THIS IS ANNEXURE "A" REFERRED TO IN THE TRANSFER MADE BETWEEN

Roads and Maritime Services ABN 76 236 371 088 **AS TRANSFEROR**

AND

Press Australia Pty Limited ACN 151 214 836 **AS TRANSFEREE.**

MADE THE __________ DAY OF __________________________ 2012

I certify that I am an eligible witness and that an authorised officer of the transferor signed this dealing in my presence [See note * below]

Signature of witness:

NICOLE LETT
Name of witness:

101 MILLER ST NORTH SYDNEY NSW
Address of witness:

Certified correct for the purposes of the Real Property Act 1900 by the authorised officer named below.

Signature of Authorised officer:

PAUL GREGORY
Authorised officers name:

Authority of officer:

Signing on behalf of - Roads and Maritime Services ABN 76 236 371 088

EXECUTED BY MANAGER, PROPERTY SALES & LEASING PURSUANT TO DELEGATION BOOK 4623 No. 148

** s117 RP Act requires that you must have known the signatory for more than 12 months or have sighted indentifying documentation.*

Form: 01T
Release: 6·0

1

TRANSFER

New South Wales
Real Property Act 1900

AH260902B

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the Registrar General to collect the information required by this form for the establishment and maintenance of the Real Property Act Register. Section 96B RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

STAMP DUTY Office of State Revenue use only

Office of State Revenue
NSW Treasury
Client No: 3323749 1755
Duty: $10.00 Trans No: 6770944
Asst details:

(A) **TORRENS TITLE** PART FOLIO IDENTIFIER 30/1170849 NOW BEING FOLIO IDENTIFIER ~~100/1176622~~

(B) **LODGED BY**

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any	CODES
45A	Level 5, Building C 1 Homebush Bay Drive Rhodes NSW 2138 LLPN: 123011G Reference: 12GW3201	T TW

(C) **TRANSFEROR** ROADS AND MARITIME SERVICES ABN 76 236 371 088

(D) **CONSIDERATION** The transferor acknowledges receipt of the consideration of $ 835,000.00 and as regards

(E) **ESTATE** the abovementioned land transfers to the transferee an estate in fee simple

(F) **SHARE TRANSFERRED**

(G) Encumbrances (if applicable):

(H) **TRANSFEREE** PRESS AUSTRALIA PTY LTD ACN 151 214 836

(I) **TENANCY:**

DATE

OFF x AH148807.

(J) Certified correct for the purposes of the Real Property Act 1900 and executed on behalf of the corporation named below by the authorised person(s) whose signature(s) appear(s) below pursuant to the authority specified.

Corporation:
Authority: PLEASE SEE ANNEXURE "A"

Signature of authorised person:
Name of authorised person:
Office held:

Signature of authorised person:
Name of authorised person:
Office held:

Certified correct for the purposes of the Real Property Act 1900 on behalf of the transferee by the person whose signature appears below.

Signature:

Signatory's name: Brooke Glastonbury
Signatory's capacity: solicitor

(K) The transferee certifies that the eNOS data relevant to this dealing has been submitted and stored under
eNOS ID No. Full name: Signature:

** s117 RP Act requires that you must have known the signatory for more than 12 months or have sighted identifying documentation.*

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 100/1176622

SEARCH DATE	TIME	EDITION NO	DATE
19/12/2013	9:59 AM	2	25/9/2012

LAND

LOT 100 IN DEPOSITED PLAN 1176622
AT DENHAM COURT
LOCAL GOVERNMENT AREA CAMPBELLTOWN
PARISH OF MINTO COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1176622

FIRST SCHEDULE

PRESS AUSTRALIA PTY LTD (T AH260902)

SECOND SCHEDULE (5 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 DP263888 RESTRICTION(S) ON THE USE OF LAND
3 DP263888 EASEMENT FOR TRANSMISSION LINE AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM
4 AH92034 RESTRICTION(S) ON THE USE OF LAND
5 AH260903 MORTGAGE TO NATIONAL AUSTRALIA BANK LIMITED

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

PRINTED ON 19/12/2013

* 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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SAI Global Property Division an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with section 96B(2) of the Real Property Act 1900.

SAI GLOBAL
PROPERTY

Order number: 18440860
Your Reference: 18440631
19/12/2013

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

19/12/2013 10:01AM

FOLIO: 100/1176622

First Title(s): OLD SYSTEM
Prior Title(s): 30/1170849

Recorded	Number	Type of Instrument	C.T. Issue
23/7/2012	DP1176622	DEPOSITED PLAN	LOT RECORDED FOLIO NOT CREATED
6/8/2012	AH92033	REQUEST	FOLIO CREATED CT NOT ISSUED
6/8/2012	AH92034	RESTRICTION ON USE OF LAND BY/VESTED IN PRESCRIBED AUTHORITY	EDITION 1
7/8/2012	AH148807	CAVEAT	
25/9/2012	AH260902	TRANSFER	
25/9/2012	AH260903	MORTGAGE	EDITION 2

*** END OF SEARCH ***

PRINTED ON 19/12/2013

SAI Global Property Division an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with section 96B(2) of the Real Property Act 1900.

Form: 01T
Licence: 01-06-012
Licensee: Colin Biggers & Paisley

TRANSFER
New South Wales
Real Property Act 1900

AB10585J

PRIVACY NOTE: this information is legally required and

STAMP DUTY

~~Office of State Revenue use only~~

Office of State Revenue NSW Treasury
Sec 162 D S45
VENDOR DUTY ENDORSED
ID:2147416/en au91-

NEW SOUTH WALES DUTY
27-08-2004 0002147345-002
SECTION OTHR LEGN-TRANSFER
NO DUTY PAYABLE

(A) TORRENS TITLE
If appropriate, specify the part transferred
FOLIO IDENTIFIER 201/263888

(B) LODGED BY

Delivery Box	Name, Address or DX and Telephone	CODE
115F	**COLIN BIGGERS & PAISLEY** **LEVEL 42, 2 PARK STREET, SYDNEY** **DX 280 SYDNEY; TEL: (02) 8281 4555** Reference (optional): SSS:SJL:42471	T TW (Sheriff)

(C) TRANSFEROR
BRIAN CHARLES HOBSON & MICHELE KERRY PECK

(D) CONSIDERATION The transferor acknowledges receipt of the consideration of $1,335,093.00 and as regards

(E) ESTATE the land specified above transfers to the transferee an estate in fee simple.

(F) SHARE TRANSFERRED

(G) Encumbrances (if applicable): 1 2 3.

(H) TRANSFEREE
ROADS & TRAFFIC AUTHORITY OF NEW SOUTH WALES
ABN 64 480 155 255

(I) TENANCY:

DATE ____ / ____ / ____
dd mm yyyy

(J) I certify that the transferor, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this transfer in my presence.

Signature of witness: FMSchluter
Name of witness: Fiona Schluter
Address of witness: 17 Faraday Rd Padstow NSW 2211

Certified correct for the purposes of the Real Property Act 1900 by the transferor.

Signature of transferor:
Brian Hobson
M K Peck

Certified correct for the purposes of the Real Property Act 1900 by the person whose signature appears below.

Signature: S. Suchard

Signatory's name: Sidney Suchard
Signatory's capacity: Solicitor for Transferee

97-01T

TRANSFER

Real Property Act, 1900

2074961 V

Office

260396 0432 04 2010894441/03 $2.00
N.S.W. STAMP DUTY

(A) **LAND TRANSFERRED**
Show no more than 20 References to Title.
If appropriate, specify the share transferred.

Folio Identifier 201/263888

(B) **LODGED BY**

L.T.O. Box	Name, Address or DX and Telephone
23W	COMMONWEALTH BANK OF AUSTR... 120 PITT ST SYDNEY NSW PHONE: 312 2195 DX 434 REFERENCE (max. 15 characters): 294597008 Team D PRS

(C) **TRANSFEROR** LESLIE ERNEST HEWSON AND MARLENE ENID HEWSON

(D) acknowledges receipt of the consideration of $345,000.00
and as regards the land specified above transfers to the Transferee an estate in fee simple

(E) subject to the following **ENCUMBRANCES** 1. .... 2. .... 3. ....

(F) **TRANSFEREE**

(G)

T / TS (s713 LGA) / TW (Sheriff)	BRIAN CHARLES HOBSON AND MICHELE KERRY PECK
	TENANCY: joint

(H) We certify this dealing correct for the purposes of the Real Property Act, 1900. **DATED** 4/4/96

Signed in my presence by the Transferor who is personally known to me.

Signature of Witness

PAUL ... SOLICITOR
Name of Witness (BLOCK LETTERS)

11 Surrey St Blacktown
Address of Witness

Signature of Transferor

Signed in my presence by the Transferee who is personally known to me.

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

Solicitor for
JOSEPH J SIMON

INSTRUCTIONS FOR FILLING OUT THIS FORM ARE AVAILABLE FROM THE LAND TITLES OFFICE

CHECKED BY (office use only)

AUSDOC Office Pty. Ltd.

RP 13

STAMP DUTY

(1) $1

[redacted]

Z
054757

TRANSFER

REAL PROPERTY ACT, 1900

T

2	3 of 3	1	R 3/3
$	44		

	Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
DESCRIPTION OF LAND Note (a)	FORMERLY VOLUME 15015 FOLIO 128 now being known as **FOLIO IDENTIFIER: 201/263888**	WHOLE	**COUNTY:** CUMBERLAND **PARISH:** MINTO

TRANSFEROR Note (b)

GILBERT MIRALLES AND **MARIE FRANCE ALICE TROUVE**

ESTATE Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $ 420,000.00 and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE Note (d)

LESLIE ERNEST HEWSON of 22 Rupertswood Road, Rooty Hill as to three quarters share, Lorry Owner Driver and **MARLENE ENID HEWSON** of the same address as to one quarter share, Home Duties. as

OFFICE USE ONLY

PROP

TENANCY Note (e)

~~as joint tenants~~/tenants in common

300490 4306 04 00108744/03

PRIOR ENCUMBRANCES Note (f)

subject to the following PRIOR ENCUMBRANCES 1. ....
2. .... 3. ....

DATE

We hereby certify this dealing to be correct for the purposes of the Real Property Act, 1900.

EXECUTION Note (g)

Signed in my presence by the transferor who is personally known to me

.... Signature of Witness

GEORGE STEN Name of Witness (BLOCK LETTERS)
Solicitor
359 Chapel Road
BANKSTOWN 2200 Address and occupation of Witness

$1.00

.... Signature of Transferor

Signed in my presence by the transferee who is personally known to me

Note (g)

.... Signature of Witness

.... Name of Witness (BLOCK LETTERS)

.... Address and occupation of Witness

.... Signature of Transferee 's

PAUL GEORGIADIS
SOLICITOR

TO BE COMPLETED BY LODGING PARTY
Notes (h) and (i)

LODGED BY

J.P. LEGAL & COMMERCIAL SERVICES,
SUITE 307, MIRVAC TRUST BUILDING
135 ELIZABETH STREET, SYDNEY, 2000
DX 1024 SYDNEY Ph: 283-2590

Ref:
Delivery Box Number 246P

LOCATION OF DOCUMENTS

CT	OTHER	
/		Herewith.
		In L.T.O. with
		Produced by

OFFICE USE ONLY

Checked	Passed	REGISTERED -19
		8 JUN 19..
Signed	Extra Fee	

Secondary Directions		
Delivery Directions	CT	246P

Order number: 18448629
Your Reference: 18440631
19/12/2013

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

19/12/2013 12:15PM

FOLIO: 201/263888

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 15015 FOL 128

Recorded	Number	Type of Instrument	C.T. Issue
5/6/1987		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
14/7/1987		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
29/3/1989	X965104	REQUEST	
8/6/1990	Z54755	DISCHARGE OF MORTGAGE	
8/6/1990	Z54756	DISCHARGE OF MORTGAGE	
8/6/1990	Z54757	TRANSFER	EDITION 1
11/4/1996	2074961	TRANSFER	
11/4/1996	2074962	MORTGAGE	
11/4/1996	2074963	MORTGAGE	EDITION 2
11/10/2004	AB10584	DISCHARGE OF MORTGAGE	
11/10/2004	AB10585	TRANSFER	EDITION 3
23/11/2011	DP1170849	DEPOSITED PLAN	
24/1/2012	AG664573	REQUEST	FOLIO CANCELLED

*** END OF SEARCH ***

PRINTED ON 19/12/2013

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Form: 01T
Licence: 01-08-067
Licensee: Midware Systems
Champion Legal

TRANSFER
New South Wales
Real Property Act 1900

AB381433K

PRIVACY NOTE: this information is legally required and will bec

STAMP DUTY Office of State Revenue use only

Office of State Revenue NSW Treasury
Appl#244 242843
VENDOR DUTY ENDORSED
ID: EXEMPTS162B

NEW SOUTH WALES DUTY
27-01-2005 0002439450-001
SECTION 30B-TRANSFER
NO DUTY PAYABLE

(A) **TORRENS TITLE** Folio Identifier 200/263888

(B) **LODGED BY**

Delivery Box	Name, Address or DX and Telephone	CODE
256L ~~440T~~	123161X LLPN: ~~123309E~~ ~~CHAMPION LEGAL~~ ~~DX 8220 PARRAMATTA~~ ~~Tel: (02) 9635 8266~~ City Agents DX 1293 Sydney Reference (optional): ~~JJC:LM:46377~~ CMP/135	T TW (Sheriff)

(C) **TRANSFEROR** JOSEPH ARTHUR BORG and RAELEAN BORG

(D) **CONSIDERATION** The transferor acknowledges receipt of the consideration of $ 1,120,000.00 and as regards

(E) **ESTATE** the land specified above transfers to the transferee an estate in fee simple.

(F) **SHARE TRANSFERRED** WHOLE

(G) Encumbrances (if applicable):

(H) **TRANSFEREE** ROADS AND TRAFFIC AUTHORITY OF NEW SOUTH WALES

(I) TENANCY:

(J) **DATE** 21 / 03 / 2005

I certify that the person(s) signing opposite, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this instrument in my presence.

Signature of witness:

Name of witness: Vincent Cavuoto

Address of witness: 18 Tasman Dr. Horsley Park NSW 2171

Certified correct for the purposes of the Real Property Act 1900 by the transferor.

Signature of transferor:

Certified correct for the purposes of the Real Property Act 1900 by the person whose signature appears below.

Signature:

Signatory's name: PAT SPITHILL
Signatory's capacity: Solicitor for the transferee

Form: 97-01T
Licence: AUS/0634/96

TRANSFER

New South Wales
Real Property Act 1900

3610147 P

1

Instructions for filling out this form are available from the Land Titles Office

Office of State Revenue use only
141197 9106 04 002187356/03
$2.00
N.S.W. STAMP DUTY

(A) **LAND TRANSFERRED**
If appropriate, specify the share or part transferred.

Folio Identifier 200/263888

(B) **LODGED BY**

LTO Box 568Q

Name, Address or DX and Telephone
T. J. Johnson & Co.
1/47 Memorial Ave. Liverpool 217
DX5046 Liverpool
Tel 9600 7277
Reference (15 character maximum): Borg

(C) **TRANSFEROR** RAYMOND JOHN TAYLOR

(D) acknowledges receipt of the consideration of $395,000.00
and as regards the land specified above transfers to the transferee an estate in fee simple.

