

AU.SampleReceipt.Sydney (Sydney)

From: Matthew Locke [Matthew_Locke@coffey.com]
Sent: Tuesday, 1 May 2012 1:33 PM
To: AU.SampleReceipt.Sydney (Sydney)
Subject: RE: GEOTLCOV24303AC

Wonnie,

Trip Spike – BTEX only. Noted. Thanks

SVOC - Please test for PAH/OC/OP/PCB analysis

ASS Screening – please test for pH Field / Fox only.

Let me know if you have any further queries.

Regards,

Matt

From: AU.SampleReceipt.Sydney (Sydney) [mailto:AU.SampleReceipt.Sydney@sgs.com]
Sent: Tuesday, 1 May 2012 1:31 PM
To: Matthew Locke
Subject: RE: GEOTLCOV24303AC
Importance: High

Hi Matthew,

TripSpike is analysed for BTEX only.

In relation to your request for SVOC SGS offers two suites. Could you please confirm which you require :

- 1) SVOC = PAH/OC/OP/PCB analysis performed internally at SGS Sydney
- 2) SVOC = SVOC USEPA 8270 list which is an extended list comprising of 160 semi volatile compounds.

Also, ASS Screening is a generic term used that requires specification as to what analysis is needed. Could you also confirm :

- pH Field / Fox
- SPOCAS
- Chromium Suite
- Or just Chromium Reducible Sulfur

Please specify which of the options above is required so that progression of job analysis can be made. Thank you.

Kind Regards,

Wonnie Condos
SGS Environmental Services

1/05/2012

From: Matthew Locke [mailto:Matthew_Locke@coffey.com]
Sent: Tuesday, 1 May 2012 1:21 PM
To: AU.SampleReceipt.Sydney (Sydney)
Subject: RE: GEOTLCOV24303AC

Wonnie,
TS5 is a Trip Spike so I have assumed that SGS will confirm analysis required. Normally this is BTEX and TPH C6-C9 but the lab needs to confirm what the sample was spiked with.

Let me know if you have additional questions.

Regards,

Matt

From: AU.SampleReceipt.Sydney (Sydney) [mailto:AU.SampleReceipt.Sydney@sgs.com]
Sent: Tuesday, 1 May 2012 1:12 PM
To: Matthew Locke
Subject: GEOTLCOV24303AC

Hi Matthew,

The COC states "Lab to advise" for the last sample on the COC labelled as TS5. Could you please clarify.

Kind Regards,

Wonnie Condos
SGS Environmental Services

SGS Australia Pty Ltd
Unit 16, 33 Maddox St
Alexandria NSW 2015
Australia
Phone : +61 02 8594 0400
Fax : +61 02 8594 0499

E-mail: wonnie.condos@sgs.com



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1/05/2012

CLIENT DETAILS

Contact **Matthew Locke**
 Client **Coffey Geotechnics Pty Ltd**
 Address **Unit 8, 12 Mars Road
NSW 2066**

Telephone **02 9911 1099**
 Facsimile **02 9911 1002**
 Email **matthew_locke@coffey.com**

Project **GEOTLCOV24303AC - SICEEP**
 Order Number **81298-299,92346**
 Samples **32**

LABORATORY DETAILS

Manager **Huong Crawford**
 Laboratory **SGS Alexandria Environmental**
 Address **Unit 16, 33 Maddox St
Alexandria NSW 2015**

Telephone **+61 2 8594 0400**
 Facsimile **+61 2 8594 0499**
 Email **au.environmental.sydney@sgs.com**

SGS Reference **SE107686 R0**
 Report Number **0000027056**
 Date Reported **04 May 2012**
 Date Received **27 Apr 2012**

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
 Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(4354).

PAH - The Limit of Reporting (LOR) has been raised for sample 15 ,27 due to interferences from the sample matrix.

METALS: The Limit of Reporting (LOR) has been raised 5x for sample #9 due to interferences from the sample matrix.

No respirable fibres detected using trace analysis technique.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

SIGNATORIES



Andy Sutton
Organics Chemist



Dong Liang
Inorganics Metals Team Leader



Huong Crawford
Laboratory Manager



Ly Kim Ha
Organics Supervisor



Ravee Sivasubramaniam
Hygienist

Sample Number	SE107686.001	SE107686.002	SE107686.003	SE107686.004	SE107686.005
Sample Matrix	Soil	Soil	Soil	Soil	Soil
Sample Date	23 Apr 2012	23 Apr 2012	23 Apr 2012	23 Apr 2012	23 Apr 2012
Sample Name	BH7-Surface	BH7_1.5-1.95	BH7_2.9-3.0	BH7_0.4-0.5	BH12_Surface
Parameter	Units	LOR			

VOC's in Soil Method: AN433/AN434

Fumigants

2,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
1,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-
1,2-dibromoethane (EDB)	mg/kg	0.1	-	-	-	-	-

Halogenated Aliphatics

Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	-	-	-	-
Chloromethane	mg/kg	1	-	-	-	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	-	-	-	-
Bromomethane	mg/kg	1	-	-	-	-	-
Chloroethane	mg/kg	1	-	-	-	-	-
Trichlorofluoromethane	mg/kg	1	-	-	-	-	-
1,1-dichloroethene	mg/kg	0.1	-	-	-	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	-	-	-	-
Allyl chloride	mg/kg	0.1	-	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
1,1-dichloroethane	mg/kg	0.1	-	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
Bromochloromethane	mg/kg	0.1	-	-	-	-	-
1,2-dichloroethane	mg/kg	0.1	-	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,1-dichloropropene	mg/kg	0.1	-	-	-	-	-
Carbon tetrachloride	mg/kg	0.1	-	-	-	-	-
Dibromomethane	mg/kg	0.1	-	-	-	-	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	-	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,3-dichloropropane	mg/kg	0.1	-	-	-	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	-	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
cis-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.1	-	-	-	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	-	-	-	-	-
Iodomethane	mg/kg	5	-	-	-	-	-

Halogenated Aromatics

Chlorobenzene	mg/kg	0.1	-	-	-	-	-
Bromobenzene	mg/kg	0.1	-	-	-	-	-
2-chlorotoluene	mg/kg	0.1	-	-	-	-	-
4-chlorotoluene	mg/kg	0.1	-	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107686.001	SE107686.002	SE107686.003	SE107686.004	SE107686.005
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	23 Apr 2012	23 Apr 2012	23 Apr 2012	23 Apr 2012	23 Apr 2012
			Sample Name	BH7-Surface	BH7_1.5-1.95	BH7_2.9-3.0	BH7_0.4-0.5	BH12_Surface

VOC's in Soil Method: AN433/AN434 (continued)

Monocyclic Aromatic Hydrocarbons

Benzene	mg/kg	0.1	-	<0.1	<0.1	<0.1	-
Toluene	mg/kg	0.1	-	<0.1	<0.1	<0.1	-
Ethylbenzene	mg/kg	0.1	-	<0.1	<0.1	<0.1	-
m/p-xylene	mg/kg	0.2	-	<0.2	<0.2	<0.2	-
o-xylene	mg/kg	0.1	-	<0.1	<0.1	<0.1	-
Styrene (Vinyl benzene)	mg/kg	0.1	-	-	-	-	-
Isopropylbenzene (Cumene)	mg/kg	0.1	-	-	-	-	-
n-propylbenzene	mg/kg	0.1	-	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
tert-butylbenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
sec-butylbenzene	mg/kg	0.1	-	-	-	-	-
p-isopropyltoluene	mg/kg	0.1	-	-	-	-	-
n-butylbenzene	mg/kg	0.1	-	-	-	-	-

Nitrogenous Compounds

Acrylonitrile	mg/kg	0.1	-	-	-	-	-
2-nitropropane	mg/kg	10	-	-	-	-	-

Oxygenated Compounds

Acetone (2-propanone)	mg/kg	10	-	-	-	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	-	-	-	-	-
Vinyl acetate	mg/kg	10	-	-	-	-	-
MEK (2-butanone)	mg/kg	10	-	-	-	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	-	-	-	-
2-hexanone (MBK)	mg/kg	5	-	-	-	-	-

Polycyclic VOCs

Naphthalene	mg/kg	0.1	-	-	-	-	-
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Sulphonated Compounds

Carbon disulfide	mg/kg	0.5	-	-	-	-	-
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Surrogates

Dibromofluoromethane (Surrogate)	%	-	-	100	99	98	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	101	101	100	-
d8-toluene (Surrogate)	%	-	-	98	99	100	-
Bromofluorobenzene (Surrogate)	%	-	-	91	96	92	-

Totals

Total Xylenes*	mg/kg	0.3	-	<0.3	<0.3	<0.3	-
Total BTEX*	mg/kg	-	-	0	0	0	-
Total Chlorinated VOC*	mg/kg	3	-	-	-	-	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	-	-	-	-
Total Halogenated VOC*	mg/kg	3.3	-	-	-	-	-
Total VOC*	mg/kg	24	-	-	-	-	-

Trihalomethanes

Chloroform	mg/kg	0.1	-	-	-	-	-
Bromodichloromethane	mg/kg	0.1	-	-	-	-	-
Chlorodibromomethane	mg/kg	0.1	-	-	-	-	-
Bromoform	mg/kg	0.1	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107686.001	SE107686.002	SE107686.003	SE107686.004	SE107686.005
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	23 Apr 2012	23 Apr 2012	23 Apr 2012	23 Apr 2012	23 Apr 2012
			Sample Name	BH7-Surface	BH7_1.5-1.95	BH7_2.9-3.0	BH7_0.4-0.5	BH12_Surface

Volatile Petroleum Hydrocarbons in Soil Method: AN433/AN434

TRH C6-C9	mg/kg	20	-	<20	<20	<20	-
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Surrogates

Trifluorotoluene (Surrogate)	%	-	-	64	69	64	-
Dibromofluoromethane (Surrogate)	%	-	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-	-

TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403

TRH C10-C14	mg/kg	20	-	<20	<20	<20	-
TRH C15-C28	mg/kg	50	-	87	260	<50	-
TRH C29-C36	mg/kg	50	-	<50	98	<50	-

Surrogates

TRH (Surrogate)	%	-	-	-	-	-	-
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PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420

Naphthalene	mg/kg	0.1	-	0.1	0.3	<0.1	-
Acenaphthylene	mg/kg	0.1	-	0.1	0.5	<0.1	-
Acenaphthene	mg/kg	0.1	-	<0.1	0.4	<0.1	-
Fluorene	mg/kg	0.1	-	0.1	0.4	<0.1	-
Phenanthrene	mg/kg	0.1	-	1.0	2.6	<0.1	-
Anthracene	mg/kg	0.1	-	0.4	1.0	<0.1	-
Fluoranthene	mg/kg	0.1	-	1.5	2.9	<0.1	-
Pyrene	mg/kg	0.1	-	1.5	2.9	<0.1	-
Benzo(a)anthracene	mg/kg	0.1	-	0.8	1.3	<0.1	-
Chrysene	mg/kg	0.1	-	0.6	1.0	<0.1	-
Benzo(b)fluoranthene	mg/kg	0.1	-	0.8	1.6	<0.1	-
Benzo(k)fluoranthene	mg/kg	0.1	-	0.3	0.5	<0.1	-
Benzo(a)pyrene	mg/kg	0.1	-	0.7	1.2	<0.1	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	-	0.3	0.6	<0.1	-
Dibenzo(a,h)anthracene	mg/kg	0.1	-	<0.1	0.1	<0.1	-
Benzo(ghi)perylene	mg/kg	0.1	-	0.5	0.8	<0.1	-
Total PAH (Vic EPA)	mg/kg	0.8	-	8.8	18	<0.8	-

Surrogates

d5-nitrobenzene (Surrogate)	%	-	-	90	91	77	-
2-fluorobiphenyl (Surrogate)	%	-	-	103	102	91	-
d14-p-terphenyl (Surrogate)	%	-	-	117	109	104	-

OC Pesticides in Soil Method: AN400/AN420

Hexachlorobenzene (HCB)	mg/kg	0.1	-	-	-	-	-
Alpha BHC	mg/kg	0.1	-	-	-	-	-
Lindane	mg/kg	0.1	-	-	-	-	-
Heptachlor	mg/kg	0.1	-	-	-	-	-
Aldrin	mg/kg	0.1	-	-	-	-	-
Beta BHC	mg/kg	0.1	-	-	-	-	-
Delta BHC	mg/kg	0.1	-	-	-	-	-
Heptachlor epoxide	mg/kg	0.1	-	-	-	-	-
o,p'-DDE	mg/kg	0.1	-	-	-	-	-
Alpha Endosulfan	mg/kg	0.2	-	-	-	-	-
Gamma Chlordane	mg/kg	0.1	-	-	-	-	-
Alpha Chlordane	mg/kg	0.1	-	-	-	-	-
trans-Nonachlor	mg/kg	0.1	-	-	-	-	-
p,p'-DDE	mg/kg	0.1	-	-	-	-	-
Dieldrin	mg/kg	0.2	-	-	-	-	-
Endrin	mg/kg	0.2	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107686.001	SE107686.002	SE107686.003	SE107686.004	SE107686.005
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	23 Apr 2012	23 Apr 2012	23 Apr 2012	23 Apr 2012	23 Apr 2012
			Sample Name	BH7-Surface	BH7_1.5-1.95	BH7_2.9-3.0	BH7_0.4-0.5	BH12_Surface

OC Pesticides in Soil Method: AN400/AN420 (continued)

o,p'-DDD	mg/kg	0.1	-	-	-	-	-
o,p'-DDT	mg/kg	0.1	-	-	-	-	-
Beta Endosulfan	mg/kg	0.2	-	-	-	-	-
p,p'-DDD	mg/kg	0.1	-	-	-	-	-
p,p'-DDT	mg/kg	0.1	-	-	-	-	-
Endosulfan sulphate	mg/kg	0.1	-	-	-	-	-
Endrin Aldehyde	mg/kg	0.1	-	-	-	-	-
Methoxychlor	mg/kg	0.1	-	-	-	-	-
Endrin Ketone	mg/kg	0.1	-	-	-	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-	-
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OP Pesticides in Soil Method: AN400/AN420

Dichlorvos	mg/kg	0.5	-	-	-	-	-
Dimethoate	mg/kg	0.5	-	-	-	-	-
Diazinon (Dimpylate)	mg/kg	0.5	-	-	-	-	-
Fenitrothion	mg/kg	0.2	-	-	-	-	-
Malathion	mg/kg	0.2	-	-	-	-	-
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	-	-	-	-	-
Parathion-ethyl (Parathion)	mg/kg	0.2	-	-	-	-	-
Bromophos Ethyl	mg/kg	0.2	-	-	-	-	-
Methidathion	mg/kg	0.5	-	-	-	-	-
Ethion	mg/kg	0.2	-	-	-	-	-
Azinphos-methyl (Guthion)	mg/kg	0.2	-	-	-	-	-

Surrogates

2-fluorobiphenyl (Surrogate)	%	-	-	-	-	-	-
d14-p-terphenyl (Surrogate)	%	-	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107686.001	SE107686.002	SE107686.003	SE107686.004	SE107686.005
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	23 Apr 2012	23 Apr 2012	23 Apr 2012	23 Apr 2012	23 Apr 2012
			Sample Name	BH7-Surface	BH7_1.5-1.95	BH7_2.9-3.0	BH7_0.4-0.5	BH12_Surface

PCBs in Soil Method: AN400/AN420

Arochlor 1016	mg/kg	0.2	-	-	-	-	-
Arochlor 1221	mg/kg	0.2	-	-	-	-	-
Arochlor 1232	mg/kg	0.2	-	-	-	-	-
Arochlor 1242	mg/kg	0.2	-	-	-	-	-
Arochlor 1248	mg/kg	0.2	-	-	-	-	-
Arochlor 1254	mg/kg	0.2	-	-	-	-	-
Arochlor 1260	mg/kg	0.2	-	-	-	-	-
Arochlor 1262	mg/kg	0.2	-	-	-	-	-
Arochlor 1268	mg/kg	0.2	-	-	-	-	-
Total PCBs (Arochlors)	mg/kg	1	-	-	-	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-	-
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Field pH for Acid Sulphate Soil Method: AN104

PHf	pH Units	-	-	-	-	-	-
PHfox	pH Units	-	-	-	-	-	-
Reaction*	No unit	-	-	-	-	-	-
pH Difference*	pH Units	-10	-	-	-	-	-

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: AN040/AN320

Arsenic, As	mg/kg	3	-	6	11	<3	-
Cadmium, Cd	mg/kg	0.3	-	<0.3	0.6	<0.3	-
Chromium, Cr	mg/kg	0.3	-	10	15	9.2	-
Copper, Cu	mg/kg	0.5	-	37	34	15	-
Lead, Pb	mg/kg	1	-	67	91	14	-
Nickel, Ni	mg/kg	0.5	-	9.5	8.3	32	-
Zinc, Zn	mg/kg	0.5	-	66	160	28	-

Mercury in Soil Method: AN312

Mercury	mg/kg	0.05	-	0.24	0.17	<0.05	-
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Fibre Identification in soil Method: AN602

FibreID

Asbestos Detected	No unit	-	No	-	-	No	No
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SemiQuant

Estimated Fibres	%w/w	0.01	<0.01	-	-	<0.01	<0.01
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Moisture Content Method: AN002

% Moisture	%	0.5	-	16	16	20	-
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Sample Number	SE107686.006	SE107686.007	SE107686.008	SE107686.009	SE107686.010
Sample Matrix	Soil	Soil	Soil	Soil	Soil
Sample Date	23 Apr 2012	23 Apr 2012	23 Apr 2012	23 Apr 2012	24 Apr 2012
Sample Name	BH12_0.4-0.5	BH12_1.5-1.95	BH12_2.9-3.0	BH12_4.5-4.95	BH23_0.5-0.6
Parameter	Units	LOR			

VOC's in Soil Method: AN433/AN434

Fumigants

2,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
1,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-
1,2-dibromoethane (EDB)	mg/kg	0.1	-	-	-	-	-

Halogenated Aliphatics

Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	-	-	-	-
Chloromethane	mg/kg	1	-	-	-	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	-	-	-	-
Bromomethane	mg/kg	1	-	-	-	-	-
Chloroethane	mg/kg	1	-	-	-	-	-
Trichlorofluoromethane	mg/kg	1	-	-	-	-	-
1,1-dichloroethene	mg/kg	0.1	-	-	-	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	-	-	-	-
Allyl chloride	mg/kg	0.1	-	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
1,1-dichloroethane	mg/kg	0.1	-	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
Bromochloromethane	mg/kg	0.1	-	-	-	-	-
1,2-dichloroethane	mg/kg	0.1	-	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,1-dichloropropene	mg/kg	0.1	-	-	-	-	-
Carbon tetrachloride	mg/kg	0.1	-	-	-	-	-
Dibromomethane	mg/kg	0.1	-	-	-	-	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	-	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,3-dichloropropane	mg/kg	0.1	-	-	-	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	-	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
cis-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.1	-	-	-	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	-	-	-	-	-
Iodomethane	mg/kg	5	-	-	-	-	-

Halogenated Aromatics

Chlorobenzene	mg/kg	0.1	-	-	-	-	-
Bromobenzene	mg/kg	0.1	-	-	-	-	-
2-chlorotoluene	mg/kg	0.1	-	-	-	-	-
4-chlorotoluene	mg/kg	0.1	-	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107686.006	SE107686.007	SE107686.008	SE107686.009	SE107686.010
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	23 Apr 2012	23 Apr 2012	23 Apr 2012	23 Apr 2012	24 Apr 2012
			Sample Name	BH12_0.4-0.5	BH12_1.5-1.95	BH12_2.9-3.0	BH12_4.5-4.95	BH23_0.5-0.6

VOC's in Soil Method: AN433/AN434 (continued)

Monocyclic Aromatic Hydrocarbons

Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Styrene (Vinyl benzene)	mg/kg	0.1	-	-	-	-	-
Isopropylbenzene (Cumene)	mg/kg	0.1	-	-	-	-	-
n-propylbenzene	mg/kg	0.1	-	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
tert-butylbenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
sec-butylbenzene	mg/kg	0.1	-	-	-	-	-
p-isopropyltoluene	mg/kg	0.1	-	-	-	-	-
n-butylbenzene	mg/kg	0.1	-	-	-	-	-

Nitrogenous Compounds

Acrylonitrile	mg/kg	0.1	-	-	-	-	-
2-nitropropane	mg/kg	10	-	-	-	-	-

Oxygenated Compounds

Acetone (2-propanone)	mg/kg	10	-	-	-	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	-	-	-	-	-
Vinyl acetate	mg/kg	10	-	-	-	-	-
MEK (2-butanone)	mg/kg	10	-	-	-	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	-	-	-	-
2-hexanone (MBK)	mg/kg	5	-	-	-	-	-

Polycyclic VOCs

Naphthalene	mg/kg	0.1	-	-	-	-	-
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Sulphonated Compounds

Carbon disulfide	mg/kg	0.5	-	-	-	-	-
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Surrogates

Dibromofluoromethane (Surrogate)	%	-	98	99	99	101	98
d4-1,2-dichloroethane (Surrogate)	%	-	100	100	101	104	101
d8-toluene (Surrogate)	%	-	100	100	100	100	101
Bromofluorobenzene (Surrogate)	%	-	87	84	87	82	93

Totals

Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	-	0	0	0	0	0
Total Chlorinated VOC*	mg/kg	3	-	-	-	-	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	-	-	-	-
Total Halogenated VOC*	mg/kg	3.3	-	-	-	-	-
Total VOC*	mg/kg	24	-	-	-	-	-

Trihalomethanes

Chloroform	mg/kg	0.1	-	-	-	-	-
Bromodichloromethane	mg/kg	0.1	-	-	-	-	-
Chlorodibromomethane	mg/kg	0.1	-	-	-	-	-
Bromoform	mg/kg	0.1	-	-	-	-	-



ANALYTICAL REPORT

SE107686 R0

Parameter	Units	LOR	Sample Number	SE107686.006	SE107686.007	SE107686.008	SE107686.009	SE107686.010
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	23 Apr 2012	23 Apr 2012	23 Apr 2012	23 Apr 2012	24 Apr 2012
			Sample Name	BH12_0.4-0.5	BH12_1.5-1.95	BH12_2.9-3.0	BH12_4.5-4.95	BH23_0.5-0.6

Volatile Petroleum Hydrocarbons in Soil Method: AN433/AN434

TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
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Surrogates

Trifluorotoluene (Surrogate)	%	-	68	70	72	73	67
Dibromofluoromethane (Surrogate)	%	-	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-	-

TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403

TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	50	<50	<50	<50	<50	<50
TRH C29-C36	mg/kg	50	<50	<50	<50	<50	<50

Surrogates

TRH (Surrogate)	%	-	-	-	-	-	-
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PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420

Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.2
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	0.4	0.5	0.5
Anthracene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1	0.1
Fluoranthene	mg/kg	0.1	<0.1	0.1	0.8	0.1	0.5
Pyrene	mg/kg	0.1	<0.1	0.1	0.8	0.2	0.5
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	0.4	0.2	0.3
Chrysene	mg/kg	0.1	<0.1	<0.1	0.4	0.2	0.3
Benzo(b)fluoranthene	mg/kg	0.1	<0.1	<0.1	0.5	0.2	0.4
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1	0.2
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	0.4	<0.1	0.3
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1	0.1
Dibenzo(a,h)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	0.3	0.1	0.2
Total PAH (Vic EPA)	mg/kg	0.8	<0.8	<0.8	4.4	1.6	3.3

Surrogates

d5-nitrobenzene (Surrogate)	%	-	90	86	89	92	83
2-fluorobiphenyl (Surrogate)	%	-	90	97	99	99	96
d14-p-terphenyl (Surrogate)	%	-	104	110	107	109	110

OC Pesticides in Soil Method: AN400/AN420

Hexachlorobenzene (HCB)	mg/kg	0.1	-	-	-	-	-
Alpha BHC	mg/kg	0.1	-	-	-	-	-
Lindane	mg/kg	0.1	-	-	-	-	-
Heptachlor	mg/kg	0.1	-	-	-	-	-
Aldrin	mg/kg	0.1	-	-	-	-	-
Beta BHC	mg/kg	0.1	-	-	-	-	-
Delta BHC	mg/kg	0.1	-	-	-	-	-
Heptachlor epoxide	mg/kg	0.1	-	-	-	-	-
o,p'-DDE	mg/kg	0.1	-	-	-	-	-
Alpha Endosulfan	mg/kg	0.2	-	-	-	-	-
Gamma Chlordane	mg/kg	0.1	-	-	-	-	-
Alpha Chlordane	mg/kg	0.1	-	-	-	-	-
trans-Nonachlor	mg/kg	0.1	-	-	-	-	-
p,p'-DDE	mg/kg	0.1	-	-	-	-	-
Dieldrin	mg/kg	0.2	-	-	-	-	-
Endrin	mg/kg	0.2	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107686.006	SE107686.007	SE107686.008	SE107686.009	SE107686.010
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	23 Apr 2012	23 Apr 2012	23 Apr 2012	23 Apr 2012	24 Apr 2012
			Sample Name	BH12_0.4-0.5	BH12_1.5-1.95	BH12_2.9-3.0	BH12_4.5-4.95	BH23_0.5-0.6

OC Pesticides in Soil Method: AN400/AN420 (continued)

o,p'-DDD	mg/kg	0.1	-	-	-	-	-
o,p'-DDT	mg/kg	0.1	-	-	-	-	-
Beta Endosulfan	mg/kg	0.2	-	-	-	-	-
p,p'-DDD	mg/kg	0.1	-	-	-	-	-
p,p'-DDT	mg/kg	0.1	-	-	-	-	-
Endosulfan sulphate	mg/kg	0.1	-	-	-	-	-
Endrin Aldehyde	mg/kg	0.1	-	-	-	-	-
Methoxychlor	mg/kg	0.1	-	-	-	-	-
Endrin Ketone	mg/kg	0.1	-	-	-	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-	-
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OP Pesticides in Soil Method: AN400/AN420

Dichlorvos	mg/kg	0.5	-	-	-	-	-
Dimethoate	mg/kg	0.5	-	-	-	-	-
Diazinon (Dimpylate)	mg/kg	0.5	-	-	-	-	-
Fenitrothion	mg/kg	0.2	-	-	-	-	-
Malathion	mg/kg	0.2	-	-	-	-	-
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	-	-	-	-	-
Parathion-ethyl (Parathion)	mg/kg	0.2	-	-	-	-	-
Bromophos Ethyl	mg/kg	0.2	-	-	-	-	-
Methidathion	mg/kg	0.5	-	-	-	-	-
Ethion	mg/kg	0.2	-	-	-	-	-
Azinphos-methyl (Guthion)	mg/kg	0.2	-	-	-	-	-

Surrogates

2-fluorobiphenyl (Surrogate)	%	-	-	-	-	-	-
d14-p-terphenyl (Surrogate)	%	-	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107686.006	SE107686.007	SE107686.008	SE107686.009	SE107686.010
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	23 Apr 2012	23 Apr 2012	23 Apr 2012	23 Apr 2012	24 Apr 2012
			Sample Name	BH12_0.4-0.5	BH12_1.5-1.95	BH12_2.9-3.0	BH12_4.5-4.95	BH23_0.5-0.6

PCBs in Soil Method: AN400/AN420

Arochlor 1016	mg/kg	0.2	-	-	-	-	-
Arochlor 1221	mg/kg	0.2	-	-	-	-	-
Arochlor 1232	mg/kg	0.2	-	-	-	-	-
Arochlor 1242	mg/kg	0.2	-	-	-	-	-
Arochlor 1248	mg/kg	0.2	-	-	-	-	-
Arochlor 1254	mg/kg	0.2	-	-	-	-	-
Arochlor 1260	mg/kg	0.2	-	-	-	-	-
Arochlor 1262	mg/kg	0.2	-	-	-	-	-
Arochlor 1268	mg/kg	0.2	-	-	-	-	-
Total PCBs (Arochlors)	mg/kg	1	-	-	-	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-	-
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Field pH for Acid Sulphate Soil Method: AN104

PHf	pH Units	-	-	-	-	-	-
PHfox	pH Units	-	-	-	-	-	-
Reaction*	No unit	-	-	-	-	-	-
pH Difference*	pH Units	-10	-	-	-	-	-

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: AN040/AN320

Arsenic, As	mg/kg	3	<3	<3	7	<15†	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	0.4	<1.5†	0.3
Chromium, Cr	mg/kg	0.3	8.5	3.9	11	4.6	5.1
Copper, Cu	mg/kg	0.5	13	2.7	78	11	51
Lead, Pb	mg/kg	1	9	8	150	19	220
Nickel, Ni	mg/kg	0.5	30	1.9	4.6	<2.5†	12
Zinc, Zn	mg/kg	0.5	33	6.8	86	40	310

Mercury in Soil Method: AN312

Mercury	mg/kg	0.05	<0.05	<0.05	0.50	0.20	0.89
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Fibre Identification in soil Method: AN602

FibreID

Asbestos Detected	No unit	-	No	-	-	-	No
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SemiQuant

Estimated Fibres	%w/w	0.01	<0.01	-	-	-	<0.01
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Moisture Content Method: AN002

% Moisture	%	0.5	13	17	16	14	27
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Parameter	Units	LOR	Sample Number	SE107686.011	SE107686.012	SE107686.013	SE107686.014	SE107686.015
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	24 Apr 2012	24 Apr 2012	24/4/12 9:27	24/4/12 9:45	24/4/12 11:50
			Sample Name	BH23_1.5-1.95	BH23_3-3.45	BH19_0.5-0.6	BH19_1.3-1.4	BH26_Surface

VOC's in Soil Method: AN433/AN434

Fumigants

2,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
1,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-
1,2-dibromoethane (EDB)	mg/kg	0.1	-	-	-	-	-

Halogenated Aliphatics

Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	-	-	-	-
Chloromethane	mg/kg	1	-	-	-	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	-	-	-	-
Bromomethane	mg/kg	1	-	-	-	-	-
Chloroethane	mg/kg	1	-	-	-	-	-
Trichlorofluoromethane	mg/kg	1	-	-	-	-	-
1,1-dichloroethene	mg/kg	0.1	-	-	-	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	-	-	-	-
Allyl chloride	mg/kg	0.1	-	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
1,1-dichloroethane	mg/kg	0.1	-	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
Bromochloromethane	mg/kg	0.1	-	-	-	-	-
1,2-dichloroethane	mg/kg	0.1	-	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,1-dichloropropene	mg/kg	0.1	-	-	-	-	-
Carbon tetrachloride	mg/kg	0.1	-	-	-	-	-
Dibromomethane	mg/kg	0.1	-	-	-	-	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	-	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,3-dichloropropane	mg/kg	0.1	-	-	-	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	-	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
cis-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.1	-	-	-	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	-	-	-	-	-
Iodomethane	mg/kg	5	-	-	-	-	-

Halogenated Aromatics

Chlorobenzene	mg/kg	0.1	-	-	-	-	-
Bromobenzene	mg/kg	0.1	-	-	-	-	-
2-chlorotoluene	mg/kg	0.1	-	-	-	-	-
4-chlorotoluene	mg/kg	0.1	-	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107686.011	SE107686.012	SE107686.013	SE107686.014	SE107686.015
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	24 Apr 2012	24 Apr 2012	24/4/12 9:27	24/4/12 9:45	24/4/12 11:50
			Sample Name	BH23_1.5-1.95	BH23_3-3.45	BH19_0.5-0.6	BH19_1.3-1.4	BH26_Surface

VOC's in Soil Method: AN433/AN434 (continued)

Monocyclic Aromatic Hydrocarbons

Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Styrene (Vinyl benzene)	mg/kg	0.1	-	-	-	-	-
Isopropylbenzene (Cumene)	mg/kg	0.1	-	-	-	-	-
n-propylbenzene	mg/kg	0.1	-	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
tert-butylbenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
sec-butylbenzene	mg/kg	0.1	-	-	-	-	-
p-isopropyltoluene	mg/kg	0.1	-	-	-	-	-
n-butylbenzene	mg/kg	0.1	-	-	-	-	-

Nitrogenous Compounds

Acrylonitrile	mg/kg	0.1	-	-	-	-	-
2-nitropropane	mg/kg	10	-	-	-	-	-

Oxygenated Compounds

Acetone (2-propanone)	mg/kg	10	-	-	-	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	-	-	-	-	-
Vinyl acetate	mg/kg	10	-	-	-	-	-
MEK (2-butanone)	mg/kg	10	-	-	-	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	-	-	-	-
2-hexanone (MBK)	mg/kg	5	-	-	-	-	-

Polycyclic VOCs

Naphthalene	mg/kg	0.1	-	-	-	-	-
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Sulphonated Compounds

Carbon disulfide	mg/kg	0.5	-	-	-	-	-
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Surrogates

Dibromofluoromethane (Surrogate)	%	-	99	99	98	97	97
d4-1,2-dichloroethane (Surrogate)	%	-	102	101	102	100	102
d8-toluene (Surrogate)	%	-	100	100	99	99	100
Bromofluorobenzene (Surrogate)	%	-	87	95	86	88	85

Totals

Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	-	0	0	0	0	0
Total Chlorinated VOC*	mg/kg	3	-	-	-	-	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	-	-	-	-
Total Halogenated VOC*	mg/kg	3.3	-	-	-	-	-
Total VOC*	mg/kg	24	-	-	-	-	-

Trihalomethanes

Chloroform	mg/kg	0.1	-	-	-	-	-
Bromodichloromethane	mg/kg	0.1	-	-	-	-	-
Chlorodibromomethane	mg/kg	0.1	-	-	-	-	-
Bromoform	mg/kg	0.1	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107686.011	SE107686.012	SE107686.013	SE107686.014	SE107686.015
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	24 Apr 2012	24 Apr 2012	24/4/12 9:27	24/4/12 9:45	24/4/12 11:50
			Sample Name	BH23_1.5-1.95	BH23_3-3.45	BH19_0.5-0.6	BH19_1.3-1.4	BH26_Surface

Volatile Petroleum Hydrocarbons in Soil Method: AN433/AN434

TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
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Surrogates

Trifluorotoluene (Surrogate)	%	-	71	86	76	78	91
Dibromofluoromethane (Surrogate)	%	-	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-	-

TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403

TRH C10-C14	mg/kg	20	<20	<20	<20	<20	30
TRH C15-C28	mg/kg	50	<50	<50	<50	160	450
TRH C29-C36	mg/kg	50	<50	<50	<50	54	420

Surrogates

TRH (Surrogate)	%	-	-	-	-	-	-
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PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420

Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	0.3	1.2
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	0.2	1.4
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	0.2	3.0
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	0.3	<1.0†
Phenanthrene	mg/kg	0.1	0.2	<0.1	0.3	1.7	8.2
Anthracene	mg/kg	0.1	<0.1	<0.1	0.1	1.0	3.8
Fluoranthene	mg/kg	0.1	0.2	<0.1	0.5	5.9	15
Pyrene	mg/kg	0.1	0.2	<0.1	0.6	5.4	14
Benzo(a)anthracene	mg/kg	0.1	0.2	<0.1	0.3	2.5	4.8
Chrysene	mg/kg	0.1	0.2	<0.1	0.3	2.0	3.6
Benzo(b)fluoranthene	mg/kg	0.1	0.2	<0.1	0.4	2.8	5.9
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	0.2	1.2	2.0
Benzo(a)pyrene	mg/kg	0.1	0.1	<0.1	0.3	2.3	4.4
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	0.2	1.1	2.3
Dibenzo(a,h)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	0.3	<1.0†
Benzo(ghi)perylene	mg/kg	0.1	0.1	<0.1	0.2	1.4	3.2
Total PAH (Vic EPA)	mg/kg	0.8	1.4	<0.8	3.2	28	73

Surrogates

d5-nitrobenzene (Surrogate)	%	-	86	109	109	101	100
2-fluorobiphenyl (Surrogate)	%	-	95	108	104	106	123
d14-p-terphenyl (Surrogate)	%	-	110	120	112	113	117

OC Pesticides in Soil Method: AN400/AN420

Hexachlorobenzene (HCB)	mg/kg	0.1	-	-	-	-	-
Alpha BHC	mg/kg	0.1	-	-	-	-	-
Lindane	mg/kg	0.1	-	-	-	-	-
Heptachlor	mg/kg	0.1	-	-	-	-	-
Aldrin	mg/kg	0.1	-	-	-	-	-
Beta BHC	mg/kg	0.1	-	-	-	-	-
Delta BHC	mg/kg	0.1	-	-	-	-	-
Heptachlor epoxide	mg/kg	0.1	-	-	-	-	-
o,p'-DDE	mg/kg	0.1	-	-	-	-	-
Alpha Endosulfan	mg/kg	0.2	-	-	-	-	-
Gamma Chlordane	mg/kg	0.1	-	-	-	-	-
Alpha Chlordane	mg/kg	0.1	-	-	-	-	-
trans-Nonachlor	mg/kg	0.1	-	-	-	-	-
p,p'-DDE	mg/kg	0.1	-	-	-	-	-
Dieldrin	mg/kg	0.2	-	-	-	-	-
Endrin	mg/kg	0.2	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107686.011	SE107686.012	SE107686.013	SE107686.014	SE107686.015
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	24 Apr 2012	24 Apr 2012	24/4/12 9:27	24/4/12 9:45	24/4/12 11:50
			Sample Name	BH23_1.5-1.95	BH23_3-3.45	BH19_0.5-0.6	BH19_1.3-1.4	BH26_Surface

OC Pesticides in Soil Method: AN400/AN420 (continued)

o,p'-DDD	mg/kg	0.1	-	-	-	-	-
o,p'-DDT	mg/kg	0.1	-	-	-	-	-
Beta Endosulfan	mg/kg	0.2	-	-	-	-	-
p,p'-DDD	mg/kg	0.1	-	-	-	-	-
p,p'-DDT	mg/kg	0.1	-	-	-	-	-
Endosulfan sulphate	mg/kg	0.1	-	-	-	-	-
Endrin Aldehyde	mg/kg	0.1	-	-	-	-	-
Methoxychlor	mg/kg	0.1	-	-	-	-	-
Endrin Ketone	mg/kg	0.1	-	-	-	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-	-
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OP Pesticides in Soil Method: AN400/AN420

Dichlorvos	mg/kg	0.5	-	-	-	-	-
Dimethoate	mg/kg	0.5	-	-	-	-	-
Diazinon (Dimpylate)	mg/kg	0.5	-	-	-	-	-
Fenitrothion	mg/kg	0.2	-	-	-	-	-
Malathion	mg/kg	0.2	-	-	-	-	-
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	-	-	-	-	-
Parathion-ethyl (Parathion)	mg/kg	0.2	-	-	-	-	-
Bromophos Ethyl	mg/kg	0.2	-	-	-	-	-
Methidathion	mg/kg	0.5	-	-	-	-	-
Ethion	mg/kg	0.2	-	-	-	-	-
Azinphos-methyl (Guthion)	mg/kg	0.2	-	-	-	-	-

Surrogates

2-fluorobiphenyl (Surrogate)	%	-	-	-	-	-	-
d14-p-terphenyl (Surrogate)	%	-	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107686.011	SE107686.012	SE107686.013	SE107686.014	SE107686.015
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	24 Apr 2012	24 Apr 2012	24/4/12 9:27	24/4/12 9:45	24/4/12 11:50
			Sample Name	BH23_1.5-1.95	BH23_3-3.45	BH19_0.5-0.6	BH19_1.3-1.4	BH26_Surface

PCBs in Soil Method: AN400/AN420

Arochlor 1016	mg/kg	0.2	-	-	-	-	-
Arochlor 1221	mg/kg	0.2	-	-	-	-	-
Arochlor 1232	mg/kg	0.2	-	-	-	-	-
Arochlor 1242	mg/kg	0.2	-	-	-	-	-
Arochlor 1248	mg/kg	0.2	-	-	-	-	-
Arochlor 1254	mg/kg	0.2	-	-	-	-	-
Arochlor 1260	mg/kg	0.2	-	-	-	-	-
Arochlor 1262	mg/kg	0.2	-	-	-	-	-
Arochlor 1268	mg/kg	0.2	-	-	-	-	-
Total PCBs (Arochlors)	mg/kg	1	-	-	-	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-	-
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Field pH for Acid Sulphate Soil Method: AN104

PHf	pH Units	-	-	-	-	-	-
PHfox	pH Units	-	-	-	-	-	-
Reaction*	No unit	-	-	-	-	-	-
pH Difference*	pH Units	-10	-	-	-	-	-

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: AN040/AN320

Arsenic, As	mg/kg	3	5	8	4	5	4
Cadmium, Cd	mg/kg	0.3	0.3	<0.3	0.3	0.4	0.4
Chromium, Cr	mg/kg	0.3	7.9	5.6	12	21	6.9
Copper, Cu	mg/kg	0.5	580	5.8	36	35	98
Lead, Pb	mg/kg	1	92	14	60	71	96
Nickel, Ni	mg/kg	0.5	7.3	1.6	8.2	7.9	11
Zinc, Zn	mg/kg	0.5	110	6.0	120	130	210

Mercury in Soil Method: AN312

Mercury	mg/kg	0.05	1.3	0.07	0.14	0.28	0.13
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Fibre Identification in soil Method: AN602

FibreID

Asbestos Detected	No unit	-	-	-	No	-	No
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SemiQuant

Estimated Fibres	%w/w	0.01	-	-	<0.01	-	<0.01
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Moisture Content Method: AN002

% Moisture	%	0.5	22	19	7.4	10	9.5
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Sample Number	SE107686.016	SE107686.017	SE107686.018	SE107686.019	SE107686.020
Sample Matrix	Soil	Soil	Soil	Soil	Soil
Sample Date	24/4/12 13:39	24/4/12 14:36	24/4/12 14:45	24/4/12 15:18	24/4/12 15:30
Sample Name	BH20_0.3-0.4	BH20_1.5-1.8	BH20_3.0-3.4	BH20_4.5-4.9	NBH18_0.5-0.6
Parameter	Units	LOR			

VOC's in Soil Method: AN433/AN434

Fumigants

2,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
1,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-
1,2-dibromoethane (EDB)	mg/kg	0.1	-	-	-	-	-

Halogenated Aliphatics

Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	-	-	-	-
Chloromethane	mg/kg	1	-	-	-	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	-	-	-	-
Bromomethane	mg/kg	1	-	-	-	-	-
Chloroethane	mg/kg	1	-	-	-	-	-
Trichlorofluoromethane	mg/kg	1	-	-	-	-	-
1,1-dichloroethene	mg/kg	0.1	-	-	-	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	-	-	-	-
Allyl chloride	mg/kg	0.1	-	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
1,1-dichloroethane	mg/kg	0.1	-	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
Bromochloromethane	mg/kg	0.1	-	-	-	-	-
1,2-dichloroethane	mg/kg	0.1	-	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,1-dichloropropene	mg/kg	0.1	-	-	-	-	-
Carbon tetrachloride	mg/kg	0.1	-	-	-	-	-
Dibromomethane	mg/kg	0.1	-	-	-	-	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	-	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,3-dichloropropane	mg/kg	0.1	-	-	-	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	-	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
cis-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.1	-	-	-	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	-	-	-	-	-
Iodomethane	mg/kg	5	-	-	-	-	-

Halogenated Aromatics

Chlorobenzene	mg/kg	0.1	-	-	-	-	-
Bromobenzene	mg/kg	0.1	-	-	-	-	-
2-chlorotoluene	mg/kg	0.1	-	-	-	-	-
4-chlorotoluene	mg/kg	0.1	-	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107686.016	SE107686.017	SE107686.018	SE107686.019	SE107686.020
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	24/4/12 13:39	24/4/12 14:36	24/4/12 14:45	24/4/12 15:18	24/4/12 15:30
			Sample Name	BH20_0.3-0.4	BH20_1.5-1.8	BH20_3.0-3.4	BH20_4.5-4.9	NBH18_0.5-0.6

VOC's in Soil Method: AN433/AN434 (continued)

Monocyclic Aromatic Hydrocarbons

Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Styrene (Vinyl benzene)	mg/kg	0.1	-	-	-	-	-
Isopropylbenzene (Cumene)	mg/kg	0.1	-	-	-	-	-
n-propylbenzene	mg/kg	0.1	-	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
tert-butylbenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
sec-butylbenzene	mg/kg	0.1	-	-	-	-	-
p-isopropyltoluene	mg/kg	0.1	-	-	-	-	-
n-butylbenzene	mg/kg	0.1	-	-	-	-	-

Nitrogenous Compounds

Acrylonitrile	mg/kg	0.1	-	-	-	-	-
2-nitropropane	mg/kg	10	-	-	-	-	-

Oxygenated Compounds

Acetone (2-propanone)	mg/kg	10	-	-	-	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	-	-	-	-	-
Vinyl acetate	mg/kg	10	-	-	-	-	-
MEK (2-butanone)	mg/kg	10	-	-	-	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	-	-	-	-
2-hexanone (MBK)	mg/kg	5	-	-	-	-	-

