130	----	----
		EG005T: Zinc	7440-66-6	250 mg/kg	91.4	----	70	130	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3604833)										
ES1418370-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	97.1	----	70	130	----	----
EG005T: Total Metals by ICP-AES (QCLot: 3604835)										
ES1418787-028	BH16_0.4	EG005T: Arsenic	7440-38-2	50 mg/kg	99.5	----	70	130	----	----
		EG005T: Cadmium	7440-43-9	50 mg/kg	98.8	----	70	130	----	----
		EG005T: Chromium	7440-47-3	50 mg/kg	100	----	70	130	----	----
		EG005T: Copper	7440-50-8	250 mg/kg	106	----	70	130	----	----

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 Client : SMEC TESTING SERVICES PTY LTD
 Project : 19852 4618C



Sub-Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number		MS	MSD	Low	High	Value	Control Limit
EG005T: Total Metals by ICP-AES (QCLot: 3604835) - continued										
ES1418787-028	BH16_0.4	EG005T: Lead	7439-92-1	250 mg/kg	104	----	70	130	----	----
		EG005T: Nickel	7440-02-0	50 mg/kg	99.1	----	70	130	----	----
		EG005T: Zinc	7440-66-6	250 mg/kg	85.6	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3604932)										
ES1418787-032	BH20_0.7	EP071: C10 - C14 Fraction	----	560 mg/kg	84.6	----	73	137	----	----
		EP071: C15 - C28 Fraction	----	2370 mg/kg	114	----	53	131	----	----
		EP071: C29 - C36 Fraction	----	1695 mg/kg	120	----	52	132	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3604932)										
ES1418787-032	BH20_0.7	EP071: >C10 - C16 Fraction	>C10_C16	902 mg/kg	80.9	----	73	137	----	----
		EP071: >C16 - C34 Fraction	----	3190 mg/kg	124	----	53	131	----	----
		EP071: >C34 - C40 Fraction	----	1087 mg/kg	106	----	52	132	----	----
EP075(SIM)A: Phenolic Compounds (QCLot: 3604933)										
ES1418787-032	BH20_0.7	EP075(SIM): Phenol	108-95-2	10 mg/kg	106	----	70	130	----	----
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	98.2	----	70	130	----	----
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	76.7	----	60	130	----	----
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	89.6	----	70	130	----	----
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	51.4	----	20	130	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3604933)										
ES1418787-032	BH20_0.7	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	102	----	70	130	----	----
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	105	----	70	130	----	----
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 3606145)										
ES1418787-027	BH16_0.2	EK026SF: Total Cyanide	57-12-5	20 mg/kg	93.7	----	70	130	----	----

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: ES1418787	Page	: 1 of 9
Client	: SMEC TESTING SERVICES PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: NATASHA RYAN	Contact	: Client Services
Address	: P O BOX 6989 WETHERILL PARK NSW, AUSTRALIA 2164	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: nryan@smectesting.com.au	E-mail	: sydney@alsglobal.com
Telephone	: +61 02 9756 2166	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 19852 4618C	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Site	: ----	Date Samples Received	: 22-AUG-2014
C-O-C number	: P19852 - COC 1	Issue Date	: 28-AUG-2014
Sampler	: ----	No. of samples received	: 39
Order number	: 11372	No. of samples analysed	: 28
Quote number	: SY/593/14		

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

This Interpretive Quality Control Report contains the following information:

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

This report summarizes extraction / preparation and analysis times and compares each with recommended holding times (USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL** Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EA055: Moisture Content								
Soil Glass Jar - Unpreserved (EA055-103)								
BH22_0.1, BH05_0.2, BH05_1.0, BH02_0.2, BH01_0.2, BH04_0.2, BH09_0.2, BH11_0.2, BH15_0.2, BH16_0.4, BH18_0.2, BH20_0.7, BH19_0.2, C	BH13_0.1, BH05_0.8, BH05_1.5, BH02_1.0, BH03_0.2, BH08_0.2, BH07_0.2, BH06_0.2, BH16_0.2, BH17_0.2, BH20_0.2, BH20_1.0, A, BH21_0.2, C	19-AUG-2014	----	----	----	26-AUG-2014	02-SEP-2014	✓
EG005T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T)								
BH22_0.1, BH05_0.2, BH05_1.0, BH02_0.2, BH01_0.2, BH04_0.2, BH09_0.2, BH11_0.2, BH15_0.2, BH16_0.4, BH18_0.2, BH20_0.7, BH19_0.2, C	BH13_0.1, BH05_0.8, BH05_1.5, BH02_1.0, BH03_0.2, BH08_0.2, BH07_0.2, BH06_0.2, BH16_0.2, BH17_0.2, BH20_0.2, BH20_1.0, A, BH21_0.2, C	19-AUG-2014	26-AUG-2014	15-FEB-2015	✓	27-AUG-2014	15-FEB-2015	✓