(E) Encumbrances (if applicable): 1. .... 2. .... 3. ....

(F) **TRANSFEREE**

T
TS (s713 LGA)
TW (Sheriff)

JOSEPH ARTHUR BORG & RAELEAN O'BRIEN

(G) TENANCY: JOINT TENANT

(H) We certify this dealing correct for the purposes of the Real Property Act 1900. DATE 7th November 1997

Signed in my presence by the transferor who is personally known to me.

Signature of Witness

CHRISTINE ARUNDEL
Name of Witness (BLOCK LETTERS)

1/47 Memorial Avenue, Liverpool
Address of Witness

R J Taylor
Signature of Transferor

Signed in my presence by the transferee who is personally known to me.

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

TASS JOHNSON
Solicitor for
Signature of Transferee

If signed on the transferee's behalf by a solicitor or licensed conveyancer, show the signatory's full name in block letters.

Checked by (LTO use) ....

Req:R754014 /Doc:DL U055116 /Rev:07-Apr-2010 /Sts:OK.OK /Prt:19-Dec-2013 12:27 /Pgs:ALL /Seq:1 of 1
Ref: /Src:U

RP13

(1)

TRANSFER

Real Property Act, 1900

U
055116 T

Office of St... use only

NO STAMP DUTY IS PAYABLE ON THIS INSTRUMENT

B

(A) **LAND TRANSFERRED**
Show no more than 20 References to Title.
If appropriate, specify the share transferred.

Folio Identifier 200/263888

(B) **LODGED BY**

L.T.O. Box
349D

Name, Address or DX and Telephone
SMITH, KERRISON & FOSTER
SOLICITORS
P O BOX 336
INGLEBURN 2565
DX 5103 CAMPBELLTOWN
REFERENCE (max. 15 characters): SM. 93.11482

(C) **TRANSFEROR** RAYMOND JOHN TAYLOR and ROBYN PATRICIA TAYLOR

(D) acknowledges receipt of the consideration of transfers the property pursuant to an Order made in the Campbelltown Local Court made on the 5th day of November, 1993 in Proceedings No. 790/93
and as regards the land specified above transfers to the transferee an estate in fee simple

(E) subject to the following **ENCUMBRANCES** 1. .... 2. .... 3. ....

(F) **TRANSFEREE**

(G) T

RAYMOND JOHN TAYLOR

S

~~as joint tenants/tenants in common~~

(H) We certify this dealing correct for the purposes of the Real Property Act, 1900. **DATE OF EXECUTION** 1.2.94

Signed in my presence by the transferor who is personally known to me.

P Crittenden
Signature of Witness
PETER CRITTENDEN
Name of Witness (BLOCK LETTERS)
INGLEBURN
Address of Witness

Signed in my presence by Raymond John Taylor who is personally known to me:
S Maxwell
S. Maxwell
Ingleburn.

R J Taylor
R. P. Taylor
Signature of Transferor

Signed in my presence by the transferee who is personally known to me.

S Maxwell
Signature of Witness
S. Maxwell
Name of Witness (BLOCK LETTERS)
Ingleburn.
Address of Witness

R J Taylor
Signature of Transferee

INSTRUCTIONS FOR FILLING OUT THIS FORM ARE AVAILABLE FROM THE LAND TITLES OFFICE

CHECKED BY (office use only) Reg'd SW

Ausdoc Commercial and Law Stationers 1991

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
19/12/2013 12:23PM

FOLIO: 200/263888

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 15015 FOL 127

Recorded	Number	Type of Instrument	C.T. Issue
5/6/1987		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
14/7/1987		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
29/8/1988	X794130	DISCHARGE OF MORTGAGE	
29/8/1988	X794131	DISCHARGE OF MORTGAGE	
29/8/1988	X794132	MORTGAGE	EDITION 1
23/2/1994	U55115	DISCHARGE OF MORTGAGE	
23/2/1994	U55116	TRANSFER	
23/2/1994	U55117	MORTGAGE	EDITION 2
4/3/1994	U79936	CAVEAT	
20/11/1995	0701511	WITHDRAWAL OF CAVEAT	
30/5/1997	3108101	DISCHARGE OF MORTGAGE	
30/5/1997	3108102	MORTGAGE	EDITION 3
25/11/1997	3610146	DISCHARGE OF MORTGAGE	
25/11/1997	3610147	TRANSFER	
25/11/1997	3610148	MORTGAGE	EDITION 4
7/2/2004	AA393747	DISCHARGE OF MORTGAGE	
7/2/2004	AA393748	CHANGE OF NAME	
7/2/2004	AA393749	MORTGAGE	EDITION 5
1/4/2005	AB381432	DISCHARGE OF MORTGAGE	
1/4/2005	AB381433	TRANSFER	EDITION 6
23/11/2011	DP1170849	DEPOSITED PLAN	
24/1/2012	AG664573	REQUEST	FOLIO CANCELLED

*** END OF SEARCH ***

PRINTED ON 19/12/2013

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Vol. 15015 Fol. 128

L.O. 1066 D. West, Government Printer

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	Registrar General
~~Sevres Import Pty. Limited by Transfer T773357. Registered 11-01-1983~~ 11-10-1983	
Gilbert Mirâlles and Marie France Alice Trouve as tenants in common in equal shares by Transfer W409136 Registered 9-7-1986	

SECOND SCHEDULE (continued)

PARTICULARS	Registrar General	CANCELLATION
~~V697840 Mortgage to State Bank of New South Wales. Registered 9-5-1985~~		W409134
~~V697841 Mortgage to State Bank of New South Wales. Registered 9-5-1985~~		W409135
W409137 Mortgage to Westpac Savings Bank Limited Registered 9-7-1986		
W409138 Mortgage to Westpac Banking Corporation Registered 9-7-1986		

NOTATIONS AND UNREGISTERED DEALINGS

T773357 R
V697840 M
W409134 DM
35 DM
36 T
37 M
35 M
R.

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

[redacted]IFICATE OF TITLE

NEW SOUTH WALES [redacted]EAL PROPERTY ACT, 1900

First Title : Old System

Prior Titles: Vol. 3902 Fol.223
Vol.13544 Fol.115

Vol. 15015 Fol. 128

EDITION ISSUED 24 3 1983

(Page 1) Vol. 15015 Fol. 128

I certify that the person named in the First Schedule is the registered proprietor of an estate in fee simple (or such other estate or interest as is set out below) in the land described subject to the recordings appearing in the Second Schedule and to the provisions of the Real Property Act, 1900.

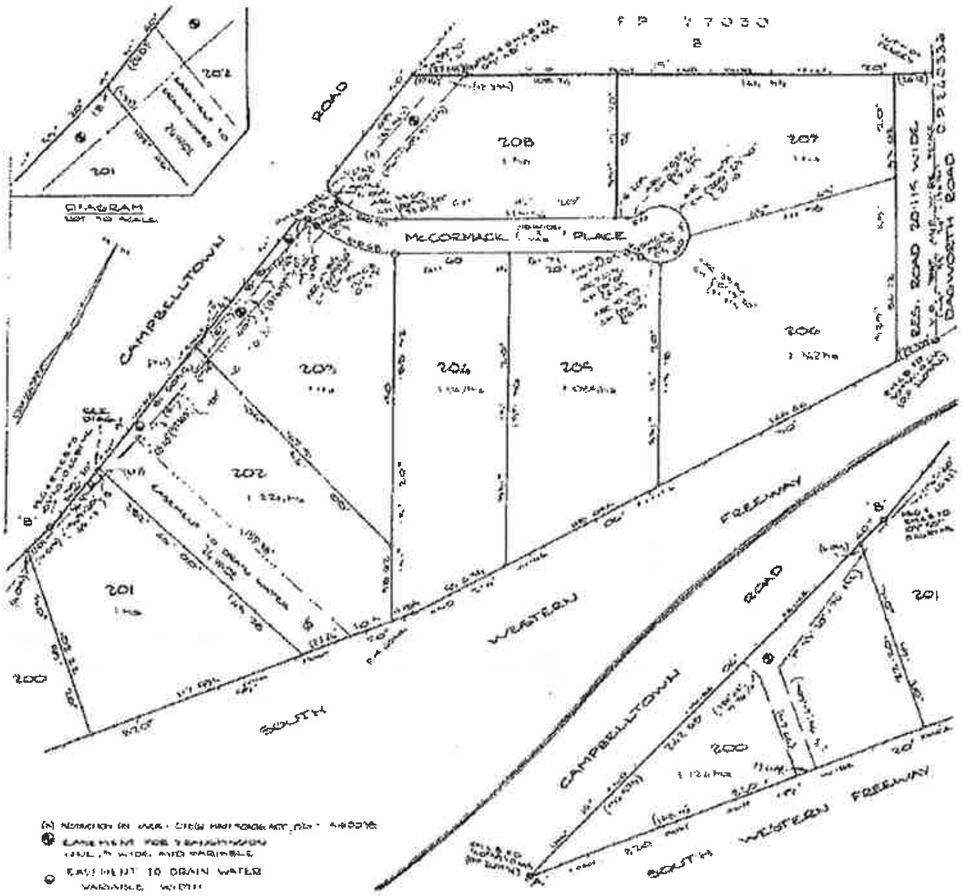
CANCELLED

Registrar General.

SEE AUTO FOLIO

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

S

LAND REFERRED TO

Lot 201 in Deposited Plan 263888 at Denham Court in the City of Campbelltown Parish of Minto and County of Cumberland.

FIRST SCHEDULE

~~MINISTER ADMINISTERING THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979.~~

SECOND SCHEDULE

GRY 1. Reservations and conditions, if any, contained in the Crown Grant.
RT (SB) 2. K160038 Restriction on user (section 27E(6) Main Roads Act, 1924) affecting the land shown so burdened in Deposited Plan 263888.
RU 3. DP263888 Restrictions as to user.
ET (SB) 4. DP263888 Easement for transmission line 9 wide and variable affecting the part of the land above described shown so burdened in Deposited Plan 263888.

L.O. 55

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	Registrar General

SECOND SCHEDULE (continued)

PARTICULARS	Registrar General	CANCELLATION
W743730 Mortgage to GIFC Limited. Registered 16-2-1987	[seal]	

NOTATIONS AND UNREGISTERED DEALINGS

W743730MR Edition issued 24-[illegible]-83 [illegible] destroyed vide [illegible] Item [illegible]		

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

:ATE OF TITLI

NEW SOUTH WALES

:OPERTY ACT, 1900

20040:114

Vol. 15015 Fol. 127

First Title Old System

Prior Title Vol. 13544 Fol. 115

31 1 1987

I certify that the person named in the First Schedule is the registered proprietor of an estate in fee simple (or such other estate or interest as is set out below) in the land described subject to the recordings appearing in the Second Schedule and to the provisions of the Real Property Act, 1900.

Registrar General

CANCELLED

(Page 1) Vol. 15015 Fol. 127

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

LAND REFERRED TO

SEE AUTO FOLIO

Lot 200 in DP263888 at Ingleburn in the City of Campbelltown Parish of Minto County of Cumberland.

Title Diagram: DP263888

FIRST SCHEDULE

RAYMOND JOHN TAYLOR and ROBYN PATRICIA TAYLOR as Joint Tenants. T984127

S

SECOND SCHEDULE

GRY 1. Reservations and conditions in the Crown Grant.
RU 2. DP263888 Restriction as to user.
ET(SB) 3. DP263888 Easement for Transmission Line 9 wide and variable width affecting the part of the land above described shown so burdened in DP263888.
M 4. W574643 Mortgage to State Bank of New South Wales.
BF 5. This edition has been issued due to the reported loss of the edition issued 24-3-1983. 30-1-1987

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

L.O. 1066 D. West, Government Printer

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	Registrar General
Raymond John Taylor and Robyn Patricia Taylor as joint tenants by Transfer T984127. Registered 22-2-1984.	

CANCELLED
See new edition issued 30-1-87
Vide W698041

SECOND SCHEDULE (continued)

PARTICULARS	Registrar General	CANCELLATION
W574643 Mortgage to State Bank of New South Wales. Registered 23-10-1986		

NOTATIONS AND UNREGISTERED DEALINGS

T984127 TR
W574643 MG

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

15015127

[redacted]IFICATE OF TITLE

NEW SOUTH WALES [redacted]REAL PROPERTY ACT, 1900

First Title : Old System

Prior Title : Vol.13544 Fol.115

Vol. 15015 Fol. 127

EDITION ISSUED 12 - 7 - 1983

I certify that the person named in the First Schedule is the registered proprietor of an estate in fee simple (or such other estate or interest as is set out below) in the land described subject to the recordings appearing in the Second Schedule and to the provisions of the Real Property Act, 1900.

Registrar General.

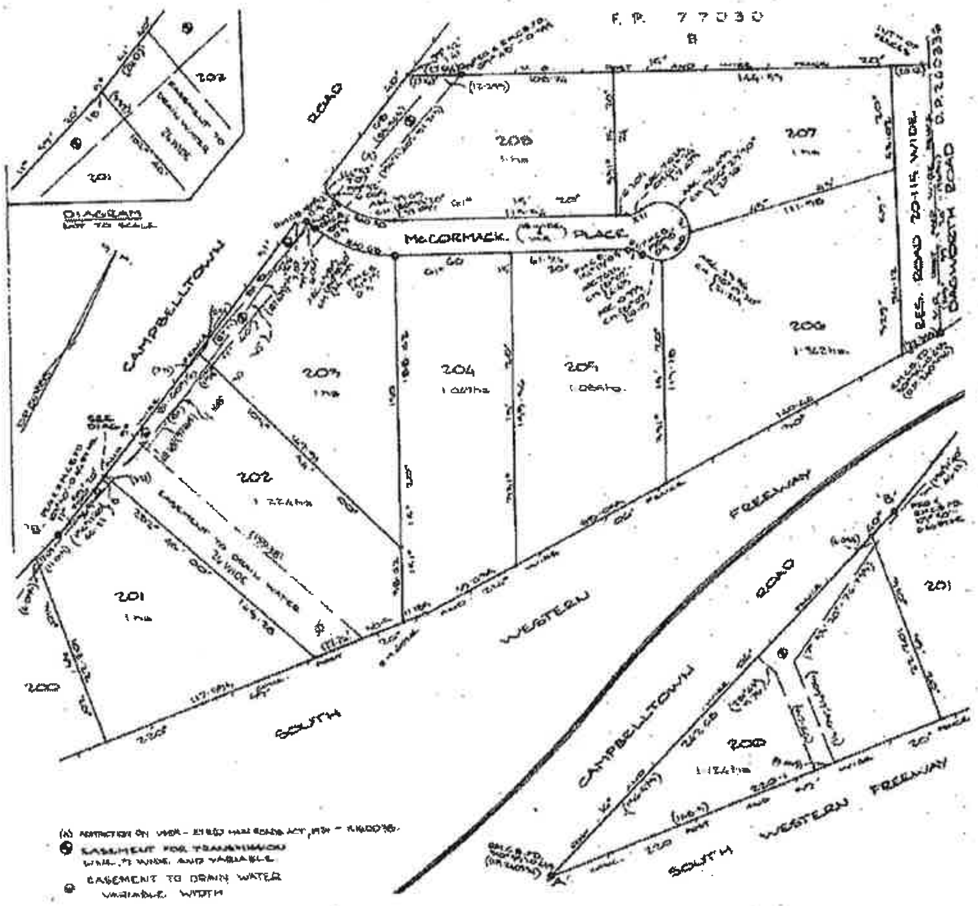
(Page 1) Vol. 15015 Fol. 127

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



LAND REFERRED TO

Lot 200 in Deposited Plan 263888 at Denham Court in the City of Campbelltown Parish of Minto and County of Cumberland.