Polycyclic VOCs

Naphthalene	mg/kg	0.1	-	-	-	-	-
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Sulphonated Compounds

Carbon disulfide	mg/kg	0.5	-	-	-	-	-
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Surrogates

Dibromofluoromethane (Surrogate)	%	-	96	98	98	99	96
d4-1,2-dichloroethane (Surrogate)	%	-	100	102	102	103	101
d8-toluene (Surrogate)	%	-	100	100	99	100	100
Bromofluorobenzene (Surrogate)	%	-	83	96	90	93	86

Totals

Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	-	0	0	0	0	0
Total Chlorinated VOC*	mg/kg	3	-	-	-	-	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	-	-	-	-
Total Halogenated VOC*	mg/kg	3.3	-	-	-	-	-
Total VOC*	mg/kg	24	-	-	-	-	-

Trihalomethanes

Chloroform	mg/kg	0.1	-	-	-	-	-
Bromodichloromethane	mg/kg	0.1	-	-	-	-	-
Chlorodibromomethane	mg/kg	0.1	-	-	-	-	-
Bromoform	mg/kg	0.1	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107686.016	SE107686.017	SE107686.018	SE107686.019	SE107686.020
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	24/4/12 13:39	24/4/12 14:36	24/4/12 14:45	24/4/12 15:18	24/4/12 15:30
			Sample Name	BH20_0.3-0.4	BH20_1.5-1.8	BH20_3.0-3.4	BH20_4.5-4.9	NBH18_0.5-0.6

Volatile Petroleum Hydrocarbons in Soil Method: AN433/AN434

TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
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Surrogates

Trifluorotoluene (Surrogate)	%	-	72	68	65	68	67
Dibromofluoromethane (Surrogate)	%	-	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-	-

TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403

TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	50	<50	<50	<50	<50	<50
TRH C29-C36	mg/kg	50	<50	<50	<50	<50	<50

Surrogates

TRH (Surrogate)	%	-	-	-	-	-	-
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PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420

Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.2
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	0.2	<0.1	<0.1	0.1
Pyrene	mg/kg	0.1	<0.1	0.2	<0.1	<0.1	0.2
Benzo(a)anthracene	mg/kg	0.1	<0.1	0.1	<0.1	<0.1	0.1
Chrysene	mg/kg	0.1	<0.1	0.1	<0.1	<0.1	<0.1
Benzo(b)fluoranthene	mg/kg	0.1	<0.1	0.2	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	0.2	<0.1	<0.1	<0.1
Total PAH (Vic EPA)	mg/kg	0.8	<0.8	1.2	<0.8	<0.8	<0.8

Surrogates

d5-nitrobenzene (Surrogate)	%	-	78	103	84	78	86
2-fluorobiphenyl (Surrogate)	%	-	81	83	90	78	90
d14-p-terphenyl (Surrogate)	%	-	102	99	86	82	80

OC Pesticides in Soil Method: AN400/AN420

Hexachlorobenzene (HCB)	mg/kg	0.1	-	-	-	-	-
Alpha BHC	mg/kg	0.1	-	-	-	-	-
Lindane	mg/kg	0.1	-	-	-	-	-
Heptachlor	mg/kg	0.1	-	-	-	-	-
Aldrin	mg/kg	0.1	-	-	-	-	-
Beta BHC	mg/kg	0.1	-	-	-	-	-
Delta BHC	mg/kg	0.1	-	-	-	-	-
Heptachlor epoxide	mg/kg	0.1	-	-	-	-	-
o,p'-DDE	mg/kg	0.1	-	-	-	-	-
Alpha Endosulfan	mg/kg	0.2	-	-	-	-	-
Gamma Chlordane	mg/kg	0.1	-	-	-	-	-
Alpha Chlordane	mg/kg	0.1	-	-	-	-	-
trans-Nonachlor	mg/kg	0.1	-	-	-	-	-
p,p'-DDE	mg/kg	0.1	-	-	-	-	-
Dieldrin	mg/kg	0.2	-	-	-	-	-
Endrin	mg/kg	0.2	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107686.016	SE107686.017	SE107686.018	SE107686.019	SE107686.020
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	24/4/12 13:39	24/4/12 14:36	24/4/12 14:45	24/4/12 15:18	24/4/12 15:30
			Sample Name	BH20_0.3-0.4	BH20_1.5-1.8	BH20_3.0-3.4	BH20_4.5-4.9	NBH18_0.5-0.6

OC Pesticides in Soil Method: AN400/AN420 (continued)

o,p'-DDD	mg/kg	0.1	-	-	-	-	-
o,p'-DDT	mg/kg	0.1	-	-	-	-	-
Beta Endosulfan	mg/kg	0.2	-	-	-	-	-
p,p'-DDD	mg/kg	0.1	-	-	-	-	-
p,p'-DDT	mg/kg	0.1	-	-	-	-	-
Endosulfan sulphate	mg/kg	0.1	-	-	-	-	-
Endrin Aldehyde	mg/kg	0.1	-	-	-	-	-
Methoxychlor	mg/kg	0.1	-	-	-	-	-
Endrin Ketone	mg/kg	0.1	-	-	-	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-	-
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OP Pesticides in Soil Method: AN400/AN420

Dichlorvos	mg/kg	0.5	-	-	-	-	-
Dimethoate	mg/kg	0.5	-	-	-	-	-
Diazinon (Dimpylate)	mg/kg	0.5	-	-	-	-	-
Fenitrothion	mg/kg	0.2	-	-	-	-	-
Malathion	mg/kg	0.2	-	-	-	-	-
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	-	-	-	-	-
Parathion-ethyl (Parathion)	mg/kg	0.2	-	-	-	-	-
Bromophos Ethyl	mg/kg	0.2	-	-	-	-	-
Methidathion	mg/kg	0.5	-	-	-	-	-
Ethion	mg/kg	0.2	-	-	-	-	-
Azinphos-methyl (Guthion)	mg/kg	0.2	-	-	-	-	-

Surrogates

2-fluorobiphenyl (Surrogate)	%	-	-	-	-	-	-
d14-p-terphenyl (Surrogate)	%	-	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107686.016	SE107686.017	SE107686.018	SE107686.019	SE107686.020
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	24/4/12 13:39	24/4/12 14:36	24/4/12 14:45	24/4/12 15:18	24/4/12 15:30
			Sample Name	BH20_0.3-0.4	BH20_1.5-1.8	BH20_3.0-3.4	BH20_4.5-4.9	NBH18_0.5-0.6

PCBs in Soil Method: AN400/AN420

Arochlor 1016	mg/kg	0.2	-	-	-	-	-
Arochlor 1221	mg/kg	0.2	-	-	-	-	-
Arochlor 1232	mg/kg	0.2	-	-	-	-	-
Arochlor 1242	mg/kg	0.2	-	-	-	-	-
Arochlor 1248	mg/kg	0.2	-	-	-	-	-
Arochlor 1254	mg/kg	0.2	-	-	-	-	-
Arochlor 1260	mg/kg	0.2	-	-	-	-	-
Arochlor 1262	mg/kg	0.2	-	-	-	-	-
Arochlor 1268	mg/kg	0.2	-	-	-	-	-
Total PCBs (Arochlors)	mg/kg	1	-	-	-	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-	-
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Field pH for Acid Sulphate Soil Method: AN104

PHf	pH Units	-	-	-	-	-	-
PHfox	pH Units	-	-	-	-	-	-
Reaction*	No unit	-	-	-	-	-	-
pH Difference*	pH Units	-10	-	-	-	-	-

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: AN040/AN320

Arsenic, As	mg/kg	3	<3	<3	5	12	<3
Cadmium, Cd	mg/kg	0.3	0.4	<0.3	<0.3	<0.3	0.4
Chromium, Cr	mg/kg	0.3	11	3.4	10	11	11
Copper, Cu	mg/kg	0.5	55	25	3.2	15	46
Lead, Pb	mg/kg	1	3	220	10	36	8
Nickel, Ni	mg/kg	0.5	95	2.0	0.6	3.4	69
Zinc, Zn	mg/kg	0.5	51	42	3.1	12	49

Mercury in Soil Method: AN312

Mercury	mg/kg	0.05	<0.05	0.32	<0.05	0.17	<0.05
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Fibre Identification in soil Method: AN602

FibreID

Asbestos Detected	No unit	-	No	-	-	-	No
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SemiQuant

Estimated Fibres	%w/w	0.01	<0.01	-	-	-	<0.01
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Moisture Content Method: AN002

% Moisture	%	0.5	12	18	18	23	13
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Parameter	Units	LOR	Sample Number	SE107686.021	SE107686.022	SE107686.023	SE107686.024	SE107686.025
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012
			Sample Name	NBH18_1.5-1.95	NBH18_3-3.45	NBH18_4.3-4.5	NBH22_0.5-0.6	NBH22_1.5-1.95

VOC's in Soil Method: AN433/AN434

Fumigants

2,2-dichloropropane	mg/kg	0.1	<0.1	-	<0.1	-	-
1,2-dichloropropane	mg/kg	0.1	<0.1	-	<0.1	-	-
cis-1,3-dichloropropene	mg/kg	0.1	<0.1	-	<0.1	-	-
trans-1,3-dichloropropene	mg/kg	0.1	<0.1	-	<0.1	-	-
1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	-	<0.1	-	-

Halogenated Aliphatics

Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	-	<1	-	-
Chloromethane	mg/kg	1	<1	-	<1	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	-	<0.1	-	-
Bromomethane	mg/kg	1	<1	-	<1	-	-
Chloroethane	mg/kg	1	<1	-	<1	-	-
Trichlorofluoromethane	mg/kg	1	<1	-	<1	-	-
1,1-dichloroethene	mg/kg	0.1	<0.1	-	<0.1	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	-	<0.5	-	-
Allyl chloride	mg/kg	0.1	<0.1	-	<0.1	-	-
trans-1,2-dichloroethene	mg/kg	0.1	<0.1	-	<0.1	-	-
1,1-dichloroethane	mg/kg	0.1	<0.1	-	<0.1	-	-
cis-1,2-dichloroethene	mg/kg	0.1	<0.1	-	<0.1	-	-
Bromochloromethane	mg/kg	0.1	<0.1	-	<0.1	-	-
1,2-dichloroethane	mg/kg	0.1	<0.1	-	<0.1	-	-
1,1,1-trichloroethane	mg/kg	0.1	<0.1	-	<0.1	-	-
1,1-dichloropropene	mg/kg	0.1	<0.1	-	<0.1	-	-
Carbon tetrachloride	mg/kg	0.1	<0.1	-	<0.1	-	-
Dibromomethane	mg/kg	0.1	<0.1	-	<0.1	-	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1	-	<0.1	-	-
1,1,2-trichloroethane	mg/kg	0.1	<0.1	-	<0.1	-	-
1,3-dichloropropane	mg/kg	0.1	<0.1	-	<0.1	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	-	<0.1	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	-	<0.1	-	-
cis-1,4-dichloro-2-butene	mg/kg	1	<1	-	<1	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	-	<0.1	-	-
1,2,3-trichloropropane	mg/kg	0.1	<0.1	-	<0.1	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	<1	-	<1	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	-	<0.1	-	-
Hexachlorobutadiene	mg/kg	0.1	<0.1	-	<0.1	-	-
Iodomethane	mg/kg	5	<5	-	<5	-	-

Halogenated Aromatics

Chlorobenzene	mg/kg	0.1	<0.1	-	<0.1	-	-
Bromobenzene	mg/kg	0.1	<0.1	-	<0.1	-	-
2-chlorotoluene	mg/kg	0.1	<0.1	-	<0.1	-	-
4-chlorotoluene	mg/kg	0.1	<0.1	-	<0.1	-	-
1,3-dichlorobenzene	mg/kg	0.1	<0.1	-	<0.1	-	-
1,4-dichlorobenzene	mg/kg	0.1	<0.1	-	<0.1	-	-
1,2-dichlorobenzene	mg/kg	0.1	<0.1	-	<0.1	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	-	<0.1	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	-	<0.1	-	-

Parameter	Units	LOR	Sample Number	SE107686.021	SE107686.022	SE107686.023	SE107686.024	SE107686.025
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012
			Sample Name	NBH18_1.5-1.95	NBH18_3-3.45	NBH18_4.3-4.5	NBH22_0.5-0.6	NBH22_1.5-1.95

VOC's in Soil Method: AN433/AN434 (continued)

Monocyclic Aromatic Hydrocarbons

Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	-	<0.1	-	-
Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	-	<0.1	-	-
n-propylbenzene	mg/kg	0.1	<0.1	-	<0.1	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	-	<0.1	-	-
tert-butylbenzene	mg/kg	0.1	<0.1	-	<0.1	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	-	<0.1	-	-
sec-butylbenzene	mg/kg	0.1	<0.1	-	<0.1	-	-
p-isopropyltoluene	mg/kg	0.1	<0.1	-	<0.1	-	-
n-butylbenzene	mg/kg	0.1	<0.1	-	<0.1	-	-

Nitrogenous Compounds

Acrylonitrile	mg/kg	0.1	<0.1	-	<0.1	-	-
2-nitropropane	mg/kg	10	<10	-	<10	-	-

Oxygenated Compounds

Acetone (2-propanone)	mg/kg	10	<10	-	<10	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	<0.5	-	<0.5	-	-
Vinyl acetate	mg/kg	10	<10	-	<10	-	-
MEK (2-butanone)	mg/kg	10	<10	-	<10	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	-	<1	-	-
2-hexanone (MBK)	mg/kg	5	<5	-	<5	-	-

Polycyclic VOCs

Naphthalene	mg/kg	0.1	<0.1	-	<0.1	-	-
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Sulphonated Compounds

Carbon disulfide	mg/kg	0.5	<0.5	-	<0.5	-	-
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Surrogates

Dibromofluoromethane (Surrogate)	%	-	86	98	84	97	98
d4-1,2-dichloroethane (Surrogate)	%	-	91	102	91	101	101
d8-toluene (Surrogate)	%	-	97	99	99	100	99
Bromofluorobenzene (Surrogate)	%	-	111	86	109	85	93

Totals

Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	-	0	0	0	0	0
Total Chlorinated VOC*	mg/kg	3	-	-	-	-	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3	-	<3	-	-
Total Halogenated VOC*	mg/kg	3.3	-	-	-	-	-
Total VOC*	mg/kg	24	-	-	-	-	-

Trihalomethanes

Chloroform	mg/kg	0.1	<0.1	-	<0.1	-	-
Bromodichloromethane	mg/kg	0.1	<0.1	-	<0.1	-	-
Chlorodibromomethane	mg/kg	0.1	<0.1	-	<0.1	-	-
Bromoform	mg/kg	0.1	<0.1	-	<0.1	-	-



ANALYTICAL REPORT

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Parameter	Units	LOR	Sample Number	SE107686.021	SE107686.022	SE107686.023	SE107686.024	SE107686.025
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012
			Sample Name	NBH18_1.5-1.95	NBH18_3-3.45	NBH18_4.3-4.5	NBH22_0.5-0.6	NBH22_1.5-1.95

Volatile Petroleum Hydrocarbons in Soil Method: AN433/AN434

TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
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Surrogates

Trifluorotoluene (Surrogate)	%	-	77	70	72	73	86
Dibromofluoromethane (Surrogate)	%	-	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-	-

TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403

TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	50	<50	<50	<50	<50	<50
TRH C29-C36	mg/kg	50	<50	<50	<50	<50	<50

Surrogates

TRH (Surrogate)	%	-	-	-	-	-	-
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PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420

Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	0.3	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	0.3	<0.1	<0.1
Phenanthrene	mg/kg	0.1	0.3	0.1	0.9	0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	0.3	<0.1	<0.1
Fluoranthene	mg/kg	0.1	0.3	0.1	0.6	<0.1	<0.1
Pyrene	mg/kg	0.1	0.3	<0.1	0.6	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	0.2	<0.1	0.2	<0.1	<0.1
Chrysene	mg/kg	0.1	0.1	<0.1	0.2	<0.1	<0.1
Benzo(b)fluoranthene	mg/kg	0.1	0.1	<0.1	0.2	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	0.1	<0.1	0.2	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total PAH (Vic EPA)	mg/kg	0.8	1.4	<0.8	3.8	<0.8	<0.8

Surrogates

d5-nitrobenzene (Surrogate)	%	-	74	92	84	94	82
2-fluorobiphenyl (Surrogate)	%	-	86	88	88	92	82
d14-p-terphenyl (Surrogate)	%	-	84	82	84	84	82

OC Pesticides in Soil Method: AN400/AN420

Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	-	<0.1	-	-
Alpha BHC	mg/kg	0.1	<0.1	-	<0.1	-	-
Lindane	mg/kg	0.1	<0.1	-	<0.1	-	-
Heptachlor	mg/kg	0.1	<0.1	-	<0.1	-	-
Aldrin	mg/kg	0.1	<0.1	-	<0.1	-	-
Beta BHC	mg/kg	0.1	<0.1	-	<0.1	-	-
Delta BHC	mg/kg	0.1	<0.1	-	<0.1	-	-
Heptachlor epoxide	mg/kg	0.1	<0.1	-	<0.1	-	-
o,p'-DDE	mg/kg	0.1	<0.1	-	<0.1	-	-
Alpha Endosulfan	mg/kg	0.2	<0.2	-	<0.2	-	-
Gamma Chlordane	mg/kg	0.1	<0.1	-	<0.1	-	-
Alpha Chlordane	mg/kg	0.1	<0.1	-	<0.1	-	-
trans-Nonachlor	mg/kg	0.1	<0.1	-	<0.1	-	-
p,p'-DDE	mg/kg	0.1	<0.1	-	<0.1	-	-
Dieldrin	mg/kg	0.2	<0.2	-	<0.2	-	-
Endrin	mg/kg	0.2	<0.2	-	<0.2	-	-

Parameter	Units	LOR	Sample Number	SE107686.021	SE107686.022	SE107686.023	SE107686.024	SE107686.025
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012
			Sample Name	NBH18_1.5-1.95	NBH18_3-3.45	NBH18_4.3-4.5	NBH22_0.5-0.6	NBH22_1.5-1.95

OC Pesticides in Soil Method: AN400/AN420 (continued)

o,p'-DDD	mg/kg	0.1	<0.1	-	<0.1	-	-
o,p'-DDT	mg/kg	0.1	<0.1	-	<0.1	-	-
Beta Endosulfan	mg/kg	0.2	<0.2	-	<0.2	-	-
p,p'-DDD	mg/kg	0.1	<0.1	-	<0.1	-	-
p,p'-DDT	mg/kg	0.1	<0.1	-	<0.1	-	-
Endosulfan sulphate	mg/kg	0.1	<0.1	-	<0.1	-	-
Endrin Aldehyde	mg/kg	0.1	<0.1	-	<0.1	-	-
Methoxychlor	mg/kg	0.1	<0.1	-	<0.1	-	-
Endrin Ketone	mg/kg	0.1	<0.1	-	<0.1	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	127	-	106	-	-
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OP Pesticides in Soil Method: AN400/AN420

Dichlorvos	mg/kg	0.5	<0.5	-	<0.5	-	-
Dimethoate	mg/kg	0.5	<0.5	-	<0.5	-	-
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	-	<0.5	-	-
Fenitrothion	mg/kg	0.2	<0.2	-	<0.2	-	-
Malathion	mg/kg	0.2	<0.2	-	<0.2	-	-
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	-	<0.2	-	-
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	-	<0.2	-	-
Bromophos Ethyl	mg/kg	0.2	<0.2	-	<0.2	-	-
Methidathion	mg/kg	0.5	<0.5	-	<0.5	-	-
Ethion	mg/kg	0.2	<0.2	-	<0.2	-	-
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	-	<0.2	-	-

Surrogates

2-fluorobiphenyl (Surrogate)	%	-	86	-	88	-	-
d14-p-terphenyl (Surrogate)	%	-	84	-	84	-	-



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Parameter	Units	LOR	Sample Number	SE107686.021	SE107686.022	SE107686.023	SE107686.024	SE107686.025
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012
			Sample Name	NBH18_1.5-1.95	NBH18_3-3.45	NBH18_4.3-4.5	NBH22_0.5-0.6	NBH22_1.5-1.95

PCBs in Soil Method: AN400/AN420

Arochlor 1016	mg/kg	0.2	<0.2	-	<0.2	-	-
Arochlor 1221	mg/kg	0.2	<0.2	-	<0.2	-	-
Arochlor 1232	mg/kg	0.2	<0.2	-	<0.2	-	-
Arochlor 1242	mg/kg	0.2	<0.2	-	<0.2	-	-
Arochlor 1248	mg/kg	0.2	<0.2	-	<0.2	-	-
Arochlor 1254	mg/kg	0.2	<0.2	-	<0.2	-	-
Arochlor 1260	mg/kg	0.2	<0.2	-	<0.2	-	-
Arochlor 1262	mg/kg	0.2	<0.2	-	<0.2	-	-
Arochlor 1268	mg/kg	0.2	<0.2	-	<0.2	-	-
Total PCBs (Arochlors)	mg/kg	1	<1	-	<1	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	127	-	106	-	-
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Field pH for Acid Sulphate Soil Method: AN104

PHf	pH Units	-	-	6.5	-	-	-
PHfox	pH Units	-	-	5.1	-	-	-
Reaction*	No unit	-	-	X	-	-	-
pH Difference*	pH Units	-10	-	1.4	-	-	-

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: AN040/AN320

Arsenic, As	mg/kg	3	9	14	5	3	8
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	0.3
Chromium, Cr	mg/kg	0.3	14	23	19	9.7	18
Copper, Cu	mg/kg	0.5	10	3.1	12	14	17
Lead, Pb	mg/kg	1	46	9	53	13	25
Nickel, Ni	mg/kg	0.5	2.6	0.9	6.1	8.0	1.7
Zinc, Zn	mg/kg	0.5	31	3.1	25	25	4.2

Mercury in Soil Method: AN312

Mercury	mg/kg	0.05	0.08	<0.05	0.31	<0.05	<0.05
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Fibre Identification in soil Method: AN602

FibreID

Asbestos Detected	No unit	-	-	-	-	No	-
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SemiQuant

Estimated Fibres	%w/w	0.01	-	-	-	<0.01	-
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Moisture Content Method: AN002