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T)		19-AUG-2014	26-AUG-2014	16-SEP-2014	✓	27-AUG-2014	16-SEP-2014	✓
BH22_0.1,	BH13_0.1,							
BH05_0.2,	BH05_0.8,							
BH05_1.0,	BH05_1.5,							
BH02_0.2,	BH02_1.0,							
BH01_0.2,	BH03_0.2,							
BH04_0.2,	BH08_0.2,							
BH09_0.2,	BH07_0.2,							
BH11_0.2,	BH06_0.2,							
BH15_0.2,	BH16_0.2,							
BH16_0.4,	BH17_0.2,							
BH18_0.2,	BH20_0.2,							
BH20_0.7,	BH20_1.0,							
BH19_0.2,	A, BH21_0.2,							
C								
EK026SF: Total CN by Segmented Flow Analyser								
Soil Glass Jar - Unpreserved (EK026SF)		19-AUG-2014	26-AUG-2014	02-SEP-2014	✓	27-AUG-2014	09-SEP-2014	✓
BH16_0.2,	BH20_0.2							
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066)		19-AUG-2014	26-AUG-2014	02-SEP-2014	✓	27-AUG-2014	05-OCT-2014	✓
BH05_0.8,	BH08_0.2,							
BH11_0.2,	BH16_0.2,							
BH17_0.2,	BH20_0.2							
EP068A: Organochlorine Pesticides (OC)								
Soil Glass Jar - Unpreserved (EP068)		19-AUG-2014	26-AUG-2014	02-SEP-2014	✓	27-AUG-2014	05-OCT-2014	✓
BH05_0.8,	BH02_0.2,							
BH08_0.2,	BH11_0.2,							
BH16_0.2,	BH16_0.4,							
BH17_0.2,	BH20_0.2,							
BH20_1.0								
EP068B: Organophosphorus Pesticides (OP)								
Soil Glass Jar - Unpreserved (EP068)		19-AUG-2014	26-AUG-2014	02-SEP-2014	✓	27-AUG-2014	05-OCT-2014	✓
BH05_0.8,	BH02_0.2,							
BH08_0.2,	BH11_0.2,							
BH16_0.2,	BH16_0.4,							
BH17_0.2,	BH20_0.2,							
BH20_1.0								



Matrix: **SOIL**

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013								
Soil Glass Jar - Unpreserved (EP071)								
BH22_0.1, BH05_0.2, BH05_1.0, BH02_1.0, BH03_0.2, BH08_0.2, BH07_0.2, BH06_0.2, BH16_0.2, BH18_0.2, BH20_0.7, BH21_0.2, C	BH13_0.1, BH05_0.8, BH05_1.5, BH01_0.2, BH04_0.2, BH09_0.2, BH11_0.2, BH15_0.2, BH17_0.2, BH20_0.2, BH19_0.2, A,	19-AUG-2014	26-AUG-2014	02-SEP-2014	✓	27-AUG-2014	05-OCT-2014	✓
EP075(SIM)A: Phenolic Compounds								
Soil Glass Jar - Unpreserved (EP075(SIM))								
BH13_0.1, BH05_0.8, BH09_0.2, BH11_0.2, BH15_0.2, BH17_0.2, BH20_0.7, BH21_0.2	BH05_0.2, BH08_0.2, BH07_0.2, BH06_0.2, BH16_0.2, BH20_0.2, BH19_0.2	19-AUG-2014	26-AUG-2014	02-SEP-2014	✓	27-AUG-2014	05-OCT-2014	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM))								
BH22_0.1, BH05_0.2, BH05_1.0, BH01_0.2, BH04_0.2, BH09_0.2, BH11_0.2, BH15_0.2, BH17_0.2, BH20_0.7, BH21_0.2, C	BH13_0.1, BH05_0.8, BH02_1.0, BH03_0.2, BH08_0.2, BH07_0.2, BH06_0.2, BH16_0.2, BH20_0.2, BH19_0.2, A,	19-AUG-2014	26-AUG-2014	02-SEP-2014	✓	27-AUG-2014	05-OCT-2014	✓