FIRST SCHEDULE

~~MINISTER ADMINISTERING THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979.~~

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grant.
2. DP263888 Restriction as to user.
3. DP263888 Easement for transmission line 9 wide and variable affecting the part of the land above described shown so burdened in Deposited Plan 263888.

DP 263888

Vol. 13544 Fol. 115

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION
			The interest of the Council of the City of Campbelltown			
			in the new road shown on DP 263888	3.3.1983	[signature]	
			Interests created pursuant to Section 88B Conveyancing Act, 1919,			
			on the registration of Deposited Plan 263888	3.3.1983	[signature]	
			This deed is cancelled as to whole ex Road			The residue of land in this folio comprises Road in DP263888.
			New Certificates of Title have issued on 23-3-1983			
			for lots in Deposited Plan No. 263888 as follows:			[signature]
			Lots 200/208 Vol. 15015 Fol. 127/135 respectively.			REGISTRAR GENERAL
			[signature] REGISTRAR GENERAL			

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

CA

13544.15

[redacted]ICATE OF TITLE

NEW SOUTH WALES

[redacted] PROPERTY ACT, 1900

Appln. No.27030

Prior Title Vol.3902 Fol.223

Vol. 13544 Fol. 115

(Page 1) Vol. 13544 Fol. 115

EDITION ISSUED

7 2 1978

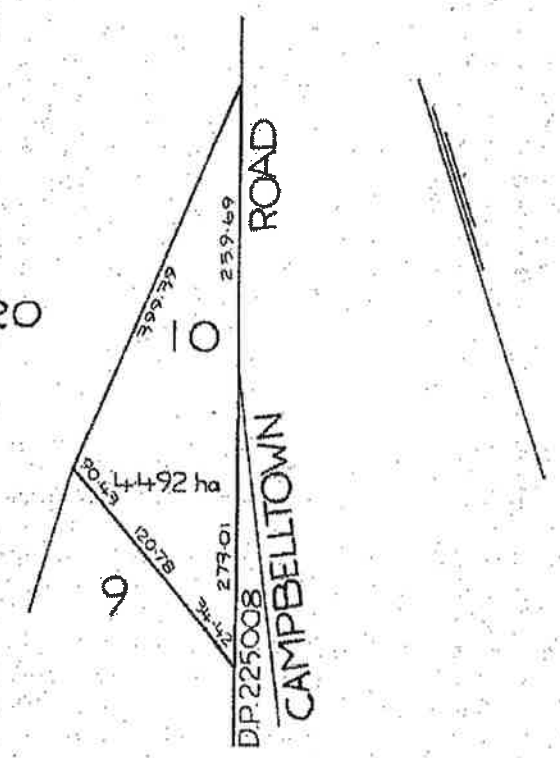
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Registrar General.

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES

CANCELLED



D.P. 255306

REDUCTION RATIO 1:5000

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 10 in Deposited Plan 240334 at Ingleburn in the City of Campbelltown Parish of Minto and County of Cumberland being part of Portion 18 granted to Joseph Underwood on 1-11-1809.

FIRST SCHEDULE

NEW SOUTH WALES PLANNING AND ENVIRONMENT COMMISSION.

SECOND SCHEDULE

NIL

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TITLES OFFICE.

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED.

The within Caveat No. G877010 is hereby withdrawn*
Dated 6th July 1959

REGISTRAR GENERAL

No. H37041 TRANSFER dated 21st August 1958
the CLIVE JOHN BLACK of the land within described
Entered 6th July 1959
~~As to the land in this transfer this deed is cancelled and new certificate issued Vol. Fol.~~

REGISTRAR GENERAL

Lot 13 D.P. 225008 ~~in the plan hereon~~ is subject to the restrictions on user imposed by Section 27 E (6) Main Roads Act 1924-1963
See No. K160038. Entered 23rd March 1966

REGISTRAR GENERAL

~~TERESA GERTRUDE BLACK of Ingleburn, Widow is now the registered proprietor of the land within described See Section 94 Application No. L61664 Entered 7th June 1968~~

REGISTRAR GENERAL

No. L61665 CAVEAT by the Registrar General
Entered 7th June 1968

REGISTRAR GENERAL

THE STATE PLANNING AUTHORITY OF NEW SOUTH WALES is now the registered proprietor of the land within described excluding Lot 13 in DP 225008
See TRANSFER No. L376354 dated 31st July 1968
Entered 2nd May 1969.

REGISTRAR GENERAL

Teresa Gertrude Black of Ingleburn Widow is now the registered proprietor of the land within described see Section 94 Application No. L61664 Entered 7th June 1968

REGISTRAR GENERAL

The residue of land in this folio comprises

REGISTRAR GENERAL

resumed at the council of the City of Campbelltown in the new road shown on DP 263888 ...

REGISTRAR GENERAL

Interests ... pursuant to Section 88B Conveyancing Act, 1919, by the registration of ... Plan 263888 ...

REGISTRAR GENERAL

APPLICATION NO. P860867 New South Wales Planning and Environment Commission is now the registered proprietor of the land within described excluding Lot 13 in D.P. 225008
Registered 14-3-1977

REGISTRAR GENERAL

TRANSFER NO. P860868 The Commissioner for Main Roads is now the registered proprietor of part of the land within described being Lot 20 in D.P. 240334 now Motorway
Registered 14-3-1977

REGISTRAR GENERAL

TRANSFER NO. P860868 The Commissioner for Main Roads is now the registered proprietor of part of the land within described being Lot 16 in D.P. 240334
Registered 14-3-1977

REGISTRAR GENERAL

The residue of land in this folio comprises Lot ... in DP 225008 ... in DP 240334

REGISTRAR GENERAL

NO. Q656918 NOTICE OF ...ION
THE NEW SOUTH WALES PLANNING AND ENVIRONMENT COMMISSION is the proprietor of PART of the Land within described. BEING LOT 21 IN D. P. 590579 freed from all other interests.
REGISTERED 19-1-1978

REGISTRAR GENERAL

... REGISTRATION OF ... D.P. 266306 ...

This deed is cancelled as to ... New certificates of Title ... issued ... as follows for lots in ... respectively.

REGISTRAR GENERAL

The land in this dealing is now comprised in Vol. Fol.

REGISTRAR GENERAL

Appn. No. 27030
Reference to Last Certificate
Vol. 3655 Fol. 72

New South Wales.

[CERTIFICATE OF TITLE.]

Register Book
Vol. 3902 Fol. 223

CANCELLED

The residue of land in this folio comprises
[illegible] 20 in DP 240334
REGISTRAR GENERAL

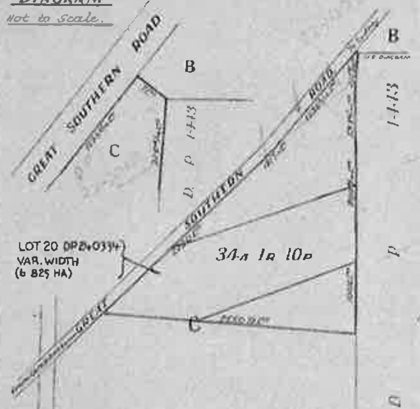
OSWALD BLACK of Ingleburn, Farmer, Transferee under Instrument of Transfer from Violet Victoria Moore, No.B 389197, is now the proprietor of an Estate in Fee Simple, subject nevertheless to the reservations and conditions, if any, contained in the Grant hereinafter referred to, and also subject to such encumbrances, liens, and interests, as are notified hereon, in That piece of land situated in the Municipality of Campbelltown, Parish of Minto, and County of Cumberland containing Thirty four acres one rood ten perches, or thereabouts, as shown in the Plan hereon and therein edged red, being part of Lot C as shown in Plan lodged with Application No. 27030 being also shown in Plan annexed to the said instrument of Transfer No.B 389197, and being also part of 300 acres (Portion 18 of Parish) delineated in the Public Map of the said parish in the Department of Lands, originally granted to Joseph Underwood by Crown Grant dated the first day of November one thousand eight hundred and nine.

In witness whereof I have hereunto signed my name and affixed my Seal, this twenty sixth day of August 1936

Signed in the presence of [signature]

[signature]
Registrar General.

DIAGRAM
Not to Scale.



Scale: 10 Chains to one inch.

THE LAND WITHIN DESCRIBED IS LAND IN DP 179605

LEASE No. C 16895 has expired by effluxion of time
See G 877008 Entered 6th March 1958
J. Wells
REGISTRAR GENERAL

OSWALD JAMES BLACK of Bringelly Farmer and CLIVE JOHN BLACK of Ingleburn Farmer as joint tenants are now the registered proprietors of the land within described.
See Section 94 Application No. G 877009
Entered 6th March 1958

J. Wells
REGISTRAR GENERAL.

No. G 877010 CAVEAT by the Registrar General
Entered 6th March 1958.

J. Wells
REGISTRAR GENERAL

No. C16895 Lease dated 29th September 1930
from the said Oswald Black to Henry Richard Wilkinson of Campbelltown Auctioneer
Extent of the land within described

Produced and entered 30th September 1930
at 6 mts pt 3 o'clock in the after noon.
[signature]
REGISTRAR GENERAL

* No. R552336 APPLICATION.
The Commissioner for Main Roads is the proprietor of part of the land within described being Lot 20 in D.P. 240334 shown by firm line (6 825 HA) var width in the plan hereon as new motorway freed from all other interests
Registered 6-9-1975

[signature]
Registrar General

This deed is cancelled as to Residue ex Road
New Certificate of Title have issued on 23-3-1982
for lots in Deposited Plan No. 263888
Lots 200/208 Vol. 15615 Fol. 130 [illegible]

[signature]

APPENDIX C

HISTORICAL LAND TITLE INFORMATION

Division 2A Edmondson Park Urban Release Area Precinct

51H Density controls

(1) The consent authority must not grant consent to the erection of dwellings on land within the Edmondson Park Urban Release Area Precinct unless the net site density applying in relation to the proposed dwellings on the land is not less than the prescribed net site density applying in relation to the land.

(2) The consent authority must not grant consent to the subdivision of land within the Edmondson Park Urban Release Area Precinct unless the consent authority is of the opinion that the proposal is not inconsistent with the prescribed net site density applying in relation to the land.

(3) Despite subclause (1), the consent authority may consent to the erection of dwellings on land within Zone 2 (c), 3 (a) or 3 (c) even though the net site density applying in relation to the proposed dwellings is less than the prescribed net site density if:

(a) the proposed net site density is not less than the prescribed net site density (if any) that would apply if the boundary of the land was located 60 metres away in at least one direction, and

(b) the consent authority is satisfied that the proposed density is required:

(i) to incorporate an efficient road layout in connection with the proposed development, or
(ii) to achieve the optimum development of the land in a planning and urban design sense.

(4) *State Environmental Planning Policy No 1—Development Standards* does not apply in relation to any prescribed net site density.

(5) In this clause:

net site density, in relation to dwellings, means the ratio that the number of dwellings concerned bears to the area occupied by those dwellings, excluding any public roads, open space or drainage corridors.

prescribed net site density, in relation to land, means the minimum net site density applying in relation to dwellings on the land, as identified on Sheet 2 of the map marked "Campbelltown (Urban Area) Local Environmental Plan 2002 (Amendment No 12)".

NOTE: A copy of the complete written instrument for the Campbelltown (Urban Area) Local Environmental Plan 2002 is available on the NSW Legislation website at: www.legislation.nsw.gov.au.

42C Minto Renewal Project

(1) This clause applies to certain land at Minto, as shown distinctively coloured, edged heavy black and lettered on Sheet 1 of the map marked "Campbelltown (Urban Area) Local Environmental Plan 2002 (Amendment No 14)".

(2) Despite any other provision of this plan, nothing restricts or prohibits the consent authority from granting consent to development of the land to which this clause applies for one or more of the following purposes:

(a) bushfire fighting establishments,

(b) bushfire hazard reduction,

(c) car parking,

(d) community facilities,

(e) recreation areas,

(f) recreation facilities,

(g) roads,

(h) underground mining.

(3) Despite any other provision of this plan, nothing restricts or prohibits the consent authority from granting consent to development of the land to which this clause applies that is within Zone 2 (b) for the purpose of integrated housing development.

(4) If 2 dwellings are situated on the same lot on land that is within Zone 2 (b) on the land to which this clause applies:

(a) the separate occupation of the lots illustrated by a proposed strata plan relating to the dwellings is prohibited, and

(b) subdivision of the land under the *Conveyancing Act 1919* is prohibited,
unless the area of each lot that will be the subject of a separate title for a dwelling when the plan is registered is not less than 300 square metres.

(5) In this clause, *integrated housing development* means development that includes subdivision and that results in:

(a) there being 3 or more dwellings, each on a separate lot, and

(b) the average area of all those separate lots with dwellings is not less than 225 square metres.

34 Dual occupancies in certain zones

(1) If two dwellings are situated on the same lot within Zone 2 (b):

(a) the separate occupation of the lots illustrated by a proposed strata plan relating to the dwellings is prohibited, and

(b) subdivision of the land under the *Conveyancing Act 1919* or the *Community Land Development Act 1989* is prohibited,

unless the area of each lot that will be the subject of a separate title for a dwelling when the plan is registered is not less than 350 square metres.

(2) If two dwellings are situated on the same lot or an existing holding within Zone 1 (a), 7 (d1), 7 (d4), 7 (d5) or 7 (d6):

(a) the separate occupation of the lots illustrated by a proposed strata plan relating to the dwellings is prohibited, and

(b) subdivision of the land under the *Conveyancing Act 1919* or the *Community Land Development Act 1989* is prohibited,

unless the area of each lot that will be the subject of a separate title for a dwelling when the plan is registered is not less than the area for a lot in the zone shown in the Table in clause 33.

35 Erection of dwelling houses or dual occupancies in certain zones

(1) Consent must not be granted to the erection of a dwelling house or a dual occupancy (attached) on land within Zone 1 (a), 7 (d1), 7 (d4), 7 (d5) or 7 (d6) unless:

(a) the area of the lot on which it is to be erected is equal to or greater than the area shown opposite that zone in the Table in clause 33, and

(b) only one dwelling house or one dual occupancy (attached) is to be erected on the lot.

(2) Despite subclause (1), consent may be granted to the erection of one dwelling house or one dual occupancy (attached) on land within Zone 7 (d4) if:

(a) that land constituted the whole of an existing holding, or

(b) the land is a lot created pursuant to clause 33 (2), but not a lot to be used for the purpose of a public utility undertaking or public reserve.