% Moisture	%	0.5	18	16	21	7.4	18
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Sample Number	SE107686.026	SE107686.027	SE107686.028	SE107686.029	SE107686.030
Sample Matrix	Soil	Soil	Soil	Soil	Soil
Sample Date	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012
Sample Name	NBH24_0-0.1	NBH24_1.5-1.95	NBH24_0.3-0.5	NBH24_3.0-3.45	DUP 10
Parameter	Units	LOR			

VOC's in Soil Method: AN433/AN434

Fumigants

2,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
1,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-
1,2-dibromoethane (EDB)	mg/kg	0.1	-	-	-	-	-

Halogenated Aliphatics

Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	-	-	-	-
Chloromethane	mg/kg	1	-	-	-	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	-	-	-	-
Bromomethane	mg/kg	1	-	-	-	-	-
Chloroethane	mg/kg	1	-	-	-	-	-
Trichlorofluoromethane	mg/kg	1	-	-	-	-	-
1,1-dichloroethene	mg/kg	0.1	-	-	-	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	-	-	-	-
Allyl chloride	mg/kg	0.1	-	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
1,1-dichloroethane	mg/kg	0.1	-	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
Bromochloromethane	mg/kg	0.1	-	-	-	-	-
1,2-dichloroethane	mg/kg	0.1	-	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,1-dichloropropene	mg/kg	0.1	-	-	-	-	-
Carbon tetrachloride	mg/kg	0.1	-	-	-	-	-
Dibromomethane	mg/kg	0.1	-	-	-	-	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	-	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,3-dichloropropane	mg/kg	0.1	-	-	-	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	-	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
cis-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.1	-	-	-	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	-	-	-	-	-
Iodomethane	mg/kg	5	-	-	-	-	-

Halogenated Aromatics

Chlorobenzene	mg/kg	0.1	-	-	-	-	-
Bromobenzene	mg/kg	0.1	-	-	-	-	-
2-chlorotoluene	mg/kg	0.1	-	-	-	-	-
4-chlorotoluene	mg/kg	0.1	-	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107686.026	SE107686.027	SE107686.028	SE107686.029	SE107686.030
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012
			Sample Name	NBH24_0-0.1	NBH24_1.5-1.95	NBH24_0.3-0.5	NBH24_3.0-3.45	DUP 10

VOC's in Soil Method: AN433/AN434 (continued)

Monocyclic Aromatic Hydrocarbons

Benzene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	0.4	-	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	1.1	-	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	0.3	-	<0.1	<0.1
Styrene (Vinyl benzene)	mg/kg	0.1	-	-	-	-	-
Isopropylbenzene (Cumene)	mg/kg	0.1	-	-	-	-	-
n-propylbenzene	mg/kg	0.1	-	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
tert-butylbenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
sec-butylbenzene	mg/kg	0.1	-	-	-	-	-
p-isopropyltoluene	mg/kg	0.1	-	-	-	-	-
n-butylbenzene	mg/kg	0.1	-	-	-	-	-

Nitrogenous Compounds

Acrylonitrile	mg/kg	0.1	-	-	-	-	-
2-nitropropane	mg/kg	10	-	-	-	-	-

Oxygenated Compounds

Acetone (2-propanone)	mg/kg	10	-	-	-	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	-	-	-	-	-
Vinyl acetate	mg/kg	10	-	-	-	-	-
MEK (2-butanone)	mg/kg	10	-	-	-	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	-	-	-	-
2-hexanone (MBK)	mg/kg	5	-	-	-	-	-

Polycyclic VOCs

Naphthalene	mg/kg	0.1	-	-	-	-	-
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Sulphonated Compounds

Carbon disulfide	mg/kg	0.5	-	-	-	-	-
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Surrogates

Dibromofluoromethane (Surrogate)	%	-	97	97	-	98	96
d4-1,2-dichloroethane (Surrogate)	%	-	100	101	-	99	99
d8-toluene (Surrogate)	%	-	100	99	-	99	99
Bromofluorobenzene (Surrogate)	%	-	86	95	-	90	96

Totals

Total Xylenes*	mg/kg	0.3	<0.3	1.4	-	<0.3	<0.3
Total BTEX*	mg/kg	-	0	2	-	0	0
Total Chlorinated VOC*	mg/kg	3	-	-	-	-	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	-	-	-	-
Total Halogenated VOC*	mg/kg	3.3	-	-	-	-	-
Total VOC*	mg/kg	24	-	-	-	-	-

Trihalomethanes

Chloroform	mg/kg	0.1	-	-	-	-	-
Bromodichloromethane	mg/kg	0.1	-	-	-	-	-
Chlorodibromomethane	mg/kg	0.1	-	-	-	-	-
Bromoform	mg/kg	0.1	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107686.026	SE107686.027	SE107686.028	SE107686.029	SE107686.030
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012
			Sample Name	NBH24_0-0.1	NBH24_1.5-1.95	NBH24_0.3-0.5	NBH24_3.0-3.45	DUP 10

Volatile Petroleum Hydrocarbons in Soil Method: AN433/AN434

TRH C6-C9	mg/kg	20	<20	21	-	<20	<20
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Surrogates

Trifluorotoluene (Surrogate)	%	-	76	73	-	64	78
Dibromofluoromethane (Surrogate)	%	-	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-	-

TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403

TRH C10-C14	mg/kg	20	<20	62	-	<20	<20
TRH C15-C28	mg/kg	50	<50	2400	-	<50	<50
TRH C29-C36	mg/kg	50	<50	1100	-	<50	<50

Surrogates

TRH (Surrogate)	%	-	-	-	-	-	-
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PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420

Naphthalene	mg/kg	0.1	<0.1	<1.0†	-	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<1.0†	-	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	13	-	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	12	-	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	120	-	0.5	0.2
Anthracene	mg/kg	0.1	<0.1	23	-	0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	79	-	0.4	0.4
Pyrene	mg/kg	0.1	<0.1	110	-	0.6	0.4
Benzo(a)anthracene	mg/kg	0.1	<0.1	50	-	0.3	0.3
Chrysene	mg/kg	0.1	<0.1	42	-	0.3	0.2
Benzo(b)fluoranthene	mg/kg	0.1	<0.1	28	-	0.2	0.3
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	10	-	0.1	0.2
Benzo(a)pyrene	mg/kg	0.1	<0.1	30	-	0.2	0.2
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	11	-	<0.1	0.2
Dibenzo(a,h)anthracene	mg/kg	0.1	<0.1	3.1	-	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	15	-	0.1	0.2
Total PAH (Vic EPA)	mg/kg	0.8	<0.8	550	-	2.7	2.5

Surrogates

d5-nitrobenzene (Surrogate)	%	-	72	100	-	92	90
2-fluorobiphenyl (Surrogate)	%	-	80	100	-	90	92
d14-p-terphenyl (Surrogate)	%	-	84	100	-	86	88

OC Pesticides in Soil Method: AN400/AN420

Hexachlorobenzene (HCB)	mg/kg	0.1	-	-	-	-	-
Alpha BHC	mg/kg	0.1	-	-	-	-	-
Lindane	mg/kg	0.1	-	-	-	-	-
Heptachlor	mg/kg	0.1	-	-	-	-	-
Aldrin	mg/kg	0.1	-	-	-	-	-
Beta BHC	mg/kg	0.1	-	-	-	-	-
Delta BHC	mg/kg	0.1	-	-	-	-	-
Heptachlor epoxide	mg/kg	0.1	-	-	-	-	-
o,p'-DDE	mg/kg	0.1	-	-	-	-	-
Alpha Endosulfan	mg/kg	0.2	-	-	-	-	-
Gamma Chlordane	mg/kg	0.1	-	-	-	-	-
Alpha Chlordane	mg/kg	0.1	-	-	-	-	-
trans-Nonachlor	mg/kg	0.1	-	-	-	-	-
p,p'-DDE	mg/kg	0.1	-	-	-	-	-
Dieldrin	mg/kg	0.2	-	-	-	-	-
Endrin	mg/kg	0.2	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107686.026	SE107686.027	SE107686.028	SE107686.029	SE107686.030
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012
			Sample Name	NBH24_0-0.1	NBH24_1.5-1.95	NBH24_0.3-0.5	NBH24_3.0-3.45	DUP 10

OC Pesticides in Soil Method: AN400/AN420 (continued)

o,p'-DDD	mg/kg	0.1	-	-	-	-	-
o,p'-DDT	mg/kg	0.1	-	-	-	-	-
Beta Endosulfan	mg/kg	0.2	-	-	-	-	-
p,p'-DDD	mg/kg	0.1	-	-	-	-	-
p,p'-DDT	mg/kg	0.1	-	-	-	-	-
Endosulfan sulphate	mg/kg	0.1	-	-	-	-	-
Endrin Aldehyde	mg/kg	0.1	-	-	-	-	-
Methoxychlor	mg/kg	0.1	-	-	-	-	-
Endrin Ketone	mg/kg	0.1	-	-	-	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-	-
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OP Pesticides in Soil Method: AN400/AN420

Dichlorvos	mg/kg	0.5	-	-	-	-	-
Dimethoate	mg/kg	0.5	-	-	-	-	-
Diazinon (Dimpylate)	mg/kg	0.5	-	-	-	-	-
Fenitrothion	mg/kg	0.2	-	-	-	-	-
Malathion	mg/kg	0.2	-	-	-	-	-
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	-	-	-	-	-
Parathion-ethyl (Parathion)	mg/kg	0.2	-	-	-	-	-
Bromophos Ethyl	mg/kg	0.2	-	-	-	-	-
Methidathion	mg/kg	0.5	-	-	-	-	-
Ethion	mg/kg	0.2	-	-	-	-	-
Azinphos-methyl (Guthion)	mg/kg	0.2	-	-	-	-	-

Surrogates

2-fluorobiphenyl (Surrogate)	%	-	-	-	-	-	-
d14-p-terphenyl (Surrogate)	%	-	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107686.026	SE107686.027	SE107686.028	SE107686.029	SE107686.030
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012	24 Apr 2012
			Sample Name	NBH24_0-0.1	NBH24_1.5-1.95	NBH24_0.3-0.5	NBH24_3.0-3.45	DUP 10

PCBs in Soil Method: AN400/AN420

Arochlor 1016	mg/kg	0.2	-	-	-	-	-
Arochlor 1221	mg/kg	0.2	-	-	-	-	-
Arochlor 1232	mg/kg	0.2	-	-	-	-	-
Arochlor 1242	mg/kg	0.2	-	-	-	-	-
Arochlor 1248	mg/kg	0.2	-	-	-	-	-
Arochlor 1254	mg/kg	0.2	-	-	-	-	-
Arochlor 1260	mg/kg	0.2	-	-	-	-	-
Arochlor 1262	mg/kg	0.2	-	-	-	-	-
Arochlor 1268	mg/kg	0.2	-	-	-	-	-
Total PCBs (Arochlors)	mg/kg	1	-	-	-	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-	-
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Field pH for Acid Sulphate Soil Method: AN104

PHf	pH Units	-	-	-	-	-	-
PHfox	pH Units	-	-	-	-	-	-
Reaction*	No unit	-	-	-	-	-	-
pH Difference*	pH Units	-10	-	-	-	-	-

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: AN040/AN320

Arsenic, As	mg/kg	3	<3	<3	-	16	4
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	-	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	4.9	7.6	-	12	12
Copper, Cu	mg/kg	0.5	5.4	8.5	-	3.4	32
Lead, Pb	mg/kg	1	11	16	-	14	40
Nickel, Ni	mg/kg	0.5	3.6	6.2	-	4.1	9.8
Zinc, Zn	mg/kg	0.5	22	33	-	9.9	87

Mercury in Soil Method: AN312

Mercury	mg/kg	0.05	<0.05	<0.05	-	<0.05	0.13
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Fibre Identification in soil Method: AN602

FibreID

Asbestos Detected	No unit	-	No	-	No	-	-
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SemiQuant

Estimated Fibres	%w/w	0.01	<0.01	-	<0.01	-	-
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Moisture Content Method: AN002

% Moisture	%	0.5	19	18	-	23	8.3
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Sample Number	SE107686.031	SE107686.032
Sample Matrix	Soil	Soil
Sample Date	24 Apr 2012	24 Apr 2012
Sample Name	TB5	TS5

Parameter

Units

LOR

VOC's in Soil Method: AN433/AN434

Fumigants

2,2-dichloropropane	mg/kg	0.1	-	-
1,2-dichloropropane	mg/kg	0.1	-	-
cis-1,3-dichloropropene	mg/kg	0.1	-	-
trans-1,3-dichloropropene	mg/kg	0.1	-	-
1,2-dibromoethane (EDB)	mg/kg	0.1	-	-

Halogenated Aliphatics

Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	-
Chloromethane	mg/kg	1	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	-
Bromomethane	mg/kg	1	-	-
Chloroethane	mg/kg	1	-	-
Trichlorofluoromethane	mg/kg	1	-	-
1,1-dichloroethene	mg/kg	0.1	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	-
Allyl chloride	mg/kg	0.1	-	-
trans-1,2-dichloroethene	mg/kg	0.1	-	-
1,1-dichloroethane	mg/kg	0.1	-	-
cis-1,2-dichloroethene	mg/kg	0.1	-	-
Bromochloromethane	mg/kg	0.1	-	-
1,2-dichloroethane	mg/kg	0.1	-	-
1,1,1-trichloroethane	mg/kg	0.1	-	-
1,1-dichloropropene	mg/kg	0.1	-	-
Carbon tetrachloride	mg/kg	0.1	-	-
Dibromomethane	mg/kg	0.1	-	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	-	-
1,1,2-trichloroethane	mg/kg	0.1	-	-
1,3-dichloropropane	mg/kg	0.1	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	-
cis-1,4-dichloro-2-butene	mg/kg	1	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	-
1,2,3-trichloropropane	mg/kg	0.1	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	-
Hexachlorobutadiene	mg/kg	0.1	-	-
Iodomethane	mg/kg	5	-	-

Halogenated Aromatics

Chlorobenzene	mg/kg	0.1	-	-
Bromobenzene	mg/kg	0.1	-	-
2-chlorotoluene	mg/kg	0.1	-	-
4-chlorotoluene	mg/kg	0.1	-	-
1,3-dichlorobenzene	mg/kg	0.1	-	-
1,4-dichlorobenzene	mg/kg	0.1	-	-
1,2-dichlorobenzene	mg/kg	0.1	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	-	-

Parameter	Sample Number		SE107686.031	SE107686.032
	Sample Matrix		Soil	Soil
	Sample Date		24 Apr 2012	24 Apr 2012
	Sample Name		TB5	TS5
Units		LOR		

VOC's in Soil Method: AN433/AN434 (continued)

Monocyclic Aromatic Hydrocarbons

Benzene	mg/kg	0.1	<0.1	[96%]
Toluene	mg/kg	0.1	<0.1	[98%]
Ethylbenzene	mg/kg	0.1	<0.1	[98%]
m/p-xylene	mg/kg	0.2	<0.2	[101%]
o-xylene	mg/kg	0.1	<0.1	[98%]
Styrene (Vinyl benzene)	mg/kg	0.1	-	-
Isopropylbenzene (Cumene)	mg/kg	0.1	-	-
n-propylbenzene	mg/kg	0.1	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	-	-
tert-butylbenzene	mg/kg	0.1	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	-	-
sec-butylbenzene	mg/kg	0.1	-	-
p-isopropyltoluene	mg/kg	0.1	-	-
n-butylbenzene	mg/kg	0.1	-	-

Nitrogenous Compounds

Acrylonitrile	mg/kg	0.1	-	-
2-nitropropane	mg/kg	10	-	-

Oxygenated Compounds

Acetone (2-propanone)	mg/kg	10	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	-	-
Vinyl acetate	mg/kg	10	-	-
MEK (2-butanone)	mg/kg	10	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	-
2-hexanone (MBK)	mg/kg	5	-	-

Polycyclic VOCs

Naphthalene	mg/kg	0.1	-	-
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Sulphonated Compounds

Carbon disulfide	mg/kg	0.5	-	-
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Surrogates

Dibromofluoromethane (Surrogate)	%	-	96	98
d4-1,2-dichloroethane (Surrogate)	%	-	98	99
d8-toluene (Surrogate)	%	-	100	96
Bromofluorobenzene (Surrogate)	%	-	91	107

Totals

Total Xylenes*	mg/kg	0.3	<0.3	-
Total BTEX*	mg/kg	-	0	-
Total Chlorinated VOC*	mg/kg	3	-	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	-
Total Halogenated VOC*	mg/kg	3.3	-	-
Total VOC*	mg/kg	24	-	-



ANALYTICAL REPORT

SE107686 R0

Parameter	Sample Number	SE107686.031	SE107686.032
	Sample Matrix	Soil	Soil
	Sample Date	24 Apr 2012	24 Apr 2012
	Sample Name	TB5	TS5
Units	LOR		

VOC's in Soil Method: AN433/AN434 (continued)

Trihalomethanes

Chloroform	mg/kg	0.1	-	-
Bromodichloromethane	mg/kg	0.1	-	-
Chlorodibromomethane	mg/kg	0.1	-	-
Bromoform	mg/kg	0.1	-	-

Volatile Petroleum Hydrocarbons in Soil Method: AN433/AN434

TRH C6-C9	mg/kg	20	<20	-
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Surrogates

Trifluorotoluene (Surrogate)	%	-	75	-
Dibromofluoromethane (Surrogate)	%	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-
d8-toluene (Surrogate)	%	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-

TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403

TRH C10-C14	mg/kg	20	<20	-
TRH C15-C28	mg/kg	50	<50	-
TRH C29-C36	mg/kg	50	<50	-

Surrogates

TRH (Surrogate)	%	-	-	-
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PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420

Naphthalene	mg/kg	0.1	-	-
Acenaphthylene	mg/kg	0.1	-	-
Acenaphthene	mg/kg	0.1	-	-
Fluorene	mg/kg	0.1	-	-
Phenanthrene	mg/kg	0.1	-	-
Anthracene	mg/kg	0.1	-	-
Fluoranthene	mg/kg	0.1	-	-
Pyrene	mg/kg	0.1	-	-
Benzo(a)anthracene	mg/kg	0.1	-	-
Chrysene	mg/kg	0.1	-	-
Benzo(b)fluoranthene	mg/kg	0.1	-	-
Benzo(k)fluoranthene	mg/kg	0.1	-	-
Benzo(a)pyrene	mg/kg	0.1	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	-	-
Dibenzo(a&h)anthracene	mg/kg	0.1	-	-
Benzo(ghi)perylene	mg/kg	0.1	-	-
Total PAH (Vic EPA)	mg/kg	0.8	-	-

Surrogates

d5-nitrobenzene (Surrogate)	%	-	-	-
2-fluorobiphenyl (Surrogate)	%	-	-	-
d14-p-terphenyl (Surrogate)	%	-	-	-

		Sample Number	SE107686.031	SE107686.032
		Sample Matrix	Soil	Soil
		Sample Date	24 Apr 2012	24 Apr 2012
		Sample Name	TB5	TS5
Parameter	Units	LOR		

OC Pesticides in Soil Method: AN400/AN420

Hexachlorobenzene (HCB)	mg/kg	0.1	-	-
Alpha BHC	mg/kg	0.1	-	-
Lindane	mg/kg	0.1	-	-
Heptachlor	mg/kg	0.1	-	-
Aldrin	mg/kg	0.1	-	-
Beta BHC	mg/kg	0.1	-	-
Delta BHC	mg/kg	0.1	-	-
Heptachlor epoxide	mg/kg	0.1	-	-
o,p'-DDE	mg/kg	0.1	-	-
Alpha Endosulfan	mg/kg	0.2	-	-
Gamma Chlordane	mg/kg	0.1	-	-
Alpha Chlordane	mg/kg	0.1	-	-
trans-Nonachlor	mg/kg	0.1	-	-
p,p'-DDE	mg/kg	0.1	-	-
Dieldrin	mg/kg	0.2	-	-
Endrin	mg/kg	0.2	-	-
o,p'-DDD	mg/kg	0.1	-	-
o,p'-DDT	mg/kg	0.1	-	-
Beta Endosulfan	mg/kg	0.2	-	-
p,p'-DDD	mg/kg	0.1	-	-
p,p'-DDT	mg/kg	0.1	-	-
Endosulfan sulphate	mg/kg	0.1	-	-
Endrin Aldehyde	mg/kg	0.1	-	-
Methoxychlor	mg/kg	0.1	-	-
Endrin Ketone	mg/kg	0.1	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-
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OP Pesticides in Soil Method: AN400/AN420

Dichlorvos	mg/kg	0.5	-	-
Dimethoate	mg/kg	0.5	-	-
Diazinon (Dimpylate)	mg/kg	0.5	-	-
Fenitrothion	mg/kg	0.2	-	-
Malathion	mg/kg	0.2	-	-
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	-	-
Parathion-ethyl (Parathion)	mg/kg	0.2	-	-
Bromophos Ethyl	mg/kg	0.2	-	-
Methidathion	mg/kg	0.5	-	-
Ethion	mg/kg	0.2	-	-
Azinphos-methyl (Guthion)	mg/kg	0.2	-	-

Surrogates

2-fluorobiphenyl (Surrogate)	%	-	-	-
d14-p-terphenyl (Surrogate)	%	-	-	-

Parameter	Sample Number	SE107686.031	SE107686.032
	Sample Matrix	Soil	Soil
	Sample Date	24 Apr 2012	24 Apr 2012
	Sample Name	TB5	TS5
Units		LOR	

PCBs in Soil Method: AN400/AN420

Arochlor 1016	mg/kg	0.2	-	-
Arochlor 1221	mg/kg	0.2	-	-
Arochlor 1232	mg/kg	0.2	-	-
Arochlor 1242	mg/kg	0.2	-	-
Arochlor 1248	mg/kg	0.2	-	-
Arochlor 1254	mg/kg	0.2	-	-
Arochlor 1260	mg/kg	0.2	-	-
Arochlor 1262	mg/kg	0.2	-	-
Arochlor 1268	mg/kg	0.2	-	-
Total PCBs (Arochlors)	mg/kg	1	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-
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Field pH for Acid Sulphate Soil Method: AN104

PHf	pH Units	-	-	-
PHfox	pH Units	-	-	-
Reaction*	No unit	-	-	-
pH Difference*	pH Units	-10	-	-

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: AN040/AN320

Arsenic, As	mg/kg	3	-	-
Cadmium, Cd	mg/kg	0.3	-	-
Chromium, Cr	mg/kg	0.3	-	-
Copper, Cu	mg/kg	0.5	-	-
Lead, Pb	mg/kg	1	-	-
Nickel, Ni	mg/kg	0.5	-	-
Zinc, Zn	mg/kg	0.5	-	-