Matrix: **SOIL**

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

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN								
Soil Glass Jar - Unpreserved (EP080)								
BH20_0.7, BH21_0.2, C	BH19_0.2, A,	19-AUG-2014	25-AUG-2014	02-SEP-2014	✓	26-AUG-2014	02-SEP-2014	✓
Soil Glass Jar - Unpreserved (EP080)								
BH22_0.1, BH05_0.2, BH05_1.0, BH02_1.0, BH03_0.2, BH08_0.2, BH07_0.2, BH06_0.2, BH16_0.2, BH18_0.2,	BH13_0.1, BH05_0.8, BH05_1.5, BH01_0.2, BH04_0.2, BH09_0.2, BH11_0.2, BH15_0.2, BH17_0.2, BH20_0.2	19-AUG-2014	26-AUG-2014	02-SEP-2014	✓	26-AUG-2014	02-SEP-2014	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013								
Soil Glass Jar - Unpreserved (EP080)								
BH20_0.7, BH21_0.2, C	BH19_0.2, A,	19-AUG-2014	25-AUG-2014	02-SEP-2014	✓	26-AUG-2014	02-SEP-2014	✓
Soil Glass Jar - Unpreserved (EP080)								
BH22_0.1, BH05_0.2, BH05_1.0, BH02_1.0, BH03_0.2, BH08_0.2, BH07_0.2, BH06_0.2, BH16_0.2, BH18_0.2,	BH13_0.1, BH05_0.8, BH05_1.5, BH01_0.2, BH04_0.2, BH09_0.2, BH11_0.2, BH15_0.2, BH17_0.2, BH20_0.2	19-AUG-2014	26-AUG-2014	02-SEP-2014	✓	26-AUG-2014	02-SEP-2014	✓



Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification	
Analytical Methods	Method	QC	Regular	Actual	Expected		Evaluation
Laboratory Duplicates (DUP)							
Moisture Content	EA055-103	4	40	10.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	4	35	11.4	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	2	12	16.7	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	2	16	12.5	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Cyanide by Segmented Flow Analyser	EK026SF	1	2	50.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	4	33	12.1	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	5	50	10.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH - Semivolatile Fraction	EP071	4	38	10.5	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH Volatiles/BTEX	EP080	4	34	11.8	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	2	35	5.7	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	12	8.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	16	6.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Cyanide by Segmented Flow Analyser	EK026SF	2	2	100.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	33	6.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	3	50	6.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH - Semivolatile Fraction	EP071	2	38	5.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH Volatiles/BTEX	EP080	2	34	5.9	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	2	35	5.7	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	12	8.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	16	6.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Cyanide by Segmented Flow Analyser	EK026SF	1	2	50.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	33	6.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	3	50	6.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH - Semivolatile Fraction	EP071	2	38	5.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH Volatiles/BTEX	EP080	2	34	5.9	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	2	35	5.7	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	12	8.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	16	6.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Cyanide by Segmented Flow Analyser	EK026SF	1	2	50.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	33	6.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	3	50	6.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH - Semivolatile Fraction	EP071	2	38	5.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH Volatiles/BTEX	EP080	2	34	5.9	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055-103	SOIL	A gravimetric procedure based on weight loss over a 12 hour drying period at 103-105 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Total Metals by ICP-AES	EG005T	SOIL	(APHA 21st ed., 3120; USEPA SW 846 - 6010) (ICPAES) Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	AS 3550, APHA 21st ed., 3112 Hg - B (Flow-injection (SnCl ₂)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Total Cyanide by Segmented Flow Analyser	EK026SF	SOIL	APHA 4500-CN-O. Caustic leachates of soil samples are introduced into an automated segmented flow analyser. Complex bound cyanide is decomposed in a continuously flowing stream, at a pH of 3.8, by the effect of UV light. A UV-B lamp (312 nm) and a decomposition spiral of borosilicate glass are used to filter out UV light with a wavelength of less than 290 nm thus preventing the conversion of thiocyanate into cyanide. The hydrogen cyanide present at a pH of 3.8 is separated by gas dialysis. The hydrogen cyanide is then determined photometrically, based on the reaction of cyanide with chloramine-T to form cyanogen chloride. This then reacts with 4-pyridine carboxylic acid and 1,3-dimethylbarbituric acid to give a red colour which is measured at 600 nm. This method is compliant with NEPM (2013) Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 504)
Pesticides by GCMS	EP068	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (2013) Schedule B(3) (Method 504,505)
TRH - Semivolatile Fraction	EP071	SOIL	(USEPA SW 846 - 8015A) Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40.
PAH/Phenols (SIM)	EP075(SIM)	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)
TRH Volatiles/BTEX	EP080	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve.
Preparation Methods	Method	Matrix	Method Descriptions
NaOH leach for CN in Soils	CN-PR	SOIL	In-house, APHA 4500 CN. Samples are extracted by end-over-end tumbling with NaOH.



Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	USEPA 200.2 Mod. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)
Methanolic Extraction of Soils for Purge and Trap	* ORG16	SOIL	(USEPA SW 846 - 5030A) 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids (Option A - Concentrating)	ORG17A	SOIL	In-house, Mechanical agitation (tumbler). 20g of sample, Na ₂ SO ₄ and surrogate are extracted with 150mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Tumbler Extraction of Solids (Option B - Non-concentrating)	ORG17B	SOIL	In-house, Mechanical agitation (tumbler). 10g of sample, Na ₂ SO ₄ and surrogate are extracted with 20mL 1:1 DCM/Acetone by end over end tumble. The solvent is transferred directly to a GC vial for analysis.



Summary of Outliers

Outliers : Quality Control Samples

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

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: SOIL

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Duplicate (DUP) RPDs							
EG005T: Total Metals by ICP-AES	ES1418370-001	Anonymous	Chromium	7440-47-3	32.1 %	0-20%	RPD exceeds LOR based limits

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

Regular Sample Surrogates

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

Outliers : Analysis Holding Time Compliance

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

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

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

- No Quality Control Sample Frequency Outliers exist.



AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref: ASET41018/ 44198 / 1 - 7

Your ref: ES1418787

NATA Accreditation No: 14484

28 August 2014

Australian Laboratory Services Pty Ltd
277 – 285 Woodpark Road
Smithfield NSW 2164



Accredited for compliance with ISO/IEC 17025.

Attn: Ms Nanthini Coilparampil

Dear Nanthini

Asbestos Identification

This report presents the results of seven samples, forwarded by Australian Laboratory Services Pty Ltd on 26 August 2014, for analysis for asbestos.

1.Introduction:Seven samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (**Safer Environment Method 1.**)

3. Results : **Sample No. 1. ASET41018 / 44198 / 1. ES1418787 - 001 - BH23 - 0.1.**
Approx dimensions 7.0 cm x 6.0 cm x 3.3 cm
The sample consisted of a mixture of clayish soil, stones, shale and plant matter.
No asbestos detected.

Sample No. 2. ASET41018 / 44198 / 2. ES1418787 - 002 - BH24 - 0.1.
Approx dimensions 6.0 cm x 6.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 3. ASET41018 / 44198 / 3. ES1418787 - 003 - BH22 - 0.1.
Approx dimensions 6.5 cm x 6.2 cm x 3.2 cm
The sample consisted of a mixture of clayish soil, stones, shale and plant matter.
No asbestos detected.

Sample No. 4. ASET41018 / 44198 / 4. ES1418787 - 006 - BH05 - 0.2.
Approx dimensions 6.5 cm x 6.5 cm x 3.2 cm
The sample consisted of a mixture of soil, stones, plant matter, fragments of plaster, cement, brick, corroded metal and pieces of glass.
No asbestos detected.

Sample No. 5. ASET41018 / 44198 / 5. ES1418787 - 016 - BH08 - 0.2.
Approx dimensions 6.6 cm x 6.6 cm x 3.6 cm
The sample consisted of a mixture of soil, stones, plant matter, fragments of plaster, cement, brick, bitumen, corroded metal and pieces of glass.
No asbestos detected.

SUITE 710 / 90 GEORGE STREET, HORNSBY NSW 2077 – P.O. BOX 1644 HORNSBY WESTFIELD NSW 1635

PHONE: (02) 99872183 FAX: (02)99872151 EMAIL: aset@bigpond.net.au WEBSITE: www.Ausset.com.au

OCCUPATIONAL HEALTH & SAFETY STUDIES • INDOOR AIR QUALITY SURVEYS • HAZARDOUS MATERIAL SURVEYS • RADIATION SURVEYS • ASBESTOS SURVEYS
ASBESTOS DETECTION & IDENTIFICATION • REPAIR & CALIBRATION OF SCIENTIFIC EQUIPMENT • AIRBORNE FIBRE & SILICA MONITORING



Sample No. 6. ASET41018 / 44198 / 6. ES1418787 - 027 - BH16 - 0.2.

Approx dimensions 6.5 cm x 6.0 cm x 4.0 cm

The sample consisted of a mixture of soil, stones, plant matter, fragments of plaster, cement, fibre cement* and brick.

Chrysotile* asbestos and Amosite* asbestos detected.

Sample No. 7. ASET41018 / 44198 / 7. ES1418787 - 031 - BH20 - 0.2.

Approx dimensions 6.5 cm x 6.5 cm x 3.8 cm

The sample consisted of a mixture of soil, stones, shale, plant matter and fragments of bitumen.

No asbestos detected.

Analysed and reported by,

A handwritten signature in black ink, appearing to read "Nisansala Maddage". The signature is written in a cursive, flowing style.

Nisansala Maddage. BSc(Hons)

Environmental Scientist/Approved Identifier

Approved Signatory



Accredited for compliance with ISO/IEC 17025.

*** denotes asbestos detected in ACM in bonded form.**