(3) For the purposes of this clause, an *existing holding* is the aggregation of all adjacent or adjoining lots or portions held in the same ownership at the relevant date shown in italics on the map for the part of that zone within which the existing holding is located.

Attachment 2

Campbelltown (Urban Area) Local Environmental Plan 2002

32 Subdivision generally

(1) Land to which this plan applies may be subdivided only with development consent.

(2) Consent must not be granted to the subdivision of land traversed by a zone boundary unless the boundaries of lots so created correspond generally with the boundaries between the zones as shown on the map.

(3) Where the subdivision of land would result in the opening of a new road, the road must accord with any pattern of proposed roads indicated on the map unless the consent authority is satisfied that the road will provide adequate access to adjoining land and fulfils the objectives of the road pattern indicated on the map.

33 Subdivision in rural and environmental protection zones

(1) Consent must not be granted to the subdivision of land in a zone specified in the following Table unless the area of any lot created is equal to or greater than that shown opposite that zone in that Table.

Table

Zone	**Lot**
1 (a)	40 hectares
1 (d)	40 hectares
7 (d1)	100 hectares
7 (d4)	2 hectares
7 (d5)	1 hectare
7 (d6)	0.4 hectare

(2) Despite subclause (1), consent may be granted to the subdivision of land in any of the zones specified in the Table so as to create lots with areas less than those set out in that Table if:

(a) the consent authority is satisfied that the purpose of the subdivision is to create a lot or lots to be used for the purpose of a public utility undertaking or public reserve, or

(b) the consent authority is satisfied that the purpose of the subdivision is to align the boundaries of those lots with the boundaries of a zone so specified.

(2) For the purposes of subclause (2), an *existing holding* is the aggregation of all adjacent or adjoining lots or portions held in the same ownership at the relevant date shown in italics on the map for that zone or the part of that zone within which the existing holding is located.

outlets; places of assembly; plant hire; professional consulting rooms; public buildings; recreation establishments; recreation facilities; refreshment rooms; religious establishments; research establishments; retail plant nurseries; roadside stalls; service stations; shops; storage establishments; transport terminals; veterinary establishments; warehouses.

NOTE: A copy of the complete written instrument for the Campbelltown (Urban Area) Local Environmental Plan 2002 is available on the NSW Legislation website at: www.legislation.nsw.gov.au.

Attachment 1

Campbelltown (Urban Area) Local Environmental Plan 2002

Zone 7 (d5)—Environmental Protection 1 hectare Minimum Zone

(1) **What land is within Zone 7 (d5)?**
Land is within Zone 7 (d5) if it is shown coloured orange with red edging and lettered "7 (d5)" on the map.

(2) **What are the zone objectives and what effect do they have?**
The objectives of this zone are:

(a) to conserve the rural-residential character of the land by maintaining a minimum area of 1 hectare for lots used for rural-residential living, and

(b) to protect environmentally important land and watercourses possessing scenic, aesthetic, ecological or conservation value, and

(c) to allow some diversity of development, but only where it is unlikely to have a detrimental effect on the quality and character of the locality or the amenity of any existing or proposed development in the locality.

Except as otherwise provided by this plan, consent must not be granted for development on land within this zone unless the consent authority is of the opinion that carrying out the proposed development would be consistent with one or more of the objectives of this zone.

A further objective of this zone is to encourage a high quality standard of development which is aesthetically pleasing, functional and relates sympathetically to nearby and adjoining development.

(3) **What development may be carried out without consent?**
Development may be carried out on land within this zone without consent for the purpose of:

drainage; utility installations.

(4) **What development may be carried out only with consent?**
Development which is not included in subclause (3) or (5) may be carried out with consent on land within this zone.

(5) **What development is prohibited?**
Development is prohibited on land within this zone if it is for the purpose of:

amusement centres; animal boarding or training establishments; auction premises; boarding-houses; bulky goods retailing; bus depots; caravan parks; clubs; commercial premises; computer processing centres; dwellings (other than dwelling houses and dual occupancies (attached)); educational establishments; exhibition homes; extractive industries; heliports; hospitals; hotels; industrial machinery showrooms; industries (other than those carried on in craft studios); institutions; intensive horticulture; intensive livestock keeping; junk yards; landscape supply establishments; liquor stores; motels; motor showrooms; motor vehicle body repair workshops; motor vehicle repair stations; motor vehicle spare parts and accessories

Matters prescribed by section 59(2) of the Contaminated Land Management Act 1997

(a) The land subject of this certificate is not significantly contaminated land within the meaning of the Contaminated Land Management Act 1997.

(b) The land subject of this certificate is not subject to a management order within the meaning of the Contaminated Land Management Act 1997.

(c) The land subject of this certificate is not the subject of an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997.

(d) The land subject of this certificate is not subject to an ongoing maintenance order within the meaning of the Contaminated Land Management Act 1997.

(e) The land subject of this certificate is not the subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997 provided to Council.

Jeff Lawrence, per
Director Planning and Environment

PART 11 – Bush fire prone land

None of the land subject of this certificate has been identified as bush fire prone land on the Campbelltown City Council - Bush Fire Prone Land Map that has been certified for the purposes of section 146(2) of the Act.

PART 12 – Property vegetation plans

No property vegetation plan applies to the land subject of this certificate as the whole of the Campbelltown City local government area is excluded from the operation of the Native Vegetation Act 2003.

PART 13 – Orders under Trees (Disputes Between Neighbours) Act 2006

No order has been made under the Trees (Disputes Between Neighbours) Act 2006 to carry out work in relation to a tree on the land subject of this certificate (but only to the extent that Council has been notified of any such orders).

PART 14 – Directions under Part 3A

No direction, in force under section 75P(2)(c1) of the Act, that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land subject of this certificate under Part 4 of the Act does not have effect, has been issued by the Minister.

PART 15 – Site compatibility certificates and conditions for seniors housing

a) No current site compatibility certificate (seniors housing), of which Council is aware, exists in respect of proposed development on the land subject of this certificate.

b) No conditions of consent to a development application, granted after 11 October 2007, of the kind referred to in clause 18(2) of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004 have been imposed in respect of proposed development on the land subject of this certificate.

PART 16 – Site compatibility certificates for infrastructure

No valid site compatibitlity certificate (infrastructure), of which Council is aware, exisits in respect of proposed development on the land subject of this certificate.

PART 17 – Site compatibility certificates and conditions for affordable rental housing

(1) No current site compatibitlity certificate (affordable rental housing), of which Council is aware, exists in respect of proposed development on the land subject of this certificate.

(2) No conditions of consent to a development application of the kind referred to in clause 17(1) or 37(1) of State Environmental Planning Policy (Affordable Rental Housing) 2009 have been imposed in respect of proposed development on the land subject of this certificate.

development of the land subject of this certificate. This policy is implemented when zoning or land use changes are proposed on lands which have previously been used for certain purposes. Council records do not have sufficient information about previous use of this land to determine whether the land is contaminated. Consideration of Council's adopted policy and the application of provisions under relevant State legislation is warranted.

PART 7A – Flood related development controls information

(1) Development on all or part of the land subject of this certificate for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing) is not subject to flood related controls.

(2) Development on all or part of the land subject of this certificate for any other purpose is not subject to flood related development controls.

(3) Words and expressions in this clause have the same meanings as in the instrument set out in the Schedule to the Standard Instrument (Local Environmental Plans) Order 2006.

Please note that some additional information regarding flooding and flood related development controls may be provided as advice under section 149(5) of the Act.

PART 8 – Land reserved for acquisition

No environmental planning instrument, deemed environmental planning instrument or draft environmental planning instrument applying to the land subject of this certificate provides for the acquisition of this land by a public authority, as referred to in section 27 of the Act.

PART 9 – Contribution plans

The following contribution plan(s) apply to the land subject of this certificate:

Campbelltown City Council Section 94A Development Contributions Plan

For further information about these contribution plans, contact Council's Environmental Planning Section on (02) 4645 4196.

PART 9A – Biodiversity certified land

The land subject of this certificate is not biodiversity certified land (within the meaning of Part 7AA of the Threatened Species Conservation Act 1995).

PART 10 – Biobanking agreements

The land subject of this certificate is not land to which a biobanking agreement under Part 7A of the Threatened Species Conservation Act 1995 relates (but only in so far as Council has been notified of the existence of any such agreement by the Director-General of the Department of Environment, Climate Change and Water).

Not applicable

PART 4 – Coastal protection

The land subject of this certificate is not affected by the operation of section 38 or 39 of the Coastal Protection Act 1979, but only to the extent that Council has been notified by the Department of Public Works.

PART 5 – Mine subsidence

The land subject of this certificate is not within a proclaimed Mine Subsidence District within the meaning of section 15 of the Mine Subsidence Compensation Act 1961.

PART 6 – Road widening and road realignment

The land subject of this certificate is not affected by any road widening or road realignment under Division 2 of Part 3 of the Roads Act 1993, any environmental planning instrument or any resolution of Council.

PART 7 – Council and other public authority policies on hazard risk restrictions

a) Council has adopted a policy with respect to all land within the Campbelltown City local government area with unusual site conditions. This policy restricts the development of land where extensive earthworks and/or filling has been carried out. Land, the development of which is restricted by this policy, has a restriction as to user placed on the title of the land stating the details of any restriction. Building lots can be affected by excessive land gradient, filling, reactive or dispersive soils, overland flow and/or mine subsidence. Buildings, structures or site works may require specific structural design to ensure proper building construction. Consequently, some applications may require the submission of structural design details and geotechnical reports. It is suggested that prior to lodging an application, enquiries be made to Council's Planning and Environment Division to ascertain any specific requirements.

b) Council has adopted by resolution the certified Campbelltown LGA Bush Fire Prone Land Map. This map identifies bush fire prone land within the Campbelltown City local government area as defined in section 4(1) of the Act. Where the land subject of this certificate is identified as bush fire prone land, the document entitled "Planning for Bush Fire Protection" prepared by the NSW Rural Fire Service in co-operation with the Department of Planning and dated December 2006 should be consulted with regards to possible restrictions on the development of the land because of the likelihood of bushfire.

c) The land subject of this certificate is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council for reference in a planning certificate that restricts the development of the land because of the likelihood of tidal inundation.

d) The land subject of this certificate is not affected by a policy adopted by Council or adopted by any other public authority and notified to Council for reference in a planning certificate that restricts the development of the land because of the likelihood of acid sulphate soils.

e) Council has adopted by resolution a policy on contaminated land which may restrict the impose minimum development standards for the creation of allotments and/or minimum site area and dimensions for the erection of a dwelling-house.

For further information about items a), b), c), d) and e) above, contact Council's Environmental Planning Section on (02) 4645 4842.

f) The land subject of this certificate does not include or comprise critical habitat.

g) The land subject of this certificate is not in a conservation area (however described).

h) No item of environmental heritage (however described) is situated on the land subject of this certificate.

PART 2A – Zoning and land use under State Environmental Planning Policy (Sydney Region Growth Centres) 2006

None

PART 3 – Complying development

(1) The land subject of this certificate is land on which complying development may be carried out under the following codes for complying development in accordance with the provisions of clauses 1.17A (c) and (d) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008:

General Housing Code

Housing Alterations Code

General Commercial and Industrial Code

Subdivisions Code

Rural Housing Code

General Development Code

Demolition Code

Please note that reference should also be made to the relevant parts of this policy for the general requirements for complying development and to the relevant codes which may also include provisions relating to zoning, lot size etc.

The land subject of this certificate is land on which no complying development may be carried out under the following codes for complying development because of the provisions of clauses 1.17A (c) and (d) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008:

None

(2) For codes identified above as being those under which no complying development may be carried out under State Environmental Planning Policy (Exempt and Complying Development Codes) 2008, this is because of the following provisions of clauses 1.17A (c) and (d) and 1.19 of this policy:

(3) The following development control plans (DCPs) apply to the carrying out of development on the land subject of this certificate:

DCP No.99 – Advertising Signs

Campbelltown DCP No.32 - Retail Plant Propagation Nurseries

Campbelltown DCP No.120 - Parking of Commercial Vehicles and Trucks Within Residential, Scenic Protection and Rural Areas

Campbelltown (Sustainable City) DCP 2012 Volume 3

Campbelltown (Sustainable City) DCP 2012 Volume 1 (Parts 1-13)

For further information about these development control plans, contact Council's Environmental Planning Section on (02) 4645 4842. Please note that the names of any draft development control plans that apply to the land subject of this certificate, that have been placed on exhibiton by Council but have not yet come into effect, are provided as advice under section 149(5) of the Act.

PART 2 – Zoning and land use under relevant LEPs

a) The following zone(s) apply to the land subject of this certificate:

7(d5) - Environmental Protection 1 hectare Minimum Zone

b) The purposes for which the plan or instrument provides that development may be carried out without the need for development consent are detailed in the land use table for each zone. Reference should be made to either Attachment 1 to this certificate or the appropriate section of the attached copy of the plan or instrument.

In addition, SEPP (Exempt and Complying Development Codes) 2008 and Campbelltown LEP No.209 – Exempt Development allow certain types of development to be carried out as exempt development within the Campbelltown City local government area.

c) The purposes for which the plan or instrument provides that development may not be carried out except with development consent are detailed in the land use table for each zone. Reference should be made to either Attachment 1 to this certificate or the appropriate section of the attached copy of the plan or instrument.

In addition, SEPP (Exempt and Complying Development Codes) 2008 and SEPP No.60 – Exempt and Complying Development allow certain types of development to be carried out as complying development within the Campbelltown City local government area after a complying development certificate has been obtained from Council or from an accredited certifier.

d) The purposes for which the plan or instrument provides that development is prohibited are detailed in the land use table for each zone. Reference should be made to either Attachment 1 to this certificate or the appropriate section of the attached copy of the plan or instrument.

e) Any development standards applying to the land subject of this certificate that fix minimum land dimensions for the erection of a dwelling-house and, if so, the minimum land dimensions so fixed are detailed in the relevant section of the plan or instrument. Reference should be made to either Attachment 2 to this certificate or the appropriate section(s) of the attached copy of the plan or instrument. In addition, certain Council development control plans may

SEPP No.22 – Shops and Commercial Premises

SEPP No.30 – Intensive Agriculture

SEPP No.33 – Hazardous and Offensive Development

SEPP No.44 – Koala Habitat Protection

SEPP No.50 – Canal Estate Development

SEPP No.55 – Remediation of Land

SEPP No.60 – Exempt and Complying Development

SEPP No.64 – Advertising and Signage

SEPP No.65 – Design Quality of Residential Flat Buildings

SEPP No.70 – Affordable Housing (Revised Schemes)

SEPP No.19 - Bushland in Urban Areas

SEPP (Building Sustainability Index: BASIX) 2004

SEPP (Major Development) 2005

SEPP (Mining, Petroleum Production and Extractive Industries) 2007

SEPP (Temporary Structures and Places of Public Entertainment) 2007

SEPP (Infrastructure) 2007

SEPP (Exempt and Complying Development Codes) 2008

SEPP (Affordable Rental Housing) 2009

SEPP (State and Regional Development) 2011

Greater Metropolitan REP No.2 - Georges River Catchment

For further information about these State environmental planning policies, contact the Department of Planning (www.planning.nsw.gov.au).