Mercury in Soil Method: AN312

Mercury	mg/kg	0.05	-	-
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Fibre Identification in soil Method: AN602

FibreID

Asbestos Detected	No unit	-	-	-
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SemiQuant

Estimated Fibres	%w/w	0.01	-	-
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Moisture Content Method: AN002

% Moisture	%	0.5	<0.5	-
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MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Field pH for Acid Sulphate Soil Method: ME-(AU)-[ENV]AN104

Parameter	QC Reference	Units	LOR	LCS %Recovery
PHf	LB019517	pH Units	-	NA
PHfox	LB019517	pH Units	-	NA

Mercury in Soil Method: ME-(AU)-[ENV]AN312

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Mercury	LB019250	mg/kg	0.05	<0.05	0%	111%	115%
	LB019251	mg/kg	0.05	<0.05	0%	120%	108%
	LB019252	mg/kg	0.05	<0.05	0%	118%	111%

OC Pesticides in Soil Method: ME-(AU)-[ENV]AN400/AN420

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Hexachlorobenzene (HCB)	LB019129	mg/kg	0.1	<0.1	NA
	LB019131	mg/kg	0.1	<0.1	NA
Alpha BHC	LB019129	mg/kg	0.1	<0.1	NA
	LB019131	mg/kg	0.1	<0.1	NA
Lindane	LB019129	mg/kg	0.1	<0.1	NA
	LB019131	mg/kg	0.1	<0.1	NA
Heptachlor	LB019129	mg/kg	0.1	<0.1	135%
	LB019131	mg/kg	0.1	<0.1	135%
Aldrin	LB019129	mg/kg	0.1	<0.1	135%
	LB019131	mg/kg	0.1	<0.1	135%
Beta BHC	LB019129	mg/kg	0.1	<0.1	NA
	LB019131	mg/kg	0.1	<0.1	NA
Delta BHC	LB019129	mg/kg	0.1	<0.1	125%
	LB019131	mg/kg	0.1	<0.1	125%
Heptachlor epoxide	LB019129	mg/kg	0.1	<0.1	NA
	LB019131	mg/kg	0.1	<0.1	NA
o,p'-DDE	LB019129	mg/kg	0.1	<0.1	NA
	LB019131	mg/kg	0.1	<0.1	NA
Alpha Endosulfan	LB019129	mg/kg	0.2	<0.2	NA
	LB019131	mg/kg	0.2	<0.2	NA
Gamma Chlordane	LB019129	mg/kg	0.1	<0.1	NA
	LB019131	mg/kg	0.1	<0.1	NA
Alpha Chlordane	LB019129	mg/kg	0.1	<0.1	NA
	LB019131	mg/kg	0.1	<0.1	NA
trans-Nonachlor	LB019129	mg/kg	0.1	<0.1	NA
	LB019131	mg/kg	0.1	<0.1	NA
p,p'-DDE	LB019129	mg/kg	0.1	<0.1	NA
	LB019131	mg/kg	0.1	<0.1	NA
Dieldrin	LB019129	mg/kg	0.2	<0.2	120%
	LB019131	mg/kg	0.2	<0.2	120%
Endrin	LB019129	mg/kg	0.2	<0.2	135%
	LB019131	mg/kg	0.2	<0.2	135%
o,p'-DDD	LB019129	mg/kg	0.1	<0.1	NA
	LB019131	mg/kg	0.1	<0.1	NA
o,p'-DDT	LB019129	mg/kg	0.1	<0.1	NA
	LB019131	mg/kg	0.1	<0.1	NA
Beta Endosulfan	LB019129	mg/kg	0.2	<0.2	NA
	LB019131	mg/kg	0.2	<0.2	NA
p,p'-DDD	LB019129	mg/kg	0.1	<0.1	NA
	LB019131	mg/kg	0.1	<0.1	NA
p,p'-DDT	LB019129	mg/kg	0.1	<0.1	115%
	LB019131	mg/kg	0.1	<0.1	115%
Endosulfan sulphate	LB019129	mg/kg	0.1	<0.1	NA
	LB019131	mg/kg	0.1	<0.1	NA

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

OC Pesticides in Soil Method: ME-(AU)-[ENV]AN400/AN420 (continued)

				MB	LCS %Recovery
Endrin Aldehyde	LB019129	mg/kg	0.1	<0.1	NA
	LB019131	mg/kg	0.1	<0.1	NA
Methoxychlor	LB019129	mg/kg	0.1	<0.1	NA
	LB019131	mg/kg	0.1	<0.1	NA
Endrin Ketone	LB019129	mg/kg	0.1	<0.1	NA
	LB019131	mg/kg	0.1	<0.1	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Tetrachloro-m-xylene (TCMX) (Surrogate)	LB019129	%	-	107%	103%
	LB019131	%	-	107%	103%

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

OP Pesticides in Soil Method: ME-(AU)-[ENV]AN400/AN420

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Dichlorvos	LB019129	mg/kg	0.5	<0.5		105%
	LB019131	mg/kg	0.5	<0.5	0%	105%
Dimethoate	LB019129	mg/kg	0.5	<0.5		NA
	LB019131	mg/kg	0.5	<0.5	0%	NA
Diazinon (Dimpylate)	LB019129	mg/kg	0.5	<0.5		108%
	LB019131	mg/kg	0.5	<0.5	0%	108%
Fenitrothion	LB019129	mg/kg	0.2	<0.2		NA
	LB019131	mg/kg	0.2	<0.2	0%	NA
Malathion	LB019129	mg/kg	0.2	<0.2		NA
	LB019131	mg/kg	0.2	<0.2	0%	NA
Chlorpyrifos (Chlorpyrifos Ethyl)	LB019129	mg/kg	0.2	<0.2		92%
	LB019131	mg/kg	0.2	<0.2	0%	92%
Parathion-ethyl (Parathion)	LB019129	mg/kg	0.2	<0.2		NA
	LB019131	mg/kg	0.2	<0.2	0%	NA
Bromophos Ethyl	LB019129	mg/kg	0.2	<0.2		NA
	LB019131	mg/kg	0.2	<0.2	0%	NA
Methidathion	LB019129	mg/kg	0.5	<0.5		NA
	LB019131	mg/kg	0.5	<0.5	0%	NA
Ethion	LB019129	mg/kg	0.2	<0.2		115%
	LB019131	mg/kg	0.2	<0.2	0%	115%
Azinphos-methyl (Guthion)	LB019129	mg/kg	0.2	<0.2		NA
	LB019131	mg/kg	0.2	<0.2	0%	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
2-fluorobiphenyl (Surrogate)	LB019129	%	-	84%		102%
	LB019131	%	-	80%	2%	102%
d14-p-terphenyl (Surrogate)	LB019129	%	-	80%		80%
	LB019131	%	-	86%	2%	80%

PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: ME-(AU)-[ENV]AN420

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Naphthalene	LB019129	mg/kg	0.1	<0.1	0 - 24%	98%	95%
	LB019131	mg/kg	0.1	<0.1	0%	75%	83%
Acenaphthylene	LB019129	mg/kg	0.1	<0.1	0%	108%	108%
	LB019131	mg/kg	0.1	<0.1	0%	98%	121%
Acenaphthene	LB019129	mg/kg	0.1	<0.1	0%	92%	91%
	LB019131	mg/kg	0.1	<0.1	7%	116%	109%
Fluorene	LB019129	mg/kg	0.1	<0.1	0%	NA	NA
	LB019131	mg/kg	0.1	<0.1	6%	NA	NA
Phenanthrene	LB019129	mg/kg	0.1	<0.1	0 - 4%	100%	100%
	LB019131	mg/kg	0.1	<0.1	2%	102%	103%
Anthracene	LB019129	mg/kg	0.1	<0.1	0 - 2%	110%	108%
	LB019131	mg/kg	0.1	<0.1	0%	101%	99%
Fluoranthene	LB019129	mg/kg	0.1	<0.1	1 - 2%	105%	107%
	LB019131	mg/kg	0.1	<0.1	7%	116%	116%
Pyrene	LB019129	mg/kg	0.1	<0.1	0 - 2%	106%	104%
	LB019131	mg/kg	0.1	<0.1	0%	110%	106%
Benzo(a)anthracene	LB019129	mg/kg	0.1	<0.1	0 - 21%	NA	NA
	LB019131	mg/kg	0.1	<0.1	0%	NA	NA
Chrysene	LB019129	mg/kg	0.1	<0.1	2 - 8%	NA	NA
	LB019131	mg/kg	0.1	<0.1	10%	NA	NA
Benzo(b)fluoranthene	LB019129	mg/kg	0.1	<0.1	3 - 4%	NA	NA
	LB019131	mg/kg	0.1	<0.1	6%	NA	NA
Benzo(k)fluoranthene	LB019129	mg/kg	0.1	<0.1	0 - 3%	NA	NA

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA', the results are less than the LOR and thus the RPD is not applicable.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: ME-(AU)-[ENV]AN420 (continued)

				MB	DUP %RPD	LCS %Recovery	MS %Recovery
Benzo(k)fluoranthene	LB019131	mg/kg	0.1	<0.1	0%	NA	NA
Benzo(a)pyrene	LB019129	mg/kg	0.1	<0.1	0 - 4%	110%	109%
	LB019131	mg/kg	0.1	<0.1	6%	102%	105%
Indeno(1,2,3-cd)pyrene	LB019129	mg/kg	0.1	<0.1	0 - 3%	NA	NA
	LB019131	mg/kg	0.1	<0.1	0%	NA	NA
Dibenzo(a&h)anthracene	LB019129	mg/kg	0.1	<0.1	0%	NA	NA
	LB019131	mg/kg	0.1	<0.1	0%	NA	NA
Benzo(ghi)perylene	LB019129	mg/kg	0.1	<0.1	0%	NA	NA
	LB019131	mg/kg	0.1	<0.1	0%	NA	NA
Total PAH (Vic EPA)	LB019129	mg/kg	0.8	<0.8	0 - 3%	NA	NA
	LB019131	mg/kg	0.8	<0.8	0%	NA	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
d5-nitrobenzene (Surrogate)	LB019129	%	-	93%	0 - 6%	98%	93%
	LB019131	%	-	82%	2%	88%	94%
2-fluorobiphenyl (Surrogate)	LB019129	%	-	110%	1 - 3%	92%	93%
	LB019131	%	-	80%	2%	82%	100%
d14-p-terphenyl (Surrogate)	LB019129	%	-	120%	1 - 2%	105%	101%
	LB019131	%	-	86%	2%	74%	84%

PCBs in Soil Method: ME-(AU)-[ENV]AN400/AN420

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Arochlor 1016	LB019129	mg/kg	0.2	<0.2	NA
	LB019131	mg/kg	0.2	<0.2	NA
Arochlor 1221	LB019129	mg/kg	0.2	<0.2	NA
	LB019131	mg/kg	0.2	<0.2	NA
Arochlor 1232	LB019129	mg/kg	0.2	<0.2	NA
	LB019131	mg/kg	0.2	<0.2	NA
Arochlor 1242	LB019129	mg/kg	0.2	<0.2	NA
	LB019131	mg/kg	0.2	<0.2	NA
Arochlor 1248	LB019129	mg/kg	0.2	<0.2	NA
	LB019131	mg/kg	0.2	<0.2	NA
Arochlor 1254	LB019129	mg/kg	0.2	<0.2	NA
	LB019131	mg/kg	0.2	<0.2	NA
Arochlor 1260	LB019129	mg/kg	0.2	<0.2	138%
	LB019131	mg/kg	0.2	<0.2	138%
Arochlor 1262	LB019129	mg/kg	0.2	<0.2	NA
	LB019131	mg/kg	0.2	<0.2	NA
Arochlor 1268	LB019129	mg/kg	0.2	<0.2	NA
	LB019131	mg/kg	0.2	<0.2	NA
Total PCBs (Arochlors)	LB019129	mg/kg	1	<1	NA
	LB019131	mg/kg	1	<1	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Tetrachloro-m-xylene (TCMX) (Surrogate)	LB019129	%	-	107%	111%
	LB019131	%	-	107%	111%

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: ME-(AU)-[ENV]AN040/AN320

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Arsenic, As	LB019245	mg/kg	3	<3	5 - 19%	96%	89%
	LB019246	mg/kg	3	<3	0%	97%	71%
Cadmium, Cd	LB019245	mg/kg	0.3	<0.3	0%	98%	90%
	LB019246	mg/kg	0.3	<0.3	0%	98%	91%
Chromium, Cr	LB019245	mg/kg	0.3	<0.3	0 - 9%	97%	91%
	LB019246	mg/kg	0.3	<0.3	4%	98%	71%
Copper, Cu	LB019245	mg/kg	0.5	<0.5	1 - 9%	92%	77%
	LB019246	mg/kg	0.5	<0.5	0%	93%	89%
Lead, Pb	LB019245	mg/kg	1	<1	5 - 7%	98%	62%
	LB019246	mg/kg	1	<1	4%	98%	88%
Nickel, Ni	LB019245	mg/kg	0.5	<0.5	1 - 18%	98%	90%
	LB019246	mg/kg	0.5	<0.5	9%	100%	92%
Zinc, Zn	LB019245	mg/kg	0.5	<0.5	2 - 8%	101%	75%
	LB019246	mg/kg	0.5	<0.5	13%	101%	94%

TRH (Total Recoverable Hydrocarbons) in Soil Method: ME-(AU)-[ENV]AN403

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
TRH C10-C14	LB019129	mg/kg	20	<20	0%	103%	118%
	LB019131	mg/kg	20	<20	0%	103%	98%
TRH C15-C28	LB019129	mg/kg	50	<50	0 - 11%	98%	268%
	LB019131	mg/kg	50	<50	0%	100%	105%
TRH C29-C36	LB019129	mg/kg	50	<50	0 - 28%	95%	98%
	LB019131	mg/kg	50	<50	0%	98%	110%

VOC's in Soil Method: ME-(AU)-[ENV]AN433/AN434

Fumigants

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
2,2-dichloropropane	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
1,2-dichloropropane	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
cis-1,3-dichloropropene	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
trans-1,3-dichloropropene	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
1,2-dibromoethane (EDB)	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA

Halogenated Aliphatics

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Dichlorodifluoromethane (CFC-12)	LB019127	mg/kg	1	<1	NA
	LB019128	mg/kg	1	<1	NA
	LB019132	mg/kg	1	<1	NA
Chloromethane	LB019127	mg/kg	1	<1	NA
	LB019128	mg/kg	1	<1	NA
	LB019132	mg/kg	1	<1	NA
Vinyl chloride (Chloroethene)	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

VOC's in Soil Method: ME-(AU)-[ENV]AN433/AN434 (continued)

				MB	LCS %Recovery
Bromomethane	LB019127	mg/kg	1	<1	NA
	LB019128	mg/kg	1	<1	NA
	LB019132	mg/kg	1	<1	NA
Chloroethane	LB019127	mg/kg	1	<1	NA
	LB019128	mg/kg	1	<1	NA
	LB019132	mg/kg	1	<1	NA
Trichlorofluoromethane	LB019127	mg/kg	1	<1	NA
	LB019128	mg/kg	1	<1	NA
	LB019132	mg/kg	1	<1	NA
1,1-dichloroethene	LB019127	mg/kg	0.1	<0.1	73%
	LB019128	mg/kg	0.1	<0.1	76%
	LB019132	mg/kg	0.1	<0.1	72%
Dichloromethane (Methylene chloride)	LB019127	mg/kg	0.5	<0.5	NA
	LB019128	mg/kg	0.5	<0.5	NA
	LB019132	mg/kg	0.5	<0.5	NA
Allyl chloride	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
trans-1,2-dichloroethene	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
1,1-dichloroethane	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
cis-1,2-dichloroethene	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
Bromochloromethane	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
1,2-dichloroethane	LB019127	mg/kg	0.1	<0.1	73%
	LB019128	mg/kg	0.1	<0.1	74%
	LB019132	mg/kg	0.1	<0.1	74%
1,1,1-trichloroethane	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
1,1-dichloropropene	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
Carbon tetrachloride	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
Dibromomethane	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
Trichloroethene (Trichloroethylene -TCE)	LB019127	mg/kg	0.1	<0.1	87%
	LB019128	mg/kg	0.1	<0.1	69%
	LB019132	mg/kg	0.1	<0.1	82%
1,1,2-trichloroethane	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
1,3-dichloropropane	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
Tetrachloroethene (Perchloroethylene,PCE)	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA', the results are less than the LOR and thus the RPD is not applicable.

VOC's in Soil Method: ME-(AU)-[ENV]AN433/AN434 (continued)

				MB	LCS %Recovery
Tetrachloroethene (Perchloroethylene,PCE)	LB019132	mg/kg	0.1	<0.1	NA
1,1,1,2-tetrachloroethane	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
cis-1,4-dichloro-2-butene	LB019127	mg/kg	1	<1	NA
	LB019128	mg/kg	1	<1	NA
	LB019132	mg/kg	1	<1	NA
1,1,2,2-tetrachloroethane	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
1,2,3-trichloropropane	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
trans-1,4-dichloro-2-butene	LB019127	mg/kg	1	<1	NA
	LB019128	mg/kg	1	<1	NA
	LB019132	mg/kg	1	<1	NA
1,2-dibromo-3-chloropropane	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
Hexachlorobutadiene	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
Iodomethane	LB019127	mg/kg	5	<5	NA
	LB019128	mg/kg	5	<5	NA
	LB019132	mg/kg	5	<5	NA

Halogenated Aromatics

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Chlorobenzene	LB019127	mg/kg	0.1	<0.1	75%
	LB019128	mg/kg	0.1	<0.1	76%
	LB019132	mg/kg	0.1	<0.1	70%
Bromobenzene	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
2-chlorotoluene	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
4-chlorotoluene	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
1,3-dichlorobenzene	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
1,4-dichlorobenzene	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
1,2-dichlorobenzene	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
1,2,4-trichlorobenzene	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
1,2,3-trichlorobenzene	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA

Monocyclic Aromatic Hydrocarbons

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA', the results are less than the LOR and thus the RPD is not applicable.

VOC's in Soil Method: ME-(AU)-[ENV]AN433/AN434 (continued)

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Benzene	LB019127	mg/kg	0.1	<0.1	0%	85%	101%
	LB019128	mg/kg	0.1	<0.1	0%	79%	
	LB019132	mg/kg	0.1	<0.1		76%	
Toluene	LB019127	mg/kg	0.1	<0.1	0%	92%	97%
	LB019128	mg/kg	0.1	<0.1	0%	83%	
	LB019132	mg/kg	0.1	<0.1		89%	
Ethylbenzene	LB019127	mg/kg	0.1	<0.1	0%	70%	96%
	LB019128	mg/kg	0.1	<0.1	0%	65%	
	LB019132	mg/kg	0.1	<0.1		68%	
m/p-xylene	LB019127	mg/kg	0.2	<0.2	0%	76%	96%
	LB019128	mg/kg	0.2	<0.2	0%	71%	
	LB019132	mg/kg	0.2	<0.2		73%	
o-xylene	LB019127	mg/kg	0.1	<0.1	0%	84%	85%
	LB019128	mg/kg	0.1	<0.1	0%	74%	
	LB019132	mg/kg	0.1	<0.1		77%	
Styrene (Vinyl benzene)	LB019127	mg/kg	0.1	<0.1		NA	
	LB019128	mg/kg	0.1	<0.1		NA	
	LB019132	mg/kg	0.1	<0.1		NA	
Isopropylbenzene (Cumene)	LB019127	mg/kg	0.1	<0.1		NA	
	LB019128	mg/kg	0.1	<0.1		NA	
	LB019132	mg/kg	0.1	<0.1		NA	
n-propylbenzene	LB019127	mg/kg	0.1	<0.1		NA	
	LB019128	mg/kg	0.1	<0.1		NA	
	LB019132	mg/kg	0.1	<0.1		NA	
1,3,5-trimethylbenzene	LB019127	mg/kg	0.1	<0.1		NA	
	LB019128	mg/kg	0.1	<0.1		NA	
	LB019132	mg/kg	0.1	<0.1		NA	
tert-butylbenzene	LB019127	mg/kg	0.1	<0.1		NA	
	LB019128	mg/kg	0.1	<0.1		NA	
	LB019132	mg/kg	0.1	<0.1		NA	
1,2,4-trimethylbenzene	LB019127	mg/kg	0.1	<0.1		NA	
	LB019128	mg/kg	0.1	<0.1		NA	
	LB019132	mg/kg	0.1	<0.1		NA	
sec-butylbenzene	LB019127	mg/kg	0.1	<0.1		NA	
	LB019128	mg/kg	0.1	<0.1		NA	
	LB019132	mg/kg	0.1	<0.1		NA	
p-isopropyltoluene	LB019127	mg/kg	0.1	<0.1		NA	
	LB019128	mg/kg	0.1	<0.1		NA	
	LB019132	mg/kg	0.1	<0.1		NA	
n-butylbenzene	LB019127	mg/kg	0.1	<0.1		NA	
	LB019128	mg/kg	0.1	<0.1		NA	
	LB019132	mg/kg	0.1	<0.1		NA	

Nitrogenous Compounds

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Acrylonitrile	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
2-nitropropane	LB019127	mg/kg	10	<10	NA
	LB019128	mg/kg	10	<10	NA
	LB019132	mg/kg	10	<10	NA

Oxygenated Compounds

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA', the results are less than the LOR and thus the RPD is not applicable.

VOC's in Soil Method: ME-(AU)-[ENV]AN433/AN434 (continued)

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Acetone (2-propanone)	LB019127	mg/kg	10	<10	NA
	LB019128	mg/kg	10	<10	NA
	LB019132	mg/kg	10	<10	NA
MiBE (Methyl-tert-butyl ether)	LB019127	mg/kg	0.5	<0.5	NA
	LB019128	mg/kg	0.5	<0.5	NA
	LB019132	mg/kg	0.5	<0.5	NA
Vinyl acetate	LB019127	mg/kg	10	<10	NA
	LB019128	mg/kg	10	<10	NA
	LB019132	mg/kg	10	<10	NA
MEK (2-butanone)	LB019127	mg/kg	10	<10	NA
	LB019128	mg/kg	10	<10	NA
	LB019132	mg/kg	10	<10	NA
MIBK (4-methyl-2-pentanone)	LB019127	mg/kg	1	<1	NA
	LB019128	mg/kg	1	<1	NA
	LB019132	mg/kg	1	<1	NA
2-hexanone (MBK)	LB019127	mg/kg	5	<5	NA
	LB019128	mg/kg	5	<5	NA
	LB019132	mg/kg	5	<5	NA

Polycyclic VOCs

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Naphthalene	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA

Sulphonated Compounds

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Carbon disulfide	LB019127	mg/kg	0.5	<0.5	NA
	LB019128	mg/kg	0.5	<0.5	NA
	LB019132	mg/kg	0.5	<0.5	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Dibromofluoromethane (Surrogate)	LB019127	%	-	87%	0%	93%	99%
	LB019128	%	-	88%	0%	91%	
	LB019132	%	-	96%		89%	
d4-1,2-dichloroethane (Surrogate)	LB019127	%	-	99%	1%	99%	102%
	LB019128	%	-	98%	2%	113%	
	LB019132	%	-	103%		100%	
d8-toluene (Surrogate)	LB019127	%	-	96%	1%	96%	99%
	LB019128	%	-	95%	1%	95%	
	LB019132	%	-	95%		95%	
Bromofluorobenzene (Surrogate)	LB019127	%	-	113%	1 - 5%	106%	94%
	LB019128	%	-	111%	3%	108%	
	LB019132	%	-	108%		104%	

Totals

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Total Xylenes*	LB019127	mg/kg	0.3	<0.3	0%	NA	NA
	LB019128	mg/kg	0.3	<0.3	0%	NA	
	LB019132	mg/kg	0.3	<0.3		NA	
Total BTEX*	LB019127	mg/kg	-	0	NA	NA	NA
	LB019128	mg/kg	-	0	NA	NA	
	LB019132	mg/kg	-	0		NA	
Total Volatile Chlorinated Hydrocarbons*	LB019127	mg/kg	3	<3		NA	
	LB019128	mg/kg	3	<3		NA	

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

VOC's in Soil Method: ME-(AU)-[ENV]AN433/AN434 (continued)

				MB	DUP %RPD	LCS %Recovery	MS %Recovery
Total Volatile Chlorinated Hydrocarbons*	LB019132	mg/kg	3	<3		NA	

Trihalomethanes

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Chloroform	LB019127	mg/kg	0.1	<0.1	86%
	LB019128	mg/kg	0.1	<0.1	84%
	LB019132	mg/kg	0.1	<0.1	79%
Bromodichloromethane	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
Chlorodibromomethane	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA
Bromoform	LB019127	mg/kg	0.1	<0.1	NA
	LB019128	mg/kg	0.1	<0.1	NA
	LB019132	mg/kg	0.1	<0.1	NA

Volatile Petroleum Hydrocarbons in Soil Method: ME-(AU)-[ENV]AN433/AN434

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
TRH C6-C9	LB019127	mg/kg	20	<20	0%	130%	127%
	LB019128	mg/kg	20	<20	0%	122%	
	LB019132	mg/kg	20	<20		131%	

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Trifluorotoluene (Surrogate)	LB019127	%	-	104%	1 - 14%	90%	66%
	LB019128	%	-	88%	4%	102%	
	LB019132	%	-	109%		90%	

METHOD

METHODOLOGY SUMMARY

AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN088	Orbital rolling for Organic pollutants are extracted from soil/sediment by transferring an appropriate mass of sample to a clear soil jar and extracting with 1:1 Dichloromethane/Acetone. Orbital Rolling method is intended for the extraction of semi-volatile organic compounds from soil/sediment samples, and is based somewhat on USEPA method 3570 (Micro Organic extraction and sample preparation). Method 3700.
AN104	pHF is determined on an extract of approximately 2g of as received sample in approximately 10 mL of deionised water with pH determined after standing 30 minutes.
AN104	pHFox is determined on an extract of approximately 2g of as received sample with a few mLs of 30% hydrogen peroxide (adjusted to pH 4.5 to 5.5) with the extract reaction being rated from slight to extreme, with pH determined after reaction is complete and extract has cooled. Referenced to ASS Laboratory Methods Guidelines, method 23Af-Bf, 2004.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN400	OC and OP Pesticides by GC-ECD: The determination of organochlorine (OC) and organophosphorus (OP) pesticides and polychlorinated biphenyls (PCBs) in soils, sludges and groundwater. (Based on USEPA methods 3510, 3550, 8140 and 8080.)
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Petroleum Hydrocarbons (TPH) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the elluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependant on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433/AN434	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC's are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

METHOD

METHODOLOGY SUMMARY

AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

FOOTNOTES

IS	Insufficient sample for analysis.	QFH	QC result is above the upper tolerance
LNR	Sample listed, but not received.	QFL	QC result is below the lower tolerance
*	This analysis is not covered by the scope of accreditation.	-	The sample was not analysed for this analyte
^	Performed by outside laboratory.	NVL	Not Validated
LOR	Limit of Reporting		
↑↓	Raised or Lowered Limit of Reporting		

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here:
<http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf>

This document is issued, on the Client's behalf, by the Company under its General Conditions of Service available on request and accessible at http://www.au.sgs.com/terms_and_conditions_au. The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

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Project **GEOTLCOV24303AC - SICEEP**
Order Number **81298-299,92346**
Samples 32

LABORATORY DETAILS

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SGS Reference SE107686 R0
Report Number 0000027058
Date Reported 04/05/2012 17:36:22
Date Received 27 Apr 2012

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(4354).

PAH - The Limit of Reporting (LOR) has been raised for sample 15 ,27 due to interferences from the sample matrix.

METALS: The Limit of Reporting (LOR) has been raised 5x for sample #9 due to interferences from the sample matrix.

No respirable fibres detected using trace analysis technique.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

SIGNATORIES



Andy Sutton
Organics Chemist



Dong Liang
Inorganics Metals Team Leader



Huong Crawford
Laboratory Manager



Ly Kim Ha
Organics Supervisor



Ravee Sivasubramaniam
Hygienist

RESULTS

Fibre Identification in soil

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w
SE107686.001	BH7-Surface	Soil	110g Sand,soil,rocks	23 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01
SE107686.004	BH7_0.4-0.5	Soil	30g Soil,clay,rocks	23 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01
SE107686.005	BH12_Surface	Soil	71g Sand,soil,rocks	23 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01
SE107686.006	BH12_0.4-0.5	Soil	103g Soil,clay,rocks	23 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01
SE107686.010	BH23_0.5-0.6	Soil	38g Soil,clay,rocks	24 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01
SE107686.013	BH19_0.5-0.6	Soil	40g Soil,rocks	24 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01
SE107686.015	BH26_Surface	Soil	24g Soil	24 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01
SE107686.016	BH20_0.3-0.4	Soil	50g Soil,rocks	24 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01
SE107686.020	NBH18_0.5-0.6	Soil	37g Soil,clay,rocks	24 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01
SE107686.024	NBH22_0.5-0.6	Soil	29g Soil,rocks	24 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01
SE107686.026	NBH24_0-0.1	Soil	66g Sand,soil,rocks	24 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01
SE107686.028	NBH24_0.3-0.5	Soil	84g Clay,soil,rocks	24 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01

METHOD

METHODOLOGY SUMMARY

AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

FOOTNOTES

Amosite	-	Brown Asbestos	NA	-	Not Analysed
Chrysotile	-	White Asbestos	LNR	-	Listed, Not Required
Crocidolite	-	Blue Asbestos	*	-	Not Accredited
Amphiboles	-	Amosite and/or Crocidolite			

This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

Sampled by the client.

Where reported: 'Asbestos Detected': Asbestos detected by polarized light microscopy, including dispersion staining.

Where reported: 'No Asbestos Found': No Asbestos Found by polarized light microscopy, including dispersion staining.

Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarized light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos-containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : <http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf>

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STATEMENT OF QA/QC PERFORMANCE

SE107686 R0

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Project **GEOTLCOV24303AC - SICEEP**
Order Number **81298-299,92346**
Samples **32**

LABORATORY DETAILS

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SGS Reference **SE107686 R0**
Report Number **0000027057**
Date Reported **04 May 2012**

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS Environmental Services' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document and was supplied by the Client. This QA/QC Statement must be read in conjunction with the referenced Analytical Report. The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Matrix Spike	Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest	1 item
	TRH (Total Recoverable Hydrocarbons) in Soil	1 item

SAMPLE SUMMARY

Sample counts by matrix	32 Soils	Type of documentation received	COC
Date documentation received	27/4/2012	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	3.5°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice	Samples clearly labelled	Yes
Complete documentation received	Yes		

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

Fibre Identification in soil

Method: ME-(AU)-ENVJAN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7-Surface	SE107686.001	LB019289	23 Apr 2012	27 Apr 2012	23 Apr 2013	02 May 2012	23 Apr 2013	03 May 2012
BH7_0.4-0.5	SE107686.004	LB019289	23 Apr 2012	27 Apr 2012	23 Apr 2013	02 May 2012	23 Apr 2013	03 May 2012
BH12-Surface	SE107686.005	LB019289	23 Apr 2012	27 Apr 2012	23 Apr 2013	02 May 2012	23 Apr 2013	03 May 2012
BH12_0.4-0.5	SE107686.006	LB019289	23 Apr 2012	27 Apr 2012	23 Apr 2013	02 May 2012	23 Apr 2013	03 May 2012
BH23_0.5-0.6	SE107686.010	LB019289	24 Apr 2012	27 Apr 2012	24 Apr 2013	02 May 2012	24 Apr 2013	03 May 2012
BH19_0.5-0.6	SE107686.013	LB019289	24 Apr 2012	27 Apr 2012	24 Apr 2013	02 May 2012	24 Apr 2013	03 May 2012
BH26-Surface	SE107686.015	LB019289	24 Apr 2012	27 Apr 2012	24 Apr 2013	02 May 2012	24 Apr 2013	03 May 2012
BH20_0.3-0.4	SE107686.016	LB019289	24 Apr 2012	27 Apr 2012	24 Apr 2013	02 May 2012	24 Apr 2013	03 May 2012
NBH18_0.5-0.6	SE107686.020	LB019289	24 Apr 2012	27 Apr 2012	24 Apr 2013	02 May 2012	24 Apr 2013	03 May 2012
NBH22_0.5-0.6	SE107686.024	LB019289	24 Apr 2012	27 Apr 2012	24 Apr 2013	02 May 2012	24 Apr 2013	03 May 2012
NBH24_0.0-1	SE107686.026	LB019289	24 Apr 2012	27 Apr 2012	24 Apr 2013	02 May 2012	24 Apr 2013	03 May 2012
NBH24_0.3-0.5	SE107686.028	LB019289	24 Apr 2012	27 Apr 2012	24 Apr 2013	02 May 2012	24 Apr 2013	03 May 2012

Field pH for Acid Sulphate Soil

Method: ME-(AU)-ENVJAN104

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
NBH18_3-3.45	SE107686.022	LB019517	24 Apr 2012	27 Apr 2012	22 May 2012	04 May 2012	22 May 2012	04 May 2012

Mercury in Soil

Method: ME-(AU)-ENVJAN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_1.5-1.95	SE107686.002	LB019250	23 Apr 2012	27 Apr 2012	21 May 2012	02 May 2012	21 May 2012	03 May 2012
BH7_2.9-3.0	SE107686.003	LB019250	23 Apr 2012	27 Apr 2012	21 May 2012	02 May 2012	21 May 2012	03 May 2012
BH7_0.4-0.5	SE107686.004	LB019250	23 Apr 2012	27 Apr 2012	21 May 2012	02 May 2012	21 May 2012	03 May 2012
BH12_0.4-0.5	SE107686.006	LB019250	23 Apr 2012	27 Apr 2012	21 May 2012	02 May 2012	21 May 2012	03 May 2012
BH12_1.5-1.95	SE107686.007	LB019251	23 Apr 2012	27 Apr 2012	21 May 2012	02 May 2012	21 May 2012	03 May 2012
BH12_2.9-3.0	SE107686.008	LB019251	23 Apr 2012	27 Apr 2012	21 May 2012	02 May 2012	21 May 2012	03 May 2012
BH12_4.5-4.95	SE107686.009	LB019251	23 Apr 2012	27 Apr 2012	21 May 2012	02 May 2012	21 May 2012	03 May 2012
BH23_0.5-0.6	SE107686.010	LB019251	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012
BH23_1.5-1.95	SE107686.011	LB019251	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012
BH23_3-3.45	SE107686.012	LB019251	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012
BH19_0.5-0.6	SE107686.013	LB019251	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012
BH19_1.3-1.4	SE107686.014	LB019251	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012
BH26-Surface	SE107686.015	LB019251	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012
BH20_0.3-0.4	SE107686.016	LB019251	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012
BH20_1.5-1.8	SE107686.017	LB019251	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012
BH20_3.0-3.4	SE107686.018	LB019251	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012
BH20_4.5-4.9	SE107686.019	LB019251	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012
NBH18_0.5-0.6	SE107686.020	LB019251	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012
NBH18_1.5-1.95	SE107686.021	LB019251	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012
NBH18_3-3.45	SE107686.022	LB019251	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012
NBH18_4.3-4.5	SE107686.023	LB019251	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012
NBH22_0.5-0.6	SE107686.024	LB019251	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012
NBH22_1.5-1.95	SE107686.025	LB019251	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012
NBH24_0.0-1	SE107686.026	LB019252	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012
NBH24_1.5-1.95	SE107686.027	LB019252	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012
NBH24_3.0-3.45	SE107686.029	LB019252	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012
DUP 10	SE107686.030	LB019252	24 Apr 2012	27 Apr 2012	22 May 2012	02 May 2012	22 May 2012	03 May 2012

Moisture Content

Method: ME-(AU)-ENVJAN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_1.5-1.95	SE107686.002	LB019133	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	06 May 2012	03 May 2012
BH7_2.9-3.0	SE107686.003	LB019133	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	06 May 2012	03 May 2012
BH7_0.4-0.5	SE107686.004	LB019133	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	06 May 2012	03 May 2012
BH12_0.4-0.5	SE107686.006	LB019133	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	06 May 2012	03 May 2012
BH12_1.5-1.95	SE107686.007	LB019133	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	06 May 2012	03 May 2012
BH12_2.9-3.0	SE107686.008	LB019133	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	06 May 2012	03 May 2012
BH12_4.5-4.95	SE107686.009	LB019133	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	06 May 2012	03 May 2012
BH23_0.5-0.6	SE107686.010	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012
BH23_1.5-1.95	SE107686.011	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012
BH23_3-3.45	SE107686.012	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012
BH19_0.5-0.6	SE107686.013	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

Moisture Content (continued)

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH19_1.3-1.4	SE107686.014	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012
BH26_Surface	SE107686.015	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012
BH20_0.3-0.4	SE107686.016	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012
BH20_1.5-1.8	SE107686.017	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012
BH20_3.0-3.4	SE107686.018	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012
BH20_4.5-4.9	SE107686.019	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012
NBH18_0.5-0.6	SE107686.020	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012
NBH18_1.5-1.95	SE107686.021	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012
NBH18_3-3.45	SE107686.022	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012
NBH18_4.3-4.5	SE107686.023	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012
NBH22_0.5-0.6	SE107686.024	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012
NBH22_1.5-1.95	SE107686.025	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012
NBH24_0-0.1	SE107686.026	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012
NBH24_1.5-1.95	SE107686.027	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012
NBH24_3.0-3.45	SE107686.029	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012
DUP 10	SE107686.030	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012
TB5	SE107686.031	LB019133	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	06 May 2012	03 May 2012

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_1.5-1.95	SE107686.002	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH7_2.9-3.0	SE107686.003	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH7_0.4-0.5	SE107686.004	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_0.4-0.5	SE107686.006	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_1.5-1.95	SE107686.007	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_2.9-3.0	SE107686.008	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_4.5-4.95	SE107686.009	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH23_0.5-0.6	SE107686.010	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH23_1.5-1.95	SE107686.011	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH23_3-3.45	SE107686.012	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH19_0.5-0.6	SE107686.013	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH19_1.3-1.4	SE107686.014	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH26_Surface	SE107686.015	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_0.3-0.4	SE107686.016	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_1.5-1.8	SE107686.017	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_3.0-3.4	SE107686.018	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_4.5-4.9	SE107686.019	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_0.5-0.6	SE107686.020	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_1.5-1.95	SE107686.021	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_3-3.45	SE107686.022	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_4.3-4.5	SE107686.023	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH22_0.5-0.6	SE107686.024	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH22_1.5-1.95	SE107686.025	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_0-0.1	SE107686.026	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_1.5-1.95	SE107686.027	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_3.0-3.45	SE107686.029	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
DUP 10	SE107686.030	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
TB5	SE107686.031	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_1.5-1.95	SE107686.002	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH7_2.9-3.0	SE107686.003	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH7_0.4-0.5	SE107686.004	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_0.4-0.5	SE107686.006	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_1.5-1.95	SE107686.007	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_2.9-3.0	SE107686.008	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_4.5-4.95	SE107686.009	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH23_0.5-0.6	SE107686.010	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH23_1.5-1.95	SE107686.011	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH23_3-3.45	SE107686.012	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

OP Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN400/AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH19_0.5-0.6	SE107686.013	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH19_1.3-1.4	SE107686.014	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH26_Surface	SE107686.015	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_0.3-0.4	SE107686.016	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_1.5-1.8	SE107686.017	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_3.0-3.4	SE107686.018	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_4.5-4.9	SE107686.019	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_0.5-0.6	SE107686.020	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_1.5-1.95	SE107686.021	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_3-3.45	SE107686.022	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_4.3-4.5	SE107686.023	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH22_0.5-0.6	SE107686.024	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH22_1.5-1.95	SE107686.025	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_0-0.1	SE107686.026	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_1.5-1.95	SE107686.027	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_3.0-3.45	SE107686.029	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
DUP 10	SE107686.030	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
TB5	SE107686.031	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_1.5-1.95	SE107686.002	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH7_2.9-3.0	SE107686.003	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH7_0.4-0.5	SE107686.004	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_0.4-0.5	SE107686.006	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_1.5-1.95	SE107686.007	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_2.9-3.0	SE107686.008	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_4.5-4.95	SE107686.009	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH23_0.5-0.6	SE107686.010	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH23_1.5-1.95	SE107686.011	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH23_3-3.45	SE107686.012	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH19_0.5-0.6	SE107686.013	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH19_1.3-1.4	SE107686.014	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH26_Surface	SE107686.015	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_0.3-0.4	SE107686.016	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_1.5-1.8	SE107686.017	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_3.0-3.4	SE107686.018	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_4.5-4.9	SE107686.019	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_0.5-0.6	SE107686.020	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_1.5-1.95	SE107686.021	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_3-3.45	SE107686.022	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_4.3-4.5	SE107686.023	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH22_0.5-0.6	SE107686.024	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH22_1.5-1.95	SE107686.025	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_0-0.1	SE107686.026	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_1.5-1.95	SE107686.027	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_3.0-3.45	SE107686.029	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
DUP 10	SE107686.030	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
TB5	SE107686.031	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012

PCBs in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_1.5-1.95	SE107686.002	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH7_2.9-3.0	SE107686.003	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH7_0.4-0.5	SE107686.004	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_0.4-0.5	SE107686.006	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_1.5-1.95	SE107686.007	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_2.9-3.0	SE107686.008	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_4.5-4.95	SE107686.009	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH23_0.5-0.6	SE107686.010	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH23_1.5-1.95	SE107686.011	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

PCBs in Soil (continued)

Method: ME-(AU)-[ENV]AN400/AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH23_3-3.45	SE107686.012	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH19_0.5-0.6	SE107686.013	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH19_1.3-1.4	SE107686.014	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH26_Surface	SE107686.015	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_0.3-0.4	SE107686.016	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_1.5-1.8	SE107686.017	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_3.0-3.4	SE107686.018	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_4.5-4.9	SE107686.019	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_0.5-0.6	SE107686.020	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_1.5-1.95	SE107686.021	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_3-3.45	SE107686.022	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_4.3-4.5	SE107686.023	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH22_0.5-0.6	SE107686.024	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH22_1.5-1.95	SE107686.025	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_0-0.1	SE107686.026	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_1.5-1.95	SE107686.027	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_3.0-3.45	SE107686.029	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
DUP 10	SE107686.030	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
TB5	SE107686.031	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_1.5-1.95	SE107686.002	LB019245	23 Apr 2012	27 Apr 2012	20 Oct 2012	02 May 2012	20 Oct 2012	03 May 2012
BH7_2.9-3.0	SE107686.003	LB019245	23 Apr 2012	27 Apr 2012	20 Oct 2012	02 May 2012	20 Oct 2012	03 May 2012
BH7_0.4-0.5	SE107686.004	LB019245	23 Apr 2012	27 Apr 2012	20 Oct 2012	02 May 2012	20 Oct 2012	03 May 2012
BH12_0.4-0.5	SE107686.006	LB019245	23 Apr 2012	27 Apr 2012	20 Oct 2012	02 May 2012	20 Oct 2012	03 May 2012
BH12_1.5-1.95	SE107686.007	LB019245	23 Apr 2012	27 Apr 2012	20 Oct 2012	02 May 2012	20 Oct 2012	03 May 2012
BH12_2.9-3.0	SE107686.008	LB019245	23 Apr 2012	27 Apr 2012	20 Oct 2012	02 May 2012	20 Oct 2012	03 May 2012
BH12_4.5-4.95	SE107686.009	LB019245	23 Apr 2012	27 Apr 2012	20 Oct 2012	02 May 2012	20 Oct 2012	03 May 2012
BH23_0.5-0.6	SE107686.010	LB019245	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012
BH23_1.5-1.95	SE107686.011	LB019245	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012
BH23_3-3.45	SE107686.012	LB019245	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012
BH19_0.5-0.6	SE107686.013	LB019245	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012
BH19_1.3-1.4	SE107686.014	LB019245	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012
BH26_Surface	SE107686.015	LB019245	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012
BH20_0.3-0.4	SE107686.016	LB019245	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012
BH20_1.5-1.8	SE107686.017	LB019245	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012
BH20_3.0-3.4	SE107686.018	LB019245	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012
BH20_4.5-4.9	SE107686.019	LB019245	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012
NBH18_0.5-0.6	SE107686.020	LB019245	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012
NBH18_1.5-1.95	SE107686.021	LB019245	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012
NBH18_3-3.45	SE107686.022	LB019246	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012
NBH18_4.3-4.5	SE107686.023	LB019246	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012
NBH22_0.5-0.6	SE107686.024	LB019246	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012
NBH22_1.5-1.95	SE107686.025	LB019246	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012
NBH24_0-0.1	SE107686.026	LB019246	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012
NBH24_1.5-1.95	SE107686.027	LB019246	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012
NBH24_3.0-3.45	SE107686.029	LB019246	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012
DUP 10	SE107686.030	LB019246	24 Apr 2012	27 Apr 2012	21 Oct 2012	02 May 2012	21 Oct 2012	03 May 2012