(2) The following proposed environmental planning instruments, which are or have been the subject of community consultation or on public exhibition under the Act (unless the Director-General has notified Council that the making of the proposed instrument has been deferred indefinately or has not been approved), apply to the carrying out of development on the land subject of this certificate:

Draft local environmental plans (LEPs)

None

For further information about these draft local environmental plans, contact Council's Environmental Planning Section on (02) 4645 4842.

Draft State environmental planning policies (SEPPs)

None

For further information about these draft State environmental planning policies, contact the Department of Planning (www.planning.nsw.gov.au).

RECEIVED
20 DEC 2013

campbelltown
city council

Issue Date: 18 December 2013
Application Number: 201304246
Receipt Number: 2498200

SMEC Testing Services Pty Ltd
via SAI Global Property
PO Box A2151
SYDNEY SOUTH NSW 1235

Your Reference: 18382346:33970559

PLANNING CERTIFICATE UNDER SECTION 149
ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

Section 149 Planning Certificate phone enquiries: (02) 4645 4560.

Property Address: 194 Campbelltown Road
DENHAM COURT NSW 2565

Property Description: Lot 100 DP 1176622

As at the date of issue, the following matters apply to the land subject of this certificate:

INFORMATION PROVIDED UNDER SECTION 149(2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 (the Act)

PART 1 – Names of relevant planning instruments and DCPs

Planning Instrument: Campbelltown (Urban Area) LEP 2002
Effect: 7(d5) - Environmental Protection 1 hectare Minimum Zone

(1) In addition to the environmental planning instrument(s) named above, the following planning instruments also apply to the carrying out of development on the land subject of this certificate:

Local environmental plans (LEPs) and deemed environmental planning instruments

Campbelltown LEP No.209 – Exempt Development

For further information about these local environmental plans and deemed environmental planning instruments, contact Council's Environmental Planning Section on (02) 4645 4842.

State environmental planning policies (SEPPs)

SEPP No.1 – Development Standards

SEPP No.4 – Development Without Consent and Miscellaneous Complying Development

SEPP No.6 – Number of Storeys in a Building

SEPP No.21 – Caravan Parks

SMEC Testing Services

APPENDIX B

SECTION 149 (2) CERTIFICATES

SMEC Testing Services

APPENDIX D

SOIL PROFILE LOG SHEETS

SMEC Testing Services Pty Ltd

GEOTECHNICAL LOG - NON CORE BOREHOLE

Client: Press Australia Pty Limited Project: 194 Campbelltown Road, Denham Court Location: Refer to Drawing No. 14/0335/2	Project No.: 19498/3826C Date : February 5, 2014 Logged: JK	**BOREHOLE NO.: BH 1** Sheet 1 of 1

WATER TABLE	SAMPLES	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	SYMBOL	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	MOISTURE
	S1 @ 0.2 m		GRAVELLY CLAY: dark brown, low plasticity, some gravel, brick, blue metal, plastic FILL	CL		D
	S2 @ 0.5 m	0.5	SILTY CLAY: orange brown with light grey, medium to high plasticity	CL/CH		M-D
		1.0	BOREHOLE DISCONTINUED AT 1.0 M			
		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

SMEC Testing Services Pty Ltd

GEOTECHNICAL LOG - NON CORE BOREHOLE

Client: Press Australia Pty Limited Project: 194 Campbelltown Road, Denham Court Location: Refer to Drawing No. 14/0335/2	Project No.: 19498/3826C Date : February 5, 2014 Logged: JK	**BOREHOLE NO.: BH 2** Sheet 1 of 1

WATER TABLE	SAMPLES	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	SYMBOL	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	MOISTURE
	S3 @ 0.2 m		GRAVELLY CLAY: dark brown with orange brown, low plasticity, some gravel, brick, plastic FILL	CL		D
	S4 @ 0.5 m	0.5	SILTY CLAY: orange brown with light grey, medium to high plasticity	CL/CH		D-M
		1.0	BOREHOLE DISCONTINUED AT 1.0 M			
		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)

See explanation sheets for meaning of all descriptive terms and symbols

Contractor: STS
Equipment: Edson RP70
Hole Diameter (mm): 100
Angle from Vertical (°) 0

SMEC Testing Services Pty Ltd

GEOTECHNICAL LOG - NON CORE BOREHOLE

Client: Press Australia Pty Limited	Project No.: 19498/3826C	BOREHOLE NO.: BH 3
Project: 194 Campbelltown Road, Denham Court	Date: February 5, 2014	
Location: Refer to Drawing No. 14/0335/2	Logged: JK	Sheet 1 of 1

WATER TABLE	SAMPLES	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	SYMBOL	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	MOISTURE
	S6 @ 0.2 m S7 @ 0.5 m	0.5	SILTY CLAY: orange brown with dark brown and light grey, medium plasticity, trace of gravel, brick, blue metal FILL	CL		D
	S8 @ 0.8 m	1.0	SILTY CLAY: orange brown with light grey, medium to high plasticity	CL/CH		M-D
		1.5 2.0 2.5	BOREHOLE DISCONTINUED AT 1.0			

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: Press Australia Pty Limited Project: 194 Campbelltown Road, Denham Court Location: Refer to Drawing No. 14/0335/2	Project No.: 19498/3826C Date : February 5, 2014 Logged: JK	**BOREHOLE NO.: BH 4** Sheet 1 of 1

WATER TABLE	SAMPLES	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	SYMBOL	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	MOISTURE
	S9 @ 0.2 m		SILTY CLAY: orange brown with dark brown and light grey, medium plasticity, trace of gravel, brick, concrete, sandstone FILL	CL		D
	S10 @ 0.5 m	0.5	SILTY CLAY: yellow brown with orange brown and light grey, medium to high plasticity	CL/CH		M
		1.0	BOREHOLE DISCONTINUED AT 1.0 M			
		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

SMEC Testing Services Pty Ltd

GEOTECHNICAL LOG - NON CORE BOREHOLE

Client: Press Australia Pty Limited
Project: 194 Campbelltown Road, Denham Court
Location: Refer to Drawing No. 14/0335/2

Project No.: 19498/3826C
Date: February 5, 2014
Logged: JK

BOREHOLE NO.: BH 5

Sheet 1 of 1

WATER TABLE	SAMPLES	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	SYMBOL	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	MOISTURE
	S11/S12/S13 @ 0.2 m		GRAVELLY CLAY: orange brown with dark grey and dark brown, medium plasticity, some gravel, brick, concrete, sandstone, metal FILL	CL		D
	S14 @ 0.5 m	0.5	SILTY CLAY: orange brown with light grey and occasional yellow brown, medium to high plasticity	CL/CH		D-M
		1.0	BOREHOLE DISCONTINUED AT 1.0 M			
		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)

See explanation sheets for meaning of all descriptive terms and symbols

Contractor: STS
Equipment: Edson RP70
Hole Diameter (mm): 100
Angle from Vertical (°) 0

SMEC Testing Services Pty Ltd

GEOTECHNICAL LOG - NON CORE BOREHOLE

Client: Press Australia Pty Limited	Project No.: 19498/3826C	**BOREHOLE NO.:**	**BH 6**
Project: 194 Campbelltown Road, Denham Court	Date : February 5, 2014	Sheet 1 of 1	
Location: Refer to Drawing No. 14/0335/2	Logged: JK		

WATER TABLE	**SAMPLES**	**DEPTH** (m)	**DESCRIPTION OF DRILLED PRODUCT** (Soil type, colour, grain size, plasticity, minor components, observations)	**SYMBOL**	**CONSISTENCY** (cohesive soils) or **RELATIVE DENSITY** (sands and gravels)	**MOISTURE**
	S15 @ 0.2 m		SILTY CLAY: dark brown/orange brown, low plasticity, trace of gravel, concrete, brick, sandstone FILL	CL		D
	S16 @ 0.5 m	0.5	SILTY CLAY: yellow brown/orange brown with light grey, medium to high plasticity	CL/CH		D-M
		1.0	BOREHOLE DISCONTINUED AT 1.0 M			
		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

SMEC Testing Services Pty Ltd

GEOTECHNICAL LOG - NON CORE BOREHOLE

Client: Press Australia Pty Limited Project: 194 Campbelltown Road, Denham Court Location: Refer to Drawing No. 14/0335/2	Project No.: 19498/3826C Date : February 5, 2014 Logged: JK	**BOREHOLE NO.: BH 7** Sheet 1 of 1

WATER TABLE	SAMPLES	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT (Soil type, colour, grain size, plasticity, minor components, observations)	SYMBOL	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	MOISTURE
	S17 @ 0.2 m		SILTY CLAY: orange brown with light brown, low plasticity, trace of gravel, concrete, asphalt, brick FILL	CL		D
	S18 @ 0.5 m	0.5	SILTY CLAY: orange brown with light grey and yellow brown, medium to high plasticity	CL/CH		D-M
		1.0	BOREHOLE DISCONTINUED AT 1.0.M			
		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

APPENDIX E

CHAIN OF CUSTODY DOCUMENTATION

CHAIN OF CUSTODY RECORD

SMEC Testing Services Pty Ltd
Job No: 19489/3826C
Order No: ~~10691~~ 10694
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

SMEC Testing Services

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

ANALYSIS

Sub-Lab / Analysis: ALS Brisbane S13
Organised By / Date: ALS Newcastle
Relinquished By / Date: AS 12/2/14
Connote / Courier: L,LB, 13
WO No:
Attach By PO / Internal Sheet:

Laboratory number	Sample number	jar/ bottle	bag	Date sampled	Composite number	Sample type	Comments	S2	S5	S7	S19	S26	Asbestos
1	S1	1		5/02/2014		soil			X				X
2	S2	1		5/02/2014		soil		X					
3	S3	1		5/02/2014		soil						X	
4	S4	1		5/02/2014		soil				X			
5	S6	1		5/02/2014		soil					X		
6	S7	1		5/02/2014		soil		X					
7	S8	1		5/02/2014		soil			X				
8	S9	1		5/02/2014		soil						X	
9	S10	1		5/02/2014		soil			X				
10	S11	1		5/02/2014		soil					X		X
TOTAL		10											

Environmental Division
Brisbane
Work Order AD
EB1403070
Telephone : + 61-7-3243 7222

Released by SMEC Testing Services Natasha Ryan Signed:	Date: 7/02/2014	Time: 2:45 PM	CoC Number: P19489 - COC1
			Your quotation: SMEC 2012 (EN/025/12)
Received by: SGS Sophie Signed: AJ	Date: 07/2/14	Time: 17:40 23:35	Preliminary results by: Friday 14 February 2014 / Final results by: Friday 14 February 2014

Comments:

Standard Detection Limits Apply, Standard Turnaround on Results

Rec: OWD of 11/2/14 9:05

CHAIN OF CUSTODY RECORD

SMEC Testing Services Pty Ltd
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

Job No: 19498/3826C Order No: ~~10694~~ 10694

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	S2	S5	S7	S19	S26	Asbestos
11	S12	1		5/02/2014		soil						X	
—	S13	1		5/02/2014		soil	**Forward to ALS Brisbane for Analysis**					X	
12	S14	1		5/02/2014		soil						X	
13	S15	1		5/02/2014		soil						X	X
14	S16	1		5/02/2014		soil		X					
15	S17	1		5/02/2014		soil			X				
16	S18	1		5/02/2014		soil		X					
TOTAL			10										

Released by SMEC Testing Services Natasha Ryan Signed:	Date: 7/02/2014	Time: ~~2.45 PM~~ 5:30 pm	CoC Number: P19498 - COC2
			Your quotation: SMEC 2012 (EN/025/12)
Received by: Sos Stephen Signed:	Date: 7/2/14	Time: 17-40 23-35	Preliminary results by: Friday 14 February 2014 / Final results by: Friday 14 February 2014

Comments:

Standard Detection Limits Apply, Standard Turnaround on Results

Please forward sample S13 to ALS Brisbane for Analysis

REC: 01

CHAIN OF CUSTODY RECORD

Page 1 of 2

SMEC Testing Services Pty Ltd Job No: 19489/3826C Order No: ~~10691~~ 10694

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

SMEC Testing Services

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

ANALYSIS

Sub... Lab / Split WO

Lab / Analysis: ALS Brisbane S13

Organised By / Date: ALS Newcastle

Relinquished By / Date:

Connote / Courier:

WO No:

Attach By PO / Internal Sheet:

Laboratory number	Sample number	jar/ bottle	bag	Date sampled	Composite number	Sample type	Comments	S2	S5	S7	S19	S26	Asbestos
1	S1	1		5/02/2014		soil			X				X
2	S2	1		5/02/2014		soil		X					
3	S3	1		5/02/2014		soil						X	
4	S4	1		5/02/2014		soil				X			
5	S6	1		5/02/2014		soil					X		
6	S7	1		5/02/2014		soil		X					
7	S8	1		5/02/2014		soil			X				
8	S9	1		5/02/2014		soil						X	
9	S10	1		5/02/2014		soil			X				
10	S11	1		5/02/2014		soil					X		X
TOTAL		10											

Environmental Division Sydney

Work Order

ES1402597

Telephone : +61-2-8784 8555

Released by SMEC Testing Services Natasha Ryan Signed:	Date: 7/02/2014	Time: 2:45 PM	CoC Number: P19489 - COC1 Your quotation: SMEC 2012 (EN/025/12)
Received by: SOY Stephen Signed:	Date: 07/2/14	Time: 1740 23.3C	Preliminary results by: Friday 14 February 2014 Final results by: Friday 14 February 2014

Comments:

Standard Detection Limits Apply, Standard Turnaround on Results

CHAIN OF CUSTODY RECORD

SMEC Testing Services Pty Ltd
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

Job No: 19498/3826C Order No: ~~10001~~ 10694

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	S2	S5	S7	S19	S26	Asbestos
11	S12	1		5/02/2014		soil						X	
—	S13	1		5/02/2014		soil	Forward to ALS Brisbane for Analysis					X	
12	S14	1		5/02/2014		soil						X	
13	S15	1		5/02/2014		soil						X	X
14	S16	1		5/02/2014		soil		X					
15	S17	1		5/02/2014		soil			X				
16	S18	1		5/02/2014		soil		X					
TOTAL			10										

Released by SMEC Testing Services: Natasha Ryan
Signed:
Date: 7/02/2014
Time: ~~2:45 PM~~ 5:30 pm

Received by: [illegible]
Signed: [illegible]
Date: 7/2/14
Time: 17-40 23-35

CoC Number: P19498 - COC2
Your quotation: SMEC 2012 (EN/025/12)
Preliminary results by: Friday 14 February 2014
Final results by: Friday 14 February 2014

Comments:

Standard Detection Limits Apply, Standard Turnaround on Results

Please forward sample S13 to ALS Brisbane for Analysis

APPENDIX F

ANALYTICAL LABORATORY REPORTS

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EB1403070**	Page	: 1 of 6
Client	: **SMEC TESTING SERVICES PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: NATASHA RYAN	Contact	: Customer Services
Address	: P O BOX 6989 WETHERILL PARK NSW, AUSTRALIA 2164	Address	: 2 Byth Street Stafford QLD Australia 4053
E-mail	: nryan@smectesting.com.au	E-mail	: Brisbane.Enviro.Services@alsglobal.com
Telephone	: +61 02 9756 2166	Telephone	: +61 7 3243 7222
Facsimile	: ----	Facsimile	: +61 7 3243 7218
Project	: 19489 3826C	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Order number	: 10694		
C-O-C number	: P19498- COC1	Date Samples Received	: 11-FEB-2014
Sampler	: ----	Issue Date	: 17-FEB-2014
Site	: ----		
		No. of samples received	: 1
Quote number	: EN/025/13	No. of samples analysed	: 1

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

NATA WORLD RECOGNISED ACCREDITATION

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*
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics
Ryan Story	2IC Organic Instrument Chemist	Brisbane Inorganics
Ryan Story	2IC Organic Instrument Chemist	Brisbane Organics

General Comments

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

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

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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	S13	----	----	----	----
			Client sampling date / time	05-FEB-2014 15:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB1403070-001	----	----	----	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	6.6	----	----	----	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	6	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	24	----	----	----	----
Copper	7440-50-8	5	mg/kg	14	----	----	----	----
Lead	7439-92-1	5	mg/kg	26	----	----	----	----
Nickel	7440-02-0	2	mg/kg	11	----	----	----	----
Zinc	7440-66-6	5	mg/kg	51	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	S13	----	----	----	----
			Client sampling date / time	05-FEB-2014 15:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB1403070-001	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons - Continued								
C6 - C9 Fraction	----	10	mg/kg	<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg	100	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	100	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	----	----	----
>C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg	120	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	120	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	----	----	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	----	----	----
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	----	----	----
^ Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg	<1	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	92.4	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	99.8	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%	65.6	----	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	108	----	----	----	----
Anthracene-d10	1719-06-8	0.1	%	91.3	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	97.4	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	99.8	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	S13	----	----	----	----
			Client sampling date / time	05-FEB-2014 15:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EB1403070-001	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates - Continued								
Toluene-D8	2037-26-5	0.1	%	113	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	106	----	----	----	----

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	34.8	154.5
2-Chlorophenol-D4	93951-73-6	41.9	152.8
2.4.6-Tribromophenol	118-79-6	26.0	156.8
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	33.8	156.5
Anthracene-d10	1719-06-8	36.9	153.1
4-Terphenyl-d14	1718-51-0	41.8	172.2
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	52.7	133.7
Toluene-D8	2037-26-5	60.3	131.1
4-Bromofluorobenzene	460-00-4	59.2	126.6

QUALITY CONTROL REPORT

Work Order	: EB1403070	Page	: 1 of 8
Client	: SMEC TESTING SERVICES PTY LTD	Laboratory	: Environmental Division Brisbane
Contact	: NATASHA RYAN	Contact	: Customer Services
Address	: P O BOX 6989 WETHERILL PARK NSW, AUSTRALIA 2164	Address	: 2 Byth Street Stafford QLD Australia 4053
E-mail	: nryan@smectesting.com.au	E-mail	: Brisbane.Enviro.Services@alsglobal.com
Telephone	: +61 02 9756 2166	Telephone	: +61 7 3243 7222
Facsimile	: ----	Facsimile	: +61 7 3243 7218
Project	: 19489 3826C	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: P19498- COC1	Date Samples Received	: 11-FEB-2014
Sampler	: ----	Issue Date	: 17-FEB-2014
Order number	: 10694		
		No. of samples received	: 1
Quote number	: EN/025/13	No. of samples analysed	: 1

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

This 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 WORLD RECOGNISED ACCREDITATION

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*
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics
Ryan Story	2IC Organic Instrument Chemist	Brisbane Inorganics
Ryan Story	2IC Organic Instrument Chemist	Brisbane Organics

General Comments

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

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

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

ALS

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: 3290733)									
EB1403062-001	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	18.7	18.1	3.2	0% - 50%
EM1400992-002	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	23.6	23.3	1.2	0% - 20%
EG005T: Total Metals by ICP-AES (QC Lot: 3290702)									
EB1402956-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	25	25	0.0	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	30	29	0.0	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	10	8	24.6	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	23	21	10.9	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	15	15	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	54	53	2.3	0% - 50%
EB1403070-001	S13	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	24	22	8.8	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	11	12	9.2	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	8	6	15.2	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	14	21	36.6	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	26	28	5.3	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	51	53	4.6	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3290703)									
EB1402956-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EB1403070-001	S13	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3290715)									
EB1403031-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	0.7	<0.5	29.3	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3290715) - continued									
EB1403031-001	Anonymous	EP075(SIM): Benzo(g.h.i)perylene	191-24-2	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: 3290599)									
EB1402956-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EB1402956-015	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3290714)									
EB1403031-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	320	230	32.4	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	490	490	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: 3290599)									
EB1402956-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EB1402956-015	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: 3290714)									
EB1403031-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	630	540	14.6	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	330	360	6.8	No Limit
		EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	<50	0.0	No Limit
EP080: BTEXN (QC Lot: 3290599)									
EB1402956-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		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
EB1402956-015	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

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

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

Sub-Matrix: SOIL

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 3290702)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	99.8	84	124
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	99.5	88	118
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	98.8	73	127
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	105	86	122
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	98.7	84	121
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.0 mg/kg	106	89	126
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	103	87	127
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3290703)								
EG035T: Mercury	7439-97-6	0.10	mg/kg	<0.1	2.57 mg/kg	92.1	81	114
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3290715)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	5.0 mg/kg	105	74	119
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	5.0 mg/kg	111	74	118
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	5.0 mg/kg	103	83	121
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	5.0 mg/kg	102	81	116
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	5.0 mg/kg	104	72	117
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	5.0 mg/kg	# 115	72	115
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	5.0 mg/kg	105	70	116
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	5.0 mg/kg	108	70	134
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	5.0 mg/kg	86.9	64	120
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	5.0 mg/kg	90.2	66	119
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	5.0 mg/kg	109	59	129
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	5.0 mg/kg	93.4	70	129
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	5.0 mg/kg	118	76	121
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	5.0 mg/kg	98.5	53	135
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	5.0 mg/kg	93.8	45	134
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	5.0 mg/kg	96.2	64	133
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3290599)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	16 mg/kg	90.6	66	124
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3290714)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	318 mg/kg	105	84	117
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	531 mg/kg	107	78	120
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3290599)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	18.5 mg/kg	87.8	66	126

Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low	Recovery Limits (%) High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3290714)								
EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	428 mg/kg	108	86	117
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	395 mg/kg	107	77	121
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
EP080: BTEXN (QCLot: 3290599)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	86.9	73	108
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	87.6	73	111
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	83.0	67	107
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	82.5	66	109
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	81.9	68	108
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	82.0	72	115

Matrix Spike (MS) Report

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

Sub-Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report Spike Concentration	SpikeRecovery(%) MS	Recovery Limits (%) Low	Recovery Limits (%) High
EG005T: Total Metals by ICP-AES (QCLot: 3290702)							
EB1402956-005	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	90.6	70	130
		EG005T: Cadmium	7440-43-9	25 mg/kg	99.4	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	105	70	130
		EG005T: Copper	7440-50-8	50 mg/kg	107	70	130
		EG005T: Lead	7439-92-1	50 mg/kg	98.5	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	78.5	70	130
		EG005T: Zinc	7440-66-6	50 mg/kg	110	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3290703)							
EB1402956-005	Anonymous	EG035T: Mercury	7439-97-6	5.0 mg/kg	91.7	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3290715)							
EB1403031-002	Anonymous	EP075(SIM): Acenaphthene	83-32-9	2.5 mg/kg	107	70	130
		EP075(SIM): Pyrene	129-00-0	2.5 mg/kg	110	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3290599)							
EB1402956-002	Anonymous	EP080: C6 - C9 Fraction	----	8 mg/kg	76.7	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3290714)							
EB1403031-002	Anonymous	EP071: C10 - C14 Fraction	----	318 mg/kg	103	70	130
		EP071: C15 - C28 Fraction	----	531 mg/kg	109	70	130

Sub-Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report Spike Concentration	SpikeRecovery(%) MS	Recovery Limits (%) Low	High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3290599)							
EB1402956-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	8 mg/kg	78.8	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3290714)							
EB1403031-002	Anonymous	EP071: >C10 - C16 Fraction	>C10_C16	428 mg/kg	107	70	130
		EP071: >C16 - C34 Fraction	----	395 mg/kg	116	70	130
EP080: BTEXN (QCLot: 3290599)							
EB1402956-002	Anonymous	EP080: Benzene	71-43-2	2 mg/kg	92.7	70	130
		EP080: Toluene	108-88-3	2 mg/kg	89.8	70	130

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

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

Sub-Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%) MS	MSD	Recovery Limits (%) Low	High	RPDs (%) Value	Control Limit
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3290599)										
EB1402956-002	Anonymous	EP080: C6 - C9 Fraction	----	8 mg/kg	76.7	----	70	130	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3290599)										
EB1402956-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	8 mg/kg	78.8	----	70	130	----	----
EP080: BTEXN (QCLot: 3290599)										
EB1402956-002	Anonymous	EP080: Benzene	71-43-2	2 mg/kg	92.7	----	70	130	----	----
		EP080: Toluene	108-88-3	2 mg/kg	89.8	----	70	130	----	----
EG005T: Total Metals by ICP-AES (QCLot: 3290702)										
EB1402956-005	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	90.6	----	70	130	----	----
		EG005T: Cadmium	7440-43-9	25 mg/kg	99.4	----	70	130	----	----
		EG005T: Chromium	7440-47-3	50 mg/kg	105	----	70	130	----	----
		EG005T: Copper	7440-50-8	50 mg/kg	107	----	70	130	----	----
		EG005T: Lead	7439-92-1	50 mg/kg	98.5	----	70	130	----	----
		EG005T: Nickel	7440-02-0	50 mg/kg	78.5	----	70	130	----	----
		EG005T: Zinc	7440-66-6	50 mg/kg	110	----	70	130	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3290703)										
EB1402956-005	Anonymous	EG035T: Mercury	7439-97-6	5.0 mg/kg	91.7	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3290714)										
EB1403031-002	Anonymous	EP071: C10 - C14 Fraction	----	318 mg/kg	103	----	70	130	----	----
		EP071: C15 - C28 Fraction	----	531 mg/kg	109	----	70	130	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3290714)										
EB1403031-002	Anonymous	EP071: >C10 - C16 Fraction	>C10_C16	428 mg/kg	107	----	70	130	----	----

Sub-Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%) MS	Spike Recovery (%) MSD	Recovery Limits (%) Low	Recovery Limits (%) High	RPDs (%) Value	RPDs (%) Control Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3290714) - continued										
EB1403031-002	Anonymous	EP071: >C16 - C34 Fraction	----	395 mg/kg	116	----	70	130	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3290715)										
EB1403031-002	Anonymous	EP075(SIM): Acenaphthene	83-32-9	2.5 mg/kg	107	----	70	130	----	----
		EP075(SIM): Pyrene	129-00-0	2.5 mg/kg	110	----	70	130	----	----

ALS Environmental

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **EB1403070**	Page	: 1 of 5
Client	: SMEC TESTING SERVICES PTY LTD	Laboratory	: Environmental Division Brisbane
Contact	: NATASHA RYAN	Contact	: Customer Services
Address	: P O BOX 6989 WETHERILL PARK NSW, AUSTRALIA 2164	Address	: 2 Byth Street Stafford QLD Australia 4053
E-mail	: nryan@smectesting.com.au	E-mail	: Brisbane.Enviro.Services@alsglobal.com
Telephone	: +61 02 9756 2166	Telephone	: +61 7 3243 7222
Facsimile	: ----	Facsimile	: +61 7 3243 7218
Project	: 19489 3826C	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: P19498- COC1	Date Samples Received	: 11-FEB-2014
Sampler	: ----	Issue Date	: 17-FEB-2014
Order number	: 10694		
		No. of samples received	: 1
Quote number	: EN/025/13	No. of samples analysed	: 1

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

This Interpretive Quality Control Report contains the following information:

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

Analysis Holding Time Compliance

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 time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

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) S13	05-FEB-2014	----	----	----	12-FEB-2014	19-FEB-2014	✓
EG005T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) S13	05-FEB-2014	13-FEB-2014	04-AUG-2014	✓	13-FEB-2014	04-AUG-2014	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) S13	05-FEB-2014	13-FEB-2014	05-MAR-2014	✓	13-FEB-2014	05-MAR-2014	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013							
Soil Glass Jar - Unpreserved (EP071) S13	05-FEB-2014	13-FEB-2014	19-FEB-2014	✓	14-FEB-2014	25-MAR-2014	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) S13	05-FEB-2014	13-FEB-2014	19-FEB-2014	✓	14-FEB-2014	25-MAR-2014	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) S13	05-FEB-2014	12-FEB-2014	19-FEB-2014	✓	13-FEB-2014	19-FEB-2014	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) S13	05-FEB-2014	12-FEB-2014	19-FEB-2014	✓	13-FEB-2014	19-FEB-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	2	20	10.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	1	5	20.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	14	14.3	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	2	19	10.5	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	5	20.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	20	10.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	5	20.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	14	7.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	19	5.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	5	20.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	20	5.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	5	20.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	14	7.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	19	5.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	5	20.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	20	5.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	5	20.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	14	7.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	19	5.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	5	20.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	20	5.0	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 (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
TPH - Semivolatile Fraction	EP071	SOIL	(USEPA SW 846 - 8015A) Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C36. This method is compliant with NEPM (2013) Schedule B(3) (Method 506.1)
PAH/Phenols (SIM)	EP075(SIM)	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)
TPH Volatiles/BTEX	EP080	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 501)

Preparation Methods	Method	Matrix	Method Descriptions
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 B - Non-concentrating)	ORG17B	SOIL	In-house, Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 20mL 1:1 DCM/Acetone by end over end tumble. The solvent is transferred directly to a GC vial for analysis.