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_1.5-1.95	SE107686.002	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH7_2.9-3.0	SE107686.003	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH7_0.4-0.5	SE107686.004	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_0.4-0.5	SE107686.006	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_1.5-1.95	SE107686.007	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_2.9-3.0	SE107686.008	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_4.5-4.95	SE107686.009	LB019129	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH23_0.5-0.6	SE107686.010	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH23_1.5-1.95	SE107686.011	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH23_3-3.45	SE107686.012	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH19_0.5-0.6	SE107686.013	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH19_1.3-1.4	SE107686.014	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH26_Surface	SE107686.015	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_0.3-0.4	SE107686.016	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_1.5-1.8	SE107686.017	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_3.0-3.4	SE107686.018	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_4.5-4.9	SE107686.019	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_0.5-0.6	SE107686.020	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_1.5-1.95	SE107686.021	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_3-3.45	SE107686.022	LB019129	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_4.3-4.5	SE107686.023	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH22_0.5-0.6	SE107686.024	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH22_1.5-1.95	SE107686.025	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_0-0.1	SE107686.026	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_1.5-1.95	SE107686.027	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_3.0-3.45	SE107686.029	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
DUP 10	SE107686.030	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
TB5	SE107686.031	LB019131	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012

VOC's in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_1.5-1.95	SE107686.002	LB019127	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH7_2.9-3.0	SE107686.003	LB019127	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH7_0.4-0.5	SE107686.004	LB019127	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_0.4-0.5	SE107686.006	LB019127	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_1.5-1.95	SE107686.007	LB019127	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_2.9-3.0	SE107686.008	LB019127	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_4.5-4.95	SE107686.009	LB019127	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH23_0.5-0.6	SE107686.010	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH23_1.5-1.95	SE107686.011	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH23_3-3.45	SE107686.012	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH19_0.5-0.6	SE107686.013	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH19_1.3-1.4	SE107686.014	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH26_Surface	SE107686.015	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_0.3-0.4	SE107686.016	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_1.5-1.8	SE107686.017	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_3.0-3.4	SE107686.018	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_4.5-4.9	SE107686.019	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_0.5-0.6	SE107686.020	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_1.5-1.95	SE107686.021	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_3-3.45	SE107686.022	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_4.3-4.5	SE107686.023	LB019128	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH22_0.5-0.6	SE107686.024	LB019128	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH22_1.5-1.95	SE107686.025	LB019128	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_0-0.1	SE107686.026	LB019128	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_1.5-1.95	SE107686.027	LB019128	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_3.0-3.45	SE107686.029	LB019128	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
DUP 10	SE107686.030	LB019128	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
TB5	SE107686.031	LB019128	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
TS5	SE107686.032	LB019132	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7_1.5-1.95	SE107686.002	LB019127	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH7_2.9-3.0	SE107686.003	LB019127	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH7_0.4-0.5	SE107686.004	LB019127	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_0.4-0.5	SE107686.006	LB019127	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_1.5-1.95	SE107686.007	LB019127	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_2.9-3.0	SE107686.008	LB019127	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH12_4.5-4.95	SE107686.009	LB019127	23 Apr 2012	27 Apr 2012	07 May 2012	01 May 2012	10 Jun 2012	03 May 2012

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

Volatiles Petroleum Hydrocarbons in Soil (continued)

Method: ME-(AU)-[ENV]AN433/AN434

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH23_0.5-0.6	SE107686.010	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH23_1.5-1.95	SE107686.011	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH23_3-3.45	SE107686.012	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH19_0.5-0.6	SE107686.013	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH19_1.3-1.4	SE107686.014	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH26_Surface	SE107686.015	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_0.3-0.4	SE107686.016	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_1.5-1.8	SE107686.017	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_3.0-3.4	SE107686.018	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
BH20_4.5-4.9	SE107686.019	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_0.5-0.6	SE107686.020	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_1.5-1.95	SE107686.021	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_3-3.45	SE107686.022	LB019127	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH18_4.3-4.5	SE107686.023	LB019128	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH22_0.5-0.6	SE107686.024	LB019128	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH22_1.5-1.95	SE107686.025	LB019128	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_0-0.1	SE107686.026	LB019128	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_1.5-1.95	SE107686.027	LB019128	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
NBH24_3.0-3.45	SE107686.029	LB019128	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
DUP 10	SE107686.030	LB019128	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
TB5	SE107686.031	LB019128	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012
TS5	SE107686.032	LB019132	24 Apr 2012	27 Apr 2012	08 May 2012	01 May 2012	10 Jun 2012	03 May 2012

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	NBH18_1.5-1.95	SE107686.021	%	60 - 130%	127
	NBH18_4.3-4.5	SE107686.023	%	60 - 130%	106

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	NBH18_1.5-1.95	SE107686.021	%	60 - 130%	86
	NBH18_4.3-4.5	SE107686.023	%	60 - 130%	88
d14-p-terphenyl (Surrogate)	NBH18_1.5-1.95	SE107686.021	%	60 - 130%	84
	NBH18_4.3-4.5	SE107686.023	%	60 - 130%	84

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH7_1.5-1.95	SE107686.002	%	60 - 130%	103
	BH7_2.9-3.0	SE107686.003	%	60 - 130%	102
	BH7_0.4-0.5	SE107686.004	%	60 - 130%	91
	BH12_0.4-0.5	SE107686.006	%	60 - 130%	90
	BH12_1.5-1.95	SE107686.007	%	60 - 130%	97
	BH12_2.9-3.0	SE107686.008	%	60 - 130%	99
	BH12_4.5-4.95	SE107686.009	%	60 - 130%	99
	BH23_0.5-0.6	SE107686.010	%	60 - 130%	96
	BH23_1.5-1.95	SE107686.011	%	60 - 130%	95
	BH23_3-3.45	SE107686.012	%	60 - 130%	108
	BH19_0.5-0.6	SE107686.013	%	60 - 130%	104
	BH19_1.3-1.4	SE107686.014	%	60 - 130%	106
	BH26_Surface	SE107686.015	%	60 - 130%	123
	BH20_0.3-0.4	SE107686.016	%	60 - 130%	81
	BH20_1.5-1.8	SE107686.017	%	60 - 130%	83
	BH20_3.0-3.4	SE107686.018	%	60 - 130%	90
	BH20_4.5-4.9	SE107686.019	%	60 - 130%	78
	NBH18_0.5-0.6	SE107686.020	%	60 - 130%	90
	NBH18_1.5-1.95	SE107686.021	%	60 - 130%	86
	NBH18_3-3.45	SE107686.022	%	60 - 130%	88
	NBH18_4.3-4.5	SE107686.023	%	60 - 130%	88
	NBH22_0.5-0.6	SE107686.024	%	60 - 130%	92
	NBH22_1.5-1.95	SE107686.025	%	60 - 130%	82
	NBH24_0-0.1	SE107686.026	%	60 - 130%	80
	NBH24_1.5-1.95	SE107686.027	%	60 - 130%	100
	NBH24_3.0-3.45	SE107686.029	%	60 - 130%	90
	DUP 10	SE107686.030	%	60 - 130%	92
d14-p-terphenyl (Surrogate)	BH7_1.5-1.95	SE107686.002	%	60 - 130%	117
	BH7_2.9-3.0	SE107686.003	%	60 - 130%	109
	BH7_0.4-0.5	SE107686.004	%	60 - 130%	104
	BH12_0.4-0.5	SE107686.006	%	60 - 130%	104
	BH12_1.5-1.95	SE107686.007	%	60 - 130%	110
	BH12_2.9-3.0	SE107686.008	%	60 - 130%	107
	BH12_4.5-4.95	SE107686.009	%	60 - 130%	109
	BH23_0.5-0.6	SE107686.010	%	60 - 130%	110
	BH23_1.5-1.95	SE107686.011	%	60 - 130%	110
	BH23_3-3.45	SE107686.012	%	60 - 130%	120
	BH19_0.5-0.6	SE107686.013	%	60 - 130%	112
	BH19_1.3-1.4	SE107686.014	%	60 - 130%	113
	BH26_Surface	SE107686.015	%	60 - 130%	117
	BH20_0.3-0.4	SE107686.016	%	60 - 130%	102
	BH20_1.5-1.8	SE107686.017	%	60 - 130%	99
	BH20_3.0-3.4	SE107686.018	%	60 - 130%	86
	BH20_4.5-4.9	SE107686.019	%	60 - 130%	82
	NBH18_0.5-0.6	SE107686.020	%	60 - 130%	80
	NBH18_1.5-1.95	SE107686.021	%	60 - 130%	84
	NBH18_3-3.45	SE107686.022	%	60 - 130%	82
	NBH18_4.3-4.5	SE107686.023	%	60 - 130%	84
	NBH22_0.5-0.6	SE107686.024	%	60 - 130%	84

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d14-p-terphenyl (Surrogate)	NBH22_1.5-1.95	SE107686.025	%	60 - 130%	82
	NBH24_0-0.1	SE107686.026	%	60 - 130%	84
	NBH24_1.5-1.95	SE107686.027	%	60 - 130%	100
	NBH24_3.0-3.45	SE107686.029	%	60 - 130%	86
	DUP 10	SE107686.030	%	60 - 130%	88
d5-nitrobenzene (Surrogate)	BH7_1.5-1.95	SE107686.002	%	60 - 130%	90
	BH7_2.9-3.0	SE107686.003	%	60 - 130%	91
	BH7_0.4-0.5	SE107686.004	%	60 - 130%	77
	BH12_0.4-0.5	SE107686.006	%	60 - 130%	90
	BH12_1.5-1.95	SE107686.007	%	60 - 130%	86
	BH12_2.9-3.0	SE107686.008	%	60 - 130%	89
	BH12_4.5-4.95	SE107686.009	%	60 - 130%	92
	BH23_0.5-0.6	SE107686.010	%	60 - 130%	83
	BH23_1.5-1.95	SE107686.011	%	60 - 130%	86
	BH23_3-3.45	SE107686.012	%	60 - 130%	109
	BH19_0.5-0.6	SE107686.013	%	60 - 130%	109
	BH19_1.3-1.4	SE107686.014	%	60 - 130%	101
	BH26_Surface	SE107686.015	%	60 - 130%	100
	BH20_0.3-0.4	SE107686.016	%	60 - 130%	78
	BH20_1.5-1.8	SE107686.017	%	60 - 130%	103
	BH20_3.0-3.4	SE107686.018	%	60 - 130%	84
	BH20_4.5-4.9	SE107686.019	%	60 - 130%	78
	NBH18_0.5-0.6	SE107686.020	%	60 - 130%	86
	NBH18_1.5-1.95	SE107686.021	%	60 - 130%	74
	NBH18_3-3.45	SE107686.022	%	60 - 130%	92
	NBH18_4.3-4.5	SE107686.023	%	60 - 130%	84
	NBH22_0.5-0.6	SE107686.024	%	60 - 130%	94
	NBH22_1.5-1.95	SE107686.025	%	60 - 130%	82
	NBH24_0-0.1	SE107686.026	%	60 - 130%	72
	NBH24_1.5-1.95	SE107686.027	%	60 - 130%	100
	NBH24_3.0-3.45	SE107686.029	%	60 - 130%	92
	DUP 10	SE107686.030	%	60 - 130%	90

PCBs in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	NBH18_1.5-1.95	SE107686.021	%	60 - 130%	127
	NBH18_4.3-4.5	SE107686.023	%	60 - 130%	106

VOC's in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH7_1.5-1.95	SE107686.002	%	60 - 130%	91
	BH7_2.9-3.0	SE107686.003	%	60 - 130%	96
	BH7_0.4-0.5	SE107686.004	%	60 - 130%	92
	BH12_0.4-0.5	SE107686.006	%	60 - 130%	87
	BH12_1.5-1.95	SE107686.007	%	60 - 130%	84
	BH12_2.9-3.0	SE107686.008	%	60 - 130%	87
	BH12_4.5-4.95	SE107686.009	%	60 - 130%	82
	BH23_0.5-0.6	SE107686.010	%	60 - 130%	93
	BH23_1.5-1.95	SE107686.011	%	60 - 130%	87
	BH23_3-3.45	SE107686.012	%	60 - 130%	95
	BH19_0.5-0.6	SE107686.013	%	60 - 130%	86
	BH19_1.3-1.4	SE107686.014	%	60 - 130%	88
	BH26_Surface	SE107686.015	%	60 - 130%	85
	BH20_0.3-0.4	SE107686.016	%	60 - 130%	83
	BH20_1.5-1.8	SE107686.017	%	60 - 130%	96
	BH20_3.0-3.4	SE107686.018	%	60 - 130%	90
	BH20_4.5-4.9	SE107686.019	%	60 - 130%	93
	NBH18_0.5-0.6	SE107686.020	%	60 - 130%	86
	NBH18_1.5-1.95	SE107686.021	%	60 - 130%	111
	NBH18_3-3.45	SE107686.022	%	60 - 130%	86
	NBH18_4.3-4.5	SE107686.023	%	60 - 130%	109

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433/AN434

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	NBH22_0.5-0.6	SE107686.024	%	60 - 130%	85
	NBH22_1.5-1.95	SE107686.025	%	60 - 130%	93
	NBH24_0-0.1	SE107686.026	%	60 - 130%	86
	NBH24_1.5-1.95	SE107686.027	%	60 - 130%	95
	NBH24_3.0-3.45	SE107686.029	%	60 - 130%	90
	DUP 10	SE107686.030	%	60 - 130%	96
	TB5	SE107686.031	%	60 - 130%	91
	TS5	SE107686.032	%	60 - 130%	107
d4-1,2-dichloroethane (Surrogate)	BH7_1.5-1.95	SE107686.002	%	60 - 130%	101
	BH7_2.9-3.0	SE107686.003	%	60 - 130%	101
	BH7_0.4-0.5	SE107686.004	%	60 - 130%	100
	BH12_0.4-0.5	SE107686.006	%	60 - 130%	100
	BH12_1.5-1.95	SE107686.007	%	60 - 130%	100
	BH12_2.9-3.0	SE107686.008	%	60 - 130%	101
	BH12_4.5-4.95	SE107686.009	%	60 - 130%	104
	BH23_0.5-0.6	SE107686.010	%	60 - 130%	101
	BH23_1.5-1.95	SE107686.011	%	60 - 130%	102
	BH23_3-3.45	SE107686.012	%	60 - 130%	101
	BH19_0.5-0.6	SE107686.013	%	60 - 130%	102
	BH19_1.3-1.4	SE107686.014	%	60 - 130%	100
	BH26_Surface	SE107686.015	%	60 - 130%	102
	BH20_0.3-0.4	SE107686.016	%	60 - 130%	100
	BH20_1.5-1.8	SE107686.017	%	60 - 130%	102
	BH20_3.0-3.4	SE107686.018	%	60 - 130%	102
	BH20_4.5-4.9	SE107686.019	%	60 - 130%	103
	NBH18_0.5-0.6	SE107686.020	%	60 - 130%	101
	NBH18_1.5-1.95	SE107686.021	%	60 - 130%	91
	NBH18_3-3.45	SE107686.022	%	60 - 130%	102
	NBH18_4.3-4.5	SE107686.023	%	60 - 130%	91
	NBH22_0.5-0.6	SE107686.024	%	60 - 130%	101
	NBH22_1.5-1.95	SE107686.025	%	60 - 130%	101
	NBH24_0-0.1	SE107686.026	%	60 - 130%	100
	NBH24_1.5-1.95	SE107686.027	%	60 - 130%	101
	NBH24_3.0-3.45	SE107686.029	%	60 - 130%	99
	DUP 10	SE107686.030	%	60 - 130%	99
	TB5	SE107686.031	%	60 - 130%	98
	TS5	SE107686.032	%	60 - 130%	99
d8-toluene (Surrogate)	BH7_1.5-1.95	SE107686.002	%	60 - 130%	98
	BH7_2.9-3.0	SE107686.003	%	60 - 130%	99
	BH7_0.4-0.5	SE107686.004	%	60 - 130%	100
	BH12_0.4-0.5	SE107686.006	%	60 - 130%	100
	BH12_1.5-1.95	SE107686.007	%	60 - 130%	100
	BH12_2.9-3.0	SE107686.008	%	60 - 130%	100
	BH12_4.5-4.95	SE107686.009	%	60 - 130%	100
	BH23_0.5-0.6	SE107686.010	%	60 - 130%	101
	BH23_1.5-1.95	SE107686.011	%	60 - 130%	100
	BH23_3-3.45	SE107686.012	%	60 - 130%	100
	BH19_0.5-0.6	SE107686.013	%	60 - 130%	99
	BH19_1.3-1.4	SE107686.014	%	60 - 130%	99
	BH26_Surface	SE107686.015	%	60 - 130%	100
	BH20_0.3-0.4	SE107686.016	%	60 - 130%	100
	BH20_1.5-1.8	SE107686.017	%	60 - 130%	100
	BH20_3.0-3.4	SE107686.018	%	60 - 130%	99
	BH20_4.5-4.9	SE107686.019	%	60 - 130%	100
	NBH18_0.5-0.6	SE107686.020	%	60 - 130%	100
	NBH18_1.5-1.95	SE107686.021	%	60 - 130%	97
	NBH18_3-3.45	SE107686.022	%	60 - 130%	99
	NBH18_4.3-4.5	SE107686.023	%	60 - 130%	99
	NBH22_0.5-0.6	SE107686.024	%	60 - 130%	100
	NBH22_1.5-1.95	SE107686.025	%	60 - 130%	99
	NBH24_0-0.1	SE107686.026	%	60 - 130%	100

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433/AN434

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	NBH24_1.5-1.95	SE107686.027	%	60 - 130%	99
	NBH24_3.0-3.45	SE107686.029	%	60 - 130%	99
	DUP 10	SE107686.030	%	60 - 130%	99
	TB5	SE107686.031	%	60 - 130%	100
	TS5	SE107686.032	%	60 - 130%	96
Dibromofluoromethane (Surrogate)	BH7_1.5-1.95	SE107686.002	%	60 - 130%	100
	BH7_2.9-3.0	SE107686.003	%	60 - 130%	99
	BH7_0.4-0.5	SE107686.004	%	60 - 130%	98
	BH12_0.4-0.5	SE107686.006	%	60 - 130%	98
	BH12_1.5-1.95	SE107686.007	%	60 - 130%	99
	BH12_2.9-3.0	SE107686.008	%	60 - 130%	99
	BH12_4.5-4.95	SE107686.009	%	60 - 130%	101
	BH23_0.5-0.6	SE107686.010	%	60 - 130%	98
	BH23_1.5-1.95	SE107686.011	%	60 - 130%	99
	BH23_3-3.45	SE107686.012	%	60 - 130%	99
	BH19_0.5-0.6	SE107686.013	%	60 - 130%	98
	BH19_1.3-1.4	SE107686.014	%	60 - 130%	97
	BH26_Surface	SE107686.015	%	60 - 130%	97
	BH20_0.3-0.4	SE107686.016	%	60 - 130%	96
	BH20_1.5-1.8	SE107686.017	%	60 - 130%	98
	BH20_3.0-3.4	SE107686.018	%	60 - 130%	98
	BH20_4.5-4.9	SE107686.019	%	60 - 130%	99
	NBH18_0.5-0.6	SE107686.020	%	60 - 130%	96
	NBH18_1.5-1.95	SE107686.021	%	60 - 130%	86
	NBH18_3-3.45	SE107686.022	%	60 - 130%	98
	NBH18_4.3-4.5	SE107686.023	%	60 - 130%	84
	NBH22_0.5-0.6	SE107686.024	%	60 - 130%	97
	NBH22_1.5-1.95	SE107686.025	%	60 - 130%	98
	NBH24_0-0.1	SE107686.026	%	60 - 130%	97
	NBH24_1.5-1.95	SE107686.027	%	60 - 130%	97
	NBH24_3.0-3.45	SE107686.029	%	60 - 130%	98
	DUP 10	SE107686.030	%	60 - 130%	96
	TB5	SE107686.031	%	60 - 130%	96
	TS5	SE107686.032	%	60 - 130%	98

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Trifluorotoluene (Surrogate)	BH7_1.5-1.95	SE107686.002	%	60 - 130%	64
	BH7_2.9-3.0	SE107686.003	%	60 - 130%	69
	BH7_0.4-0.5	SE107686.004	%	60 - 130%	64
	BH12_0.4-0.5	SE107686.006	%	60 - 130%	68
	BH12_1.5-1.95	SE107686.007	%	60 - 130%	70
	BH12_2.9-3.0	SE107686.008	%	60 - 130%	72
	BH12_4.5-4.95	SE107686.009	%	60 - 130%	73
	BH23_0.5-0.6	SE107686.010	%	60 - 130%	67
	BH23_1.5-1.95	SE107686.011	%	60 - 130%	71
	BH23_3-3.45	SE107686.012	%	60 - 130%	86
	BH19_0.5-0.6	SE107686.013	%	60 - 130%	76
	BH19_1.3-1.4	SE107686.014	%	60 - 130%	78
	BH26_Surface	SE107686.015	%	60 - 130%	91
	BH20_0.3-0.4	SE107686.016	%	60 - 130%	72
	BH20_1.5-1.8	SE107686.017	%	60 - 130%	68
	BH20_3.0-3.4	SE107686.018	%	60 - 130%	65
	BH20_4.5-4.9	SE107686.019	%	60 - 130%	68
	NBH18_0.5-0.6	SE107686.020	%	60 - 130%	67
	NBH18_1.5-1.95	SE107686.021	%	60 - 130%	77
	NBH18_3-3.45	SE107686.022	%	60 - 130%	70
	NBH18_4.3-4.5	SE107686.023	%	60 - 130%	72
	NBH22_0.5-0.6	SE107686.024	%	60 - 130%	73
	NBH22_1.5-1.95	SE107686.025	%	60 - 130%	86
	NBH24_0-0.1	SE107686.026	%	60 - 130%	76

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Volatile Petroleum Hydrocarbons In Soil (continued)**Method: ME-(AU)-[ENV]AN433/AN434**

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Trifluorotoluene (Surrogate)	NBH24_1.5-1.95	SE107686.027	%	60 - 130%	73
	NBH24_3.0-3.45	SE107686.029	%	60 - 130%	64
	DUP 10	SE107686.030	%	60 - 130%	78
	TB5	SE107686.031	%	60 - 130%	75