Summary of Outliers

Outliers : Quality Control Samples

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

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: SOIL

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Laboratory Control Spike (LCS) Recoveries							
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	3929524-006	----	Anthracene	120-12-7	115 %	72-115%	Recovery greater than upper control limit

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

Regular Sample Surrogates

- **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.**

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES1402597**	Page	: 1 of 17
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	: 19489 3826C	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Order number	: 10694		
C-O-C number	: P19489 - COC1	Date Samples Received	: 07-FEB-2014
Sampler	: ----	Issue Date	: 14-FEB-2014
Site	: ----		
		No. of samples received	: 16
Quote number	: EN/025/13	No. of samples analysed	: 16

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

This Certificate of Analysis contains the following information:

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

NATA

WORLD RECOGNISED ACCREDITATION

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*
Christopher Owler	Team Leader - Asbestos	Newcastle - Asbestos
Pabi Subba	Senior Organic Chemist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Organics
Shobhna Chandra	Metals 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

- **EA200 Legend**
- **EA200 'Am' Amosite (brown asbestos)**
- **EA200 'Ch' Chrysotile (white asbestos)**
- **EA200 'Cr' Crocidolite (blue asbestos)**
- **EA200 'Trace' - Asbestos 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.**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	S1	S2	S3	S4	S6
			Client sampling date / time	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00
Compound	CAS Number	LOR	Unit	ES1402597-001	ES1402597-002	ES1402597-003	ES1402597-004	ES1402597-005
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	4.3	11.8	4.8	12.6	12.6
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples								
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	----	----	----
Asbestos Type	1332-21-4	-	-	-	----	----	----	----
Sample weight (dry)	----	0.01	g	27.8	----	----	----	----
APPROVED IDENTIFIER:	----	-	-	C.OWLER	----	----	----	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	7	6	----	23
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	----	<1
Chromium	7440-47-3	2	mg/kg	14	15	14	----	24
Copper	7440-50-8	5	mg/kg	22	21	19	----	30
Lead	7439-92-1	5	mg/kg	24	18	30	----	25
Nickel	7440-02-0	2	mg/kg	12	12	10	----	18
Zinc	7440-66-6	5	mg/kg	50	26	40	----	48
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	S1	S2	S3	S4	S6
			Client sampling date / time	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00
Compound	CAS Number	LOR	Unit	ES1402597-001	ES1402597-002	ES1402597-003	ES1402597-004	ES1402597-005
EP068A: Organochlorine Pesticides (OC) - Continued								
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
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
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	S1	S2	S3	S4	S6
			Client sampling date / time	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00
				ES1402597-001	ES1402597-002	ES1402597-003	ES1402597-004	ES1402597-005
EP075(SIM)A: Phenolic Compounds - Continued								
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	1.9
Pyrene	129-00-0	0.5	mg/kg	----	----	<0.5	<0.5	1.7
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	<0.5	<0.5	0.7
Chrysene	218-01-9	0.5	mg/kg	----	----	<0.5	<0.5	0.6
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	----	----	<0.5	<0.5	0.7
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	5.6
^ 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	0.7
^ 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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	S1	S2	S3	S4	S6
			Client sampling date / time	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00
Compound	CAS Number	LOR	Unit	ES1402597-001	ES1402597-002	ES1402597-003	ES1402597-004	ES1402597-005
EP080/071: Total Petroleum Hydrocarbons - Continued								
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
^ 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	----	<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
^ 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
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	----	----	88.7
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	----	----	----	----	94.6
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	----	----	----	----	82.2
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	----	----	104	91.8	98.7
2-Chlorophenol-D4	93951-73-6	0.1	%	----	----	105	96.2	101
2.4.6-Tribromophenol	118-79-6	0.1	%	----	----	96.6	97.5	98.6
EP075(SIM)T: PAH Surrogates								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	S1	S2	S3	S4	S6
			Client sampling date / time	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00
Compound	CAS Number	LOR	Unit	ES1402597-001	ES1402597-002	ES1402597-003	ES1402597-004	ES1402597-005
EP075(SIM)T: PAH Surrogates - Continued								
2-Fluorobiphenyl	321-60-8	0.1	%	----	----	110	104	109
Anthracene-d10	1719-06-8	0.1	%	----	----	99.5	93.2	96.7
4-Terphenyl-d14	1718-51-0	0.1	%	----	----	114	106	108
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	95.6	----	98.4	94.9	99.3
Toluene-D8	2037-26-5	0.1	%	90.0	----	87.9	90.3	92.2
4-Bromofluorobenzene	460-00-4	0.1	%	94.1	----	88.0	93.1	93.3

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			*Client sample ID*	S7	S8	S9	S10	S11
			Client sampling date / time	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00
Compound	*CAS Number*	*LOR*	*Unit*	ES1402597-006	ES1402597-007	ES1402597-008	ES1402597-009	ES1402597-010
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	10.8	15.6	9.0	15.8	5.7
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples								
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	----	----	Yes
Asbestos Type	1332-21-4	-	-	----	----	----	----	Ch
Sample weight (dry)	----	0.01	g	----	----	----	----	29.4
APPROVED IDENTIFIER:	----	-	-	----	----	----	----	C.OWLER
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	26	10	8	10	8
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	35	23	24	20	23
Copper	7440-50-8	5	mg/kg	29	21	17	23	26
Lead	7439-92-1	5	mg/kg	22	15	28	14	28
Nickel	7440-02-0	2	mg/kg	17	9	9	6	16
Zinc	7440-66-6	5	mg/kg	43	36	59	11	65
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

			Client sample ID	S7	S8	S9	S10	S11
			Client sampling date / time	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00
Compound	CAS Number	LOR	Unit	ES1402597-006	ES1402597-007	ES1402597-008	ES1402597-009	ES1402597-010
EP068A: Organochlorine Pesticides (OC) - Continued								
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
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
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	S7	S8	S9	S10	S11
			Client sampling date / time	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00
Compound	CAS Number	LOR	Unit	ES1402597-006	ES1402597-007	ES1402597-008	ES1402597-009	ES1402597-010
EP075(SIM)A: Phenolic Compounds - Continued								
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
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	<0.5	----	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	----	----	<0.5	----	<0.5
Fluorene	86-73-7	0.5	mg/kg	----	----	<0.5	----	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	----	----	<0.5	----	<0.5
Anthracene	120-12-7	0.5	mg/kg	----	----	<0.5	----	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	----	----	<0.5	----	<0.5
Pyrene	129-00-0	0.5	mg/kg	----	----	<0.5	----	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	<0.5	----	<0.5
Chrysene	218-01-9	0.5	mg/kg	----	----	<0.5	----	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	----	----	<0.5	----	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	<0.5	----	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	<0.5	----	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	<0.5	----	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	<0.5	----	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	<0.5	----	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	<0.5	----	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	<0.5	----	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	0.6	----	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	1.2	----	1.2
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	<10	<10	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	S7	S8	S9	S10	S11
			Client sampling date / time	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00
Compound	CAS Number	LOR	Unit	ES1402597-006	ES1402597-007	ES1402597-008	ES1402597-009	ES1402597-010
EP080/071: Total Petroleum Hydrocarbons - Continued								
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
^ 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	<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
^ 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
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	----	----	87.7
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	----	----	----	----	90.5
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	----	----	----	----	92.1
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	----	----	94.9	----	96.4
2-Chlorophenol-D4	93951-73-6	0.1	%	----	----	100	----	101
2.4.6-Tribromophenol	118-79-6	0.1	%	----	----	101	----	104
EP075(SIM)T: PAH Surrogates								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	S7	S8	S9	S10	S11
			Client sampling date / time	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00
Compound	CAS Number	LOR	Unit	ES1402597-006	ES1402597-007	ES1402597-008	ES1402597-009	ES1402597-010
EP075(SIM)T: PAH Surrogates - Continued								
2-Fluorobiphenyl	321-60-8	0.1	%	----	----	106	----	108
Anthracene-d10	1719-06-8	0.1	%	----	----	95.2	----	96.8
4-Terphenyl-d14	1718-51-0	0.1	%	----	----	107	----	105
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	----	92.2	97.2	101	99.2
Toluene-D8	2037-26-5	0.1	%	----	87.5	90.6	88.0	83.6
4-Bromofluorobenzene	460-00-4	0.1	%	----	92.8	93.6	88.0	87.7

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	S12	S14	S15	S16	S17
			Client sampling date / time	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00
Compound	CAS Number	LOR	Unit	ES1402597-011	ES1402597-012	ES1402597-013	ES1402597-014	ES1402597-015
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	5.3	13.6	5.9	12.0	5.5
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples								
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	No	----	----
Asbestos Type	1332-21-4	-	-	----	----	-	----	----
Sample weight (dry)	----	0.01	g	----	----	33.1	----	----
APPROVED IDENTIFIER:	----	-	-	----	----	C.OWLER	----	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	5	9	11	8	7
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	25	16	25	15	12
Copper	7440-50-8	5	mg/kg	860	19	35	29	39
Lead	7439-92-1	5	mg/kg	43	20	32	15	92
Nickel	7440-02-0	2	mg/kg	10	3	10	9	13
Zinc	7440-66-6	5	mg/kg	430	15	45	23	73
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
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	1.4	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	1.2	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.6	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.8	----	----
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	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	S12	S14	S15	S16	S17
			Client sampling date / time	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00
Compound	CAS Number	LOR	Unit	ES1402597-011	ES1402597-012	ES1402597-013	ES1402597-014	ES1402597-015
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	4.0	----	----
^ 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	0.7	----	----
^ 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	<100	----	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	180	----	100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	180	----	100
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	180	----	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	220	----	120
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	400	----	120
^ >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
^ 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
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	94.2	94.7	93.8	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	100	97.7	97.6	----	----
2.4.6-Tribromophenol	118-79-6	0.1	%	106	102	106	----	----
EP075(SIM)T: PAH Surrogates								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			*Client sample ID*	S12	S14	S15	S16	S17
			Client sampling date / time	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00	05-FEB-2014 15:00
Compound	*CAS Number*	*LOR*	*Unit*	ES1402597-011	ES1402597-012	ES1402597-013	ES1402597-014	ES1402597-015
EP075(SIM)T: PAH Surrogates - Continued								
2-Fluorobiphenyl	321-60-8	0.1	%	**109**	**107**	**106**	----	----
Anthracene-d10	1719-06-8	0.1	%	**97.1**	**95.3**	**94.7**	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	**104**	**103**	**99.6**	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	**103**	**91.8**	**93.1**	----	**99.0**
Toluene-D8	2037-26-5	0.1	%	**86.2**	**80.3**	**78.6**	----	**84.5**
4-Bromofluorobenzene	460-00-4	0.1	%	**91.0**	**85.3**	**81.6**	----	**86.6**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	S18	----	----	----	----
			Client sampling date / time	05-FEB-2014 15:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES1402597-016	----	----	----	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	13.4	----	----	----	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	8	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	17	----	----	----	----
Copper	7440-50-8	5	mg/kg	28	----	----	----	----
Lead	7439-92-1	5	mg/kg	21	----	----	----	----
Nickel	7440-02-0	2	mg/kg	9	----	----	----	----
Zinc	7440-66-6	5	mg/kg	32	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----

Analytical Results

Descriptive Results

Sub-Matrix: SOIL

Method: Compound	Client sample ID - Client sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples		
EA200: Description	S1 - 05-FEB-2014 15:00	Pale brown sandy soil with some small grey rocks plus a trace of vegetation
EA200: Description	S11 - 05-FEB-2014 15:00	Pale brown sandy soil with some small grey rocks plus one small fragment of friable asbestos fibre board approx 4 x 3 x 2mm
EA200: Description	S15 - 05-FEB-2014 15:00	Pale brown sandy soil with some small grey rocks plus a trace of vegetation

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

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **ES1402597**	Page	: 1 of 15
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	: 19489 3826C	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: P19489 - COC1	Date Samples Received	: 07-FEB-2014
Sampler	: ----	Issue Date	: 14-FEB-2014
Order number	: 10694		
		No. of samples received	: 16
Quote number	: EN/025/13	No. of samples analysed	: 16

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 WORLD RECOGNISED ACCREDITATION

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*
Christopher Owler	Team Leader - Asbestos	Newcastle - Asbestos
Pabi Subba	Senior Organic Chemist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Organics
Shobhna Chandra	Metals 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: 3289092)									
ES1402597-002	S2	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	11.8	11.1	6.3	0% - 50%
ES1402597-013	S15	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	5.9	5.9	0.0	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 3289024)									
ES1402548-053	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	40	47	14.9	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	6	8	25.3	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	10	9	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	20	29	37.8	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	27	48	54.7	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	208	207	0.8	0% - 20%
ES1402597-001	S1	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	14	12	15.9	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	12	10	22.9	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	22	18	22.4	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	24	25	6.8	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	50	43	15.4	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 3292462)									
ES1402581-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	9	12	29.7	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	4	4	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	8	44.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	13	10	22.8	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	36	33	10.4	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	65	56	16.4	0% - 50%
ES1402876-002	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	12	12	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	27	26	4.4	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	8	11	24.8	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	37	49	27.3	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	25	27	6.8	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	148	124	18.0	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3289025)									
ES1402548-053	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.1	0.2	0.0	No Limit
ES1402597-001	S1	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit

Sub-Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3292461)									
ES1402466-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1402468-003	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.1	0.2	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3287160)									
ES1402598-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1402600-016	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3287159)									
ES1402598-001	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
ES1402600-016	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

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: 3287159) - continued									
ES1402600-016	Anonymous	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: 3287159)									
ES1402598-001	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
ES1402600-016	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

Sub-Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3287159) - continued									
ES1402600-016	Anonymous	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: 3286920)									
ES1402597-003	S3	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
ES1402598-001	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		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: 3286920)									
ES1402597-003	S3	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3286920) - continued									
ES1402597-003	S3	EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES1402598-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		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: 3286919)									
ES1402597-003	S3	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
ES1402598-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3286925)									
ES1402597-001	S1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit

Sub-Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3286925) - continued									
ES1402598-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QC Lot: 3286919)									
ES1402597-003	S3	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
ES1402598-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QC Lot: 3286925)									
ES1402597-001	S1	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES1402598-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 3286925)									
ES1402597-001	S1	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES1402598-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

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

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

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 3289024)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	104	87	129
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	97.9	80	122
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	102	71	133
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	106	86	128
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	98.2	81	123
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.0 mg/kg	106	84	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	106	81	133
EG005T: Total Metals by ICP-AES (QCLot: 3292462)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	118	87	129
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	103	80	122
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	97.7	71	133
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	119	86	128
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	112	81	123
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.0 mg/kg	111	84	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	115	81	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3289025)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	83.0	66	112
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3292461)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	87.5	66	112
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3287160)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	98.4	57.4	117
EP068A: Organochlorine Pesticides (OC) (QCLot: 3287159)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	84.0	71	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	76.8	66	122
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	83.2	69	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	82.0	71	115
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.7	65	113
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.7	68	116
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	81.5	68	118
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	79.1	68	116
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	75.6	68	120
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	85.3	69	119
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	81.2	67	121
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	82.3	66	118

Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 3287159) - continued								
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	86.5	69	117
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.8	67	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	86.6	76	120
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	88.0	76	120
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	84.9	57.3	115
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	72.7	60	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	83.9	67	127
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	72.6	65	123
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	88.0	65	129
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3287159)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	75.1	56	126
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.9	64	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	81.2	54	122
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	101	64	124
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	82.5	73	117
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	77.4	55	119
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	111	69	123
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	94.2	70	120
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	84.0	71	115
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	86.0	68	114
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	107	68	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	83.4	69	115
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.9	70	118
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	81.8	68	116
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	95.0	64	120
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	87.8	68	116
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	89.7	70	118
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	80.0	67	123
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	83.0	42	126
EP075(SIM)A: Phenolic Compounds (QCLot: 3286920)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	4 mg/kg	94.0	74	116
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	4 mg/kg	93.6	74	116
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	4 mg/kg	96.6	72	116
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1	8 mg/kg	90.8	69	123
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	4 mg/kg	88.9	60.3	117
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	4 mg/kg	92.5	69	117
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	4 mg/kg	87.8	68	112
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	4 mg/kg	90.2	73	117
EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	4 mg/kg	93.5	76.4	114

Work Order : ES1402597
Client : SMEC TESTING SERVICES PTY LTD
Project : 19489 3826C