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB019250.001	Mercury	mg/kg	0.05	<0.05
LB019251.001	Mercury	mg/kg	0.05	<0.05
LB019252.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result
LB019129.001	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Alpha BHC	mg/kg	0.1	<0.1
	Lindane	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	<0.2
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.2	<0.2
	Endrin	mg/kg	0.2	<0.2
	Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	Endrin Aldehyde	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Endrin Ketone	mg/kg	0.1	<0.1
LB019131.001	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	107
	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Alpha BHC	mg/kg	0.1	<0.1
	Lindane	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	<0.2
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.2	<0.2
	Endrin	mg/kg	0.2	<0.2
	Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	Endrin Aldehyde	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Endrin Ketone	mg/kg	0.1	<0.1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	107

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result
LB019129.001	Dichlorvos	mg/kg	0.5	<0.5
	Dimethoate	mg/kg	0.5	<0.5
	Diazinon (Dimpylate)	mg/kg	0.5	<0.5
	Fenitrothion	mg/kg	0.2	<0.2
	Malathion	mg/kg	0.2	<0.2
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
	Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Bromophos Ethyl	mg/kg	0.2	<0.2
	Methidathion	mg/kg	0.5	<0.5

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

OP Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result
LB019129.001	Ethion	mg/kg	0.2	<0.2
	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	2-fluorobiphenyl (Surrogate)	%	-	84
	d14-p-terphenyl (Surrogate)	%	-	80
LB019131.001	Dichlorvos	mg/kg	0.5	<0.5
	Dimethoate	mg/kg	0.5	<0.5
	Diazinon (Dimpylate)	mg/kg	0.5	<0.5
	Fenitrothion	mg/kg	0.2	<0.2
	Malathion	mg/kg	0.2	<0.2
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
	Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Bromophos Ethyl	mg/kg	0.2	<0.2
	Methidathion	mg/kg	0.5	<0.5
	Ethion	mg/kg	0.2	<0.2
	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	2-fluorobiphenyl (Surrogate)	%	-	80
	d14-p-terphenyl (Surrogate)	%	-	86

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB019129.001	Naphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1
	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	<0.1
	Chrysene	mg/kg	0.1	<0.1
	Benzo(a)pyrene	mg/kg	0.1	<0.1
	Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
	Dibenzo(a&h)anthracene	mg/kg	0.1	<0.1
	Benzo(ghi)perylene	mg/kg	0.1	<0.1
	d5-nitrobenzene (Surrogate)	%	-	93
LB019131.001	2-fluorobiphenyl (Surrogate)	%	-	110
	d14-p-terphenyl (Surrogate)	%	-	120
	Naphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1
	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	<0.1
	Chrysene	mg/kg	0.1	<0.1
	Benzo(a)pyrene	mg/kg	0.1	<0.1
	Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
	Dibenzo(a&h)anthracene	mg/kg	0.1	<0.1
	Benzo(ghi)perylene	mg/kg	0.1	<0.1
Surrogates	d5-nitrobenzene (Surrogate)	%	-	82
	2-fluorobiphenyl (Surrogate)	%	-	80
	d14-p-terphenyl (Surrogate)	%	-	86

PCBs in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result
LB019129.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PCBs in Soil (continued)

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result
LB019129.001	Arochlor 1254	mg/kg	0.2	<0.2
	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1	<1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	107
LB019131.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2
	Arochlor 1254	mg/kg	0.2	<0.2
	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates			
	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	107

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB019245.001	Arsenic, As	mg/kg	3	<3
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.3	<0.3
	Copper, Cu	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Nickel, Ni	mg/kg	0.5	<0.5
	Zinc, Zn	mg/kg	0.5	<0.5
LB019246.001	Arsenic, As	mg/kg	3	<3
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.3	<0.3
	Copper, Cu	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Nickel, Ni	mg/kg	0.5	<0.5
	Zinc, Zn	mg/kg	0.5	<0.5

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB019129.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	50	<50
	TRH C29-C36	mg/kg	50	<50
LB019131.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	50	<50
	TRH C29-C36	mg/kg	50	<50

VOC's in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number		Parameter	Units	LOR	Result
LB019127.001	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1
		1,2-dichloropropane	mg/kg	0.1	<0.1
		cis-1,3-dichloropropene	mg/kg	0.1	<0.1
		trans-1,3-dichloropropene	mg/kg	0.1	<0.1
		1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1
	Halogenated Aliphatics	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1
		Chloromethane	mg/kg	1	<1
		Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1
		Bromomethane	mg/kg	1	<1
		Chloroethane	mg/kg	1	<1
		Trichlorofluoromethane	mg/kg	1	<1
		1,1-dichloroethene	mg/kg	0.1	<0.1
		Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5
		Allyl chloride	mg/kg	0.1	<0.1
		trans-1,2-dichloroethene	mg/kg	0.1	<0.1
		1,1-dichloroethane	mg/kg	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number		Parameter	Units	LOR	Result
LB019127.001	Halogenated Aliphatics	cis-1,2-dichloroethene	mg/kg	0.1	<0.1
		Bromochloromethane	mg/kg	0.1	<0.1
		1,2-dichloroethane	mg/kg	0.1	<0.1
		1,1,1-trichloroethane	mg/kg	0.1	<0.1
		1,1-dichloropropene	mg/kg	0.1	<0.1
		Carbon tetrachloride	mg/kg	0.1	<0.1
		Dibromomethane	mg/kg	0.1	<0.1
		Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1
		1,1,2-trichloroethane	mg/kg	0.1	<0.1
		1,3-dichloropropane	mg/kg	0.1	<0.1
		Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1
		1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1
		cis-1,4-dichloro-2-butene	mg/kg	1	<1
		1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1
		1,2,3-trichloropropane	mg/kg	0.1	<0.1
		trans-1,4-dichloro-2-butene	mg/kg	1	<1
		1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1
		Hexachlorobutadiene	mg/kg	0.1	<0.1
		Iodomethane	mg/kg	5	<5
	Halogenated Aromatics	Chlorobenzene	mg/kg	0.1	<0.1
		Bromobenzene	mg/kg	0.1	<0.1
		2-chlorotoluene	mg/kg	0.1	<0.1
		4-chlorotoluene	mg/kg	0.1	<0.1
		1,3-dichlorobenzene	mg/kg	0.1	<0.1
		1,4-dichlorobenzene	mg/kg	0.1	<0.1
		1,2-dichlorobenzene	mg/kg	0.1	<0.1
		1,2,4-trichlorobenzene	mg/kg	0.1	<0.1
		1,2,3-trichlorobenzene	mg/kg	0.1	<0.1
	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
		Styrene (Vinyl benzene)	mg/kg	0.1	<0.1
		Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1
		n-propylbenzene	mg/kg	0.1	<0.1
		1,3,5-trimethylbenzene	mg/kg	0.1	<0.1
		tert-butylbenzene	mg/kg	0.1	<0.1
		1,2,4-trimethylbenzene	mg/kg	0.1	<0.1
		sec-butylbenzene	mg/kg	0.1	<0.1
		p-isopropyltoluene	mg/kg	0.1	<0.1
		n-butylbenzene	mg/kg	0.1	<0.1
	Nitrogenous Compounds	Acrylonitrile	mg/kg	0.1	<0.1
		2-nitropropane	mg/kg	10	<10
	Oxygenated Compounds	Acetone (2-propanone)	mg/kg	10	<10
		MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	<0.5
		Vinyl acetate	mg/kg	10	<10
		MEK (2-butanone)	mg/kg	10	<10
		MIBK (4-methyl-2-pentanone)	mg/kg	1	<1
		2-hexanone (MBK)	mg/kg	5	<5
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	87
		d4-1,2-dichloroethane (Surrogate)	%	-	99
		d8-toluene (Surrogate)	%	-	96
		Bromofluorobenzene (Surrogate)	%	-	113
	Totals	Total BTEX*	mg/kg	-	0
	Trihalomethanes	Chloroform	mg/kg	0.1	<0.1
		Bromodichloromethane	mg/kg	0.1	<0.1
		Chlorodibromomethane	mg/kg	0.1	<0.1
		Bromoform	mg/kg	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number		Parameter	Units	LOR	Result
LB019128.001	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1
		1,2-dichloropropane	mg/kg	0.1	<0.1
		cis-1,3-dichloropropene	mg/kg	0.1	<0.1
		trans-1,3-dichloropropene	mg/kg	0.1	<0.1
		1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1
	Halogenated Aliphatics	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1
		Chloromethane	mg/kg	1	<1
		Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1
		Bromomethane	mg/kg	1	<1
		Chloroethane	mg/kg	1	<1
		Trichlorofluoromethane	mg/kg	1	<1
		1,1-dichloroethene	mg/kg	0.1	<0.1
		Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5
		Allyl chloride	mg/kg	0.1	<0.1
		trans-1,2-dichloroethene	mg/kg	0.1	<0.1
		1,1-dichloroethane	mg/kg	0.1	<0.1
		cis-1,2-dichloroethene	mg/kg	0.1	<0.1
		Bromochloromethane	mg/kg	0.1	<0.1
		1,2-dichloroethane	mg/kg	0.1	<0.1
		1,1,1-trichloroethane	mg/kg	0.1	<0.1
		1,1-dichloropropene	mg/kg	0.1	<0.1
		Carbon tetrachloride	mg/kg	0.1	<0.1
		Dibromomethane	mg/kg	0.1	<0.1
		Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1
		1,1,2-trichloroethane	mg/kg	0.1	<0.1
		1,3-dichloropropane	mg/kg	0.1	<0.1
		Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1
		1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1
		cis-1,4-dichloro-2-butene	mg/kg	1	<1
		1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1
		1,2,3-trichloropropane	mg/kg	0.1	<0.1
		trans-1,4-dichloro-2-butene	mg/kg	1	<1
		1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1
		Hexachlorobutadiene	mg/kg	0.1	<0.1
		Iodomethane	mg/kg	5	<5
	Halogenated Aromatics	Chlorobenzene	mg/kg	0.1	<0.1
		Bromobenzene	mg/kg	0.1	<0.1
		2-chlorotoluene	mg/kg	0.1	<0.1
		4-chlorotoluene	mg/kg	0.1	<0.1
		1,3-dichlorobenzene	mg/kg	0.1	<0.1
		1,4-dichlorobenzene	mg/kg	0.1	<0.1
		1,2-dichlorobenzene	mg/kg	0.1	<0.1
		1,2,4-trichlorobenzene	mg/kg	0.1	<0.1
		1,2,3-trichlorobenzene	mg/kg	0.1	<0.1
	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
		Styrene (Vinyl benzene)	mg/kg	0.1	<0.1
		Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1
		n-propylbenzene	mg/kg	0.1	<0.1
		1,3,5-trimethylbenzene	mg/kg	0.1	<0.1
		tert-butylbenzene	mg/kg	0.1	<0.1
		1,2,4-trimethylbenzene	mg/kg	0.1	<0.1
		sec-butylbenzene	mg/kg	0.1	<0.1
		p-isopropyltoluene	mg/kg	0.1	<0.1
		n-butylbenzene	mg/kg	0.1	<0.1
		Nitrogenous Compounds			
		Acrylonitrile	mg/kg	0.1	<0.1
		2-nitropropane	mg/kg	10	<10
	Oxygenated Compounds	Acetone (2-propanone)	mg/kg	10	<10

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number		Parameter	Units	LOR	Result
LB019128.001	Oxygenated Compounds	MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	<0.5
		Vinyl acetate	mg/kg	10	<10
		MEK (2-butanone)	mg/kg	10	<10
		MIBK (4-methyl-2-pentanone)	mg/kg	1	<1
		2-hexanone (MBK)	mg/kg	5	<5
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	88
		d4-1,2-dichloroethane (Surrogate)	%	-	98
		d8-toluene (Surrogate)	%	-	95
		Bromofluorobenzene (Surrogate)	%	-	111
	Totals	Total BTEX*	mg/kg	-	0
	Trihalomethanes	Chloroform	mg/kg	0.1	<0.1
		Bromodichloromethane	mg/kg	0.1	<0.1
		Chlorodibromomethane	mg/kg	0.1	<0.1
		Bromoform	mg/kg	0.1	<0.1
LB019132.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	96
		d4-1,2-dichloroethane (Surrogate)	%	-	103
		d8-toluene (Surrogate)	%	-	95
		Bromofluorobenzene (Surrogate)	%	-	108

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number		Parameter	Units	LOR	Result
LB019127.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	Trifluorotoluene (Surrogate)	%	-	104
LB019128.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	Trifluorotoluene (Surrogate)	%	-	88

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE107598.009	LB019250.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE107686.006	LB019250.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE107686.016	LB019251.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE107686.025	LB019251.024	Mercury	mg/kg	0.05	<0.05	0.05	138	0
SE107690.006	LB019252.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE107735.010	LB019252.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE107686.023	LB019131.004	Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
		Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
		Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
		Malathion	mg/kg	0.2	<0.2	<0.2	200	0
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
		Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
		Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
		Ethion	mg/kg	0.2	<0.2	<0.2	200	0
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
		Surrogates						
		2-fluorobiphenyl (Surrogate)	%	-	88.0	86.0	30	2
		d14-p-terphenyl (Surrogate)	%	-	84.0	86.0	30	2

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE107686.002	LB019129.004	Naphthalene	mg/kg	0.1	0.1	0.1	110	24
		Acenaphthylene	mg/kg	0.1	0.1	0.1	101	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	0.1	0.1	130	0
		Phenanthrene	mg/kg	0.1	1.0	1.0	40	0
		Anthracene	mg/kg	0.1	0.4	0.4	55	2
		Fluoranthene	mg/kg	0.1	1.5	1.5	37	1
		Pyrene	mg/kg	0.1	1.5	1.5	37	0
		Benzo(a)anthracene	mg/kg	0.1	0.8	0.8	43	0
		Chrysene	mg/kg	0.1	0.6	0.6	47	2
		Benzo(b)fluoranthene	mg/kg	0.1	0.8	0.9	42	4
		Benzo(k)fluoranthene	mg/kg	0.1	0.3	0.3	62	3
		Benzo(a)pyrene	mg/kg	0.1	0.7	0.7	44	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.3	0.3	60	3
		Dibenzo(a&h)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	0.5	0.5	52	0
		Total PAH (Vic EPA)	mg/kg	0.8	8.8	8.8	39	0
		Surrogates						
		d5-nitrobenzene (Surrogate)	%	-	90.0	90.0	30	0
		2-fluorobiphenyl (Surrogate)	%	-	103.0	104.0	30	1
		d14-p-terphenyl (Surrogate)	%	-	117.0	116.0	30	1
SE107686.013	LB019129.016	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	0.3	0.3	69	4
		Anthracene	mg/kg	0.1	0.1	0.1	130	0
		Fluoranthene	mg/kg	0.1	0.5	0.5	49	2
		Pyrene	mg/kg	0.1	0.6	0.5	48	2
		Benzo(a)anthracene	mg/kg	0.1	0.3	0.3	66	21
		Chrysene	mg/kg	0.1	0.3	0.3	68	8
		Benzo(b)fluoranthene	mg/kg	0.1	0.4	0.4	58	3
		Benzo(k)fluoranthene	mg/kg	0.1	0.2	0.2	83	0
		Benzo(a)pyrene	mg/kg	0.1	0.3	0.3	65	4
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.2	0.2	93	0
		Dibenzo(a&h)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	0.2	0.2	78	0
		Total PAH (Vic EPA)	mg/kg	0.8	3.2	3.1	55	3

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE107686.013	LB019129.016	Surrogates	d5-nitrobenzene (Surrogate)	%	-	109.0	103.0	30	6
			2-fluorobiphenyl (Surrogate)	%	-	104.0	101.0	30	3
			d14-p-terphenyl (Surrogate)	%	-	112.0	110.0	30	2
SE107686.023	LB019131.004		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0	
		Acenaphthene	mg/kg	0.1	0.3	0.3	66	7	
		Fluorene	mg/kg	0.1	0.3	0.3	61	6	
		Phenanthrene	mg/kg	0.1	0.9	0.9	41	2	
		Anthracene	mg/kg	0.1	0.3	0.3	62	0	
		Fluoranthene	mg/kg	0.1	0.6	0.6	48	7	
		Pyrene	mg/kg	0.1	0.6	0.6	48	0	
		Benzo(a)anthracene	mg/kg	0.1	0.2	0.2	72	0	
		Chrysene	mg/kg	0.1	0.2	0.2	80	10	
		Benzo(b)fluoranthene	mg/kg	0.1	0.2	0.2	91	6	
		Benzo(k)fluoranthene	mg/kg	0.1	0.1	0.1	130	0	
		Benzo(a)pyrene	mg/kg	0.1	0.2	0.2	91	6	
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0	
		Dibenzo(a&h)anthracene	mg/kg	0.1	<0.1	<0.1	200	0	
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0	
		Total PAH (Vic EPA)	mg/kg	0.8	3.8	3.8	51	0	
		Surrogates	d5-nitrobenzene (Surrogate)	%	-	84.0	86.0	30	2
			2-fluorobiphenyl (Surrogate)	%	-	88.0	86.0	30	2
			d14-p-terphenyl (Surrogate)	%	-	84.0	86.0	30	2

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE107686.012	LB019245.014	Arsenic, As	mg/kg	3	8	7	70	19
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.3	5.6	5.6	35	0
		Copper, Cu	mg/kg	0.5	5.8	5.3	39	9
		Lead, Pb	mg/kg	1	14	13	37	7
		Nickel, Ni	mg/kg	0.5	1.6	1.6	62	1
		Zinc, Zn	mg/kg	0.5	6.0	5.5	39	8
SE107686.021	LB019245.024	Arsenic, As	mg/kg	3	9	8	66	5
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	170	0
		Chromium, Cr	mg/kg	0.3	14	16	32	9
		Copper, Cu	mg/kg	0.5	10	10	35	1
		Lead, Pb	mg/kg	1	46	43	32	5
		Nickel, Ni	mg/kg	0.5	2.6	2.2	51	18
		Zinc, Zn	mg/kg	0.5	31	30	32	2
SE107690.002	LB019246.014	Arsenic, As	mg/kg	3	<3	<3	150	0
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.3	5.04412596935.2691047681		36	4
		Copper, Cu	mg/kg	0.5	<0.5	<0.5	170	0
		Lead, Pb	mg/kg	1	20	21	35	4
		Nickel, Ni	mg/kg	0.5	<0.5	0.5	127	9
		Zinc, Zn	mg/kg	0.5	1.3	1.5	66	13

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE107686.002	LB019129.004	TRH C10-C14	mg/kg	20	<20	<20	200	0
		TRH C15-C28	mg/kg	50	87	97	84	11
		TRH C29-C36	mg/kg	50	<50	66	118	28
SE107686.013	LB019129.016	TRH C10-C14	mg/kg	20	<20	<20	200	0
		TRH C15-C28	mg/kg	50	<50	<50	200	0
		TRH C29-C36	mg/kg	50	<50	<50	200	0
SE107686.023	LB019131.004	TRH C10-C14	mg/kg	20	<20	<20	200	0
		TRH C15-C28	mg/kg	50	<50	<50	200	0
		TRH C29-C36	mg/kg	50	<50	<50	200	0

VOC's in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Original	Duplicate	Parameter	Units	LOR
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Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433/AN434

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE107686.012	LB019127.015	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200
		Ethylbenzene		mg/kg	0.1	<0.1	<0.1	200	0
		m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0	
		o-xylene	mg/kg	0.1	<0.1	<0.1	200	0	
		Surrogates	Dibromofluoromethane (Surrogate)	%	-	99.0	99.0	50	0
			d4-1,2-dichloroethane (Surrogate)	%	-	101.0	102.0	50	1
			d8-toluene (Surrogate)	%	-	100.0	99.0	50	1
			Bromofluorobenzene (Surrogate)	%	-	95.0	96.0	50	1
		Totals	Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX*	mg/kg	-	0	0	200	NA
		SE107686.022	LB019127.028	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1
Aromatic	Toluene				mg/kg	0.1	<0.1	<0.1	200
	Ethylbenzene			mg/kg	0.1	<0.1	<0.1	200	0
m/p-xylene	mg/kg			0.2	<0.2	<0.2	200	0	
o-xylene	mg/kg			0.1	<0.1	<0.1	200	0	
Surrogates	Dibromofluoromethane (Surrogate)			%	-	98.0	98.0	50	0
	d4-1,2-dichloroethane (Surrogate)			%	-	102.0	103.0	50	1
	d8-toluene (Surrogate)			%	-	99.0	100.0	50	1
	Bromofluorobenzene (Surrogate)			%	-	86.0	90.0	50	5
Totals	Total Xylenes*			mg/kg	0.3	<0.3	<0.3	200	0
	Total BTEX*			mg/kg	-	0	0	200	NA
SE107686.031	LB019128.013			Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1
		Aromatic	Toluene		mg/kg	0.1	<0.1	<0.1	200
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
		m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0	
		o-xylene	mg/kg	0.1	<0.1	<0.1	200	0	
		Surrogates	Dibromofluoromethane (Surrogate)	%	-	96.0	96.0	50	0
			d4-1,2-dichloroethane (Surrogate)	%	-	98.0	100.0	50	2
			d8-toluene (Surrogate)	%	-	100.0	99.0	50	1
			Bromofluorobenzene (Surrogate)	%	-	91.0	88.0	50	3
		Totals	Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX*	mg/kg	-	0	0	200	NA

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE107686.012	LB019127.015	TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	Trifluorotoluene (Surrogate)	%	-	86	75	30
SE107686.022	LB019127.028	TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	Trifluorotoluene (Surrogate)	%	-	70	69	30
SE107686.031	LB019128.013	TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	Trifluorotoluene (Surrogate)	%	-	75	78	30

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019250.002	Mercury	mg/kg	0.05	0.22	0.2	70 - 130	111
LB019251.002	Mercury	mg/kg	0.05	0.24	0.2	70 - 130	120
LB019252.002	Mercury	mg/kg	0.05	0.24	0.2	70 - 130	118

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019129.002	Heptachlor	mg/kg	0.1	0.3	0.2	60 - 140	135
	Aldrin	mg/kg	0.1	0.3	0.2	60 - 140	135
	Delta BHC	mg/kg	0.1	0.3	0.2	60 - 140	125
	Dieldrin	mg/kg	0.2	0.2	0.2	60 - 140	120
	Endrin	mg/kg	0.2	0.3	0.2	60 - 140	135
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	115
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	100	100	60 - 140	103
LB019131.002	Heptachlor	mg/kg	0.1	0.3	0.2	60 - 140