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	*CAS Number*	*LOR*	*Unit*	*Result*	*Concentration*	*LCS*	*Low*	*High*
EP075(SIM)A: Phenolic Compounds (QCLot: 3286920) - continued								
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	4 mg/kg	82.7	57	111
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	4 mg/kg	83.8	68.9	112
EP075(SIM): Pentachlorophenol	87-86-5	1.0	mg/kg	<1	8 mg/kg	42.1	3.9	57
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3286920)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	4 mg/kg	104	80	124
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	4 mg/kg	103	77	123
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	4 mg/kg	102	79	123
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	4 mg/kg	102	77	123
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	4 mg/kg	104	79	123
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	4 mg/kg	102	79	123
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	4 mg/kg	102	79	123
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	4 mg/kg	102	79	125
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	4 mg/kg	103	73	121
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	4 mg/kg	107	81	123
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	4 mg/kg	95.8	70	118
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	4 mg/kg	98.0	77	123
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	4 mg/kg	99.4	76	122
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	4 mg/kg	98.9	71	113
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	4 mg/kg	102	71.7	113
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	4 mg/kg	106	72.4	114
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3286919)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	100	71	131
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	106	74	138
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	96.8	64	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3286925)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	74.4	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3286919)								
EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	250 mg/kg	97.1	70	130
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	106	74	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
		50	mg/kg	----	200 mg/kg	65.5	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3286925)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	78.5	68.4	128
EP080: BTEXN (QCLot: 3286925)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	76.3	62	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	79.8	62	128
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	81.2	58	118

Sub-Matrix: SOIL

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP080: BTEXN (QCLot: 3286925) - continued								
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	82.5	60	120
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	87.1	60	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	80.9	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	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 3289024)							
ES1402548-053	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	99.6	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	101	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	126	70	130
		EG005T: Copper	7440-50-8	125 mg/kg	114	70	130
		EG005T: Lead	7439-92-1	125 mg/kg	116	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	103	70	130
		EG005T: Zinc	7440-66-6	125 mg/kg	104	70	130
EG005T: Total Metals by ICP-AES (QCLot: 3292462)							
ES1402581-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	121	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	107	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	112	70	130
		EG005T: Copper	7440-50-8	125 mg/kg	120	70	130
		EG005T: Lead	7439-92-1	125 mg/kg	115	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	109	70	130
		EG005T: Zinc	7440-66-6	125 mg/kg	113	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3289025)							
ES1402548-053	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	83.9	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3292461)							
ES1402466-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	77.7	70	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3287160)							
ES1402598-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	88.5	70	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3287159)							
ES1402598-001	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	104	70	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	101	70	130

Sub-Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%) MS	Recovery Limits (%) Low	Recovery Limits (%) High
EP068A: Organochlorine Pesticides (OC) (QCLot: 3287159) - continued							
ES1402598-001	Anonymous	EP068: Aldrin	309-00-2	0.5 mg/kg	99.0	70	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	107	70	130
		EP068: Endrin	72-20-8	2 mg/kg	109	70	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	110	70	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3287159)							
ES1402598-001	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	85.3	70	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	82.2	70	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	98.8	70	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	103	70	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	85.8	70	130
EP075(SIM)A: Phenolic Compounds (QCLot: 3286920)							
ES1402597-003	S3	EP075(SIM): Phenol	108-95-2	10 mg/kg	105	70	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	106	70	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	100	60	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	108	70	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	48.5	20	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3286920)							
ES1402597-003	S3	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	97.5	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	96.9	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3286919)							
ES1402597-003	S3	EP071: C10 - C14 Fraction	----	640 mg/kg	76.2	73	137
		EP071: C15 - C28 Fraction	----	3140 mg/kg	79.3	53	131
		EP071: C29 - C36 Fraction	----	2860 mg/kg	88.0	52	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3286925)							
ES1402597-001	S1	EP080: C6 - C9 Fraction	----	32.5 mg/kg	91.0	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3286919)							
ES1402597-003	S3	EP071: >C10 - C16 Fraction	>C10_C16	850 mg/kg	99.1	73	137
		EP071: >C16 - C34 Fraction	----	4800 mg/kg	79.9	53	131
		EP071: >C34 - C40 Fraction	----	2400 mg/kg	78.5	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3286925)							
ES1402597-001	S1	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	90.2	70	130
EP080: BTEXN (QCLot: 3286925)							
ES1402597-001	S1	EP080: Benzene	71-43-2	2.5 mg/kg	76.9	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	83.7	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	81.6	70	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	82.8	70	130

Sub-Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%) MS	Recovery Limits (%) Low	Recovery Limits (%) High
EP080: BTEXN (QCLot: 3286925) - continued							
ES1402597-001	S1	EP080: ortho-Xylene	95-47-6	2.5 mg/kg	87.8	70	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	85.1	70	130

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

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

Sub-Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%) MS	Spike Recovery (%) MSD	Recovery Limits (%) Low	Recovery Limits (%) High	RPDs (%) Value	RPDs (%) Control Limit
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3286919)										
ES1402597-003	S3	EP071: C10 - C14 Fraction	----	640 mg/kg	76.2	----	73	137	----	----
		EP071: C15 - C28 Fraction	----	3140 mg/kg	79.3	----	53	131	----	----
		EP071: C29 - C36 Fraction	----	2660 mg/kg	88.0	----	52	132	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3286919)										
ES1402597-003	S3	EP071: >C10 - C16 Fraction	>C10_C16	850 mg/kg	99.1	----	73	137	----	----
		EP071: >C16 - C34 Fraction	----	4800 mg/kg	79.9	----	53	131	----	----
		EP071: >C34 - C40 Fraction	----	2400 mg/kg	78.5	----	52	132	----	----
EP075(SIM)A: Phenolic Compounds (QCLot: 3286920)										
ES1402597-003	S3	EP075(SIM): Phenol	108-95-2	10 mg/kg	105	----	70	130	----	----
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	106	----	70	130	----	----
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	100	----	60	130	----	----
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	108	----	70	130	----	----
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	48.5	----	20	130	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3286920)										
ES1402597-003	S3	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	97.5	----	70	130	----	----
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	96.9	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3286925)										
ES1402597-001	S1	EP080: C6 - C9 Fraction	----	32.5 mg/kg	91.0	----	70	130	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3286925)										
ES1402597-001	S1	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	90.2	----	70	130	----	----
EP080: BTEXN (QCLot: 3286925)										
ES1402597-001	S1	EP080: Benzene	71-43-2	2.5 mg/kg	76.9	----	70	130	----	----
		EP080: Toluene	108-88-3	2.5 mg/kg	83.7	----	70	130	----	----
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	81.6	----	70	130	----	----
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	82.8	----	70	130	----	----
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	87.8	----	70	130	----	----

Sub-Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%) MS	Spike Recovery (%) MSD	Recovery Limits (%) Low	Recovery Limits (%) High	RPDs (%) Value	RPDs (%) Control Limit
EP080: BTEXN (QCLot: 3286925) - continued										
ES1402597-001	S1	EP080: Naphthalene	91-20-3	2.5 mg/kg	85.1	----	70	130	----	----
EP068A: Organochlorine Pesticides (OC) (QCLot: 3287159)										
ES1402598-001	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	104	----	70	130	----	----
		EP068: Heptachlor	76-44-8	0.5 mg/kg	101	----	70	130	----	----
		EP068: Aldrin	309-00-2	0.5 mg/kg	99.0	----	70	130	----	----
		EP068: Dieldrin	60-57-1	0.5 mg/kg	107	----	70	130	----	----
		EP068: Endrin	72-20-8	2 mg/kg	109	----	70	130	----	----
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	110	----	70	130	----	----
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3287159)										
ES1402598-001	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	85.3	----	70	130	----	----
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	82.2	----	70	130	----	----
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	98.8	----	70	130	----	----
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	103	----	70	130	----	----
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	85.8	----	70	130	----	----
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3287160)										
ES1402598-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	88.5	----	70	130	----	----
EG005T: Total Metals by ICP-AES (QCLot: 3289024)										
ES1402548-053	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	99.6	----	70	130	----	----
		EG005T: Cadmium	7440-43-9	50 mg/kg	101	----	70	130	----	----
		EG005T: Chromium	7440-47-3	50 mg/kg	126	----	70	130	----	----
		EG005T: Copper	7440-50-8	125 mg/kg	114	----	70	130	----	----
		EG005T: Lead	7439-92-1	125 mg/kg	116	----	70	130	----	----
		EG005T: Nickel	7440-02-0	50 mg/kg	103	----	70	130	----	----
		EG005T: Zinc	7440-66-6	125 mg/kg	104	----	70	130	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3289025)										
ES1402548-053	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	83.9	----	70	130	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3292461)										
ES1402466-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	77.7	----	70	130	----	----
EG005T: Total Metals by ICP-AES (QCLot: 3292462)										
ES1402581-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	121	----	70	130	----	----
		EG005T: Cadmium	7440-43-9	50 mg/kg	107	----	70	130	----	----
		EG005T: Chromium	7440-47-3	50 mg/kg	112	----	70	130	----	----
		EG005T: Copper	7440-50-8	125 mg/kg	120	----	70	130	----	----
		EG005T: Lead	7439-92-1	125 mg/kg	115	----	70	130	----	----
		EG005T: Nickel	7440-02-0	50 mg/kg	109	----	70	130	----	----
		EG005T: Zinc	7440-66-6	125 mg/kg	113	----	70	130	----	----

ALS Environmental

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **ES1402597**	Page	: 1 of 7
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	: 19489 3826C	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: P19489 - COC1	Date Samples Received	: 07-FEB-2014
Sampler	: ----	Issue Date	: 14-FEB-2014
Order number	: 10694		
		No. of samples received	: 16
Quote number	: EN/025/13	No. of samples analysed	: 16

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

This Interpretive Quality Control Report contains the following information:

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

Analysis Holding Time Compliance

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 time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

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)								
S1,	S2,	05-FEB-2014	----	----	----	11-FEB-2014	19-FEB-2014	✓
S3,	S4,							
S6,	S7,							
S8,	S9,							
S10,	S11,							
S12,	S14,							
S15,	S16,							
S17,	S18							
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples								
Snap Lock Bag (EA200)								
S1,	S11,	05-FEB-2014	----	04-AUG-2014	----	13-FEB-2014	12-AUG-2014	✓
S15								
EG005T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T)								
S1,	S2,	05-FEB-2014	11-FEB-2014	04-AUG-2014	✓	12-FEB-2014	04-AUG-2014	✓
S3,	S6,							
S7,	S8,							
S9,	S10,							
S11,	S12							
Soil Glass Jar - Unpreserved (EG005T)								
S14,	S15,	05-FEB-2014	13-FEB-2014	04-AUG-2014	✓	13-FEB-2014	04-AUG-2014	✓
S16,	S17,							
S18								

Matrix: SOIL

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

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation: Date extracted	Due for extraction	Evaluation	Analysis: Date analysed	Due for analysis	Evaluation
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T)								
S1,	S2,	05-FEB-2014	11-FEB-2014	05-MAR-2014	✓	13-FEB-2014	05-MAR-2014	✓
S3,	S6,							
S7,	S8,							
S9,	S10,							
S11,	S12							
Soil Glass Jar - Unpreserved (EG035T)								
S14,	S15,	05-FEB-2014	13-FEB-2014	05-MAR-2014	✓	14-FEB-2014	05-MAR-2014	✓
S16,	S17,							
S18								
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066)								
S6,	S11	05-FEB-2014	11-FEB-2014	19-FEB-2014	✓	12-FEB-2014	23-MAR-2014	✓
EP068A: Organochlorine Pesticides (OC)								
Soil Glass Jar - Unpreserved (EP068)								
S6,	S11	05-FEB-2014	11-FEB-2014	19-FEB-2014	✓	12-FEB-2014	23-MAR-2014	✓
EP068B: Organophosphorus Pesticides (OP)								
Soil Glass Jar - Unpreserved (EP068)								
S6,	S11	05-FEB-2014	11-FEB-2014	19-FEB-2014	✓	12-FEB-2014	23-MAR-2014	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013								
Soil Glass Jar - Unpreserved (EP071)								
S1,	S3,	05-FEB-2014	11-FEB-2014	19-FEB-2014	✓	12-FEB-2014	23-MAR-2014	✓
S4,	S6,							
S8,	S9,							
S10,	S11,							
S12,	S14,							
S15,	S17							
EP075(SIM)A: Phenolic Compounds								
Soil Glass Jar - Unpreserved (EP075(SIM))								
S6,	S11	05-FEB-2014	11-FEB-2014	19-FEB-2014	✓	12-FEB-2014	23-MAR-2014	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM))								
S3,	S4,	05-FEB-2014	11-FEB-2014	19-FEB-2014	✓	12-FEB-2014	23-MAR-2014	✓
S6,	S9,							
S11,	S12,							
S14,	S15							

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)								
S1,	S3,	05-FEB-2014	11-FEB-2014	19-FEB-2014	✓	11-FEB-2014	19-FEB-2014	✓
S4,	S6,							
S8,	S9,							
S10,	S11,							
S12,	S14,							
S15,	S17							
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP080)								
S1,	S3,	05-FEB-2014	11-FEB-2014	19-FEB-2014	✓	11-FEB-2014	19-FEB-2014	✓
S4,	S6,							
S8,	S9,							
S10,	S11,							
S12,	S14,							
S15,	S17							

Quality Control Parameter Frequency Compliance

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

Matrix: SOIL

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055-103	2	20	10.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	2	13	15.4	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	2	18	11.1	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	2	12	16.7	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	4	36	11.1	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	4	37	10.8	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	2	20	10.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	20	10.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	13	7.7	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	18	5.6	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	12	8.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	36	5.6	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	2	37	5.4	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	20	5.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	20	5.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	13	7.7	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	18	5.6	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	12	8.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	36	5.6	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	2	37	5.4	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	20	5.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	20	5.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	13	7.7	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	18	5.6	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	12	8.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	36	5.6	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	2	37	5.4	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	20	5.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	20	5.0	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).
Asbestos Identification in bulk solids	EA200	SOIL	AS 4964 - 2004 Method for the qualitative identification of asbestos in bulk samples
Total Metals by ICP-AES	EG005T	SOIL	(APHA 21st ed., 3120; USEPA SW 846 - 6010) (ICPAES) Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	AS 3550, APHA 21st ed., 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (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)
TPH - Semivolatile Fraction	EP071	SOIL	(USEPA SW 846 - 8015A) Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C36. This method is compliant with NEPM (2013) Schedule B(3) (Method 506.1)
PAH/Phenols (SIM)	EP075(SIM)	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)
TPH Volatiles/BTEX	EP080	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 501)

Preparation Methods	Method	Matrix	Method Descriptions
Methanolic Extraction of Soils for Purge and Trap	* ORG16	SOIL	(USEPA SW 846 - 5030A) 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids (Option A - Concentrating)	ORG17A	SOIL	In-house, Mechanical agitation (tumbler). 20g of sample, Na2SO4 and surrogate are extracted with 150mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Tumbler Extraction of Solids (Option B - Non-concentrating)	ORG17B	SOIL	In-house, Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 20mL 1:1 DCM/Acetone by end over end tumble. The solvent is transferred directly to a GC vial for analysis.

Summary of Outliers

Outliers : Quality Control Samples

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

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

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

Regular Sample Surrogates

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

Outliers : Analysis Holding Time Compliance

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

- **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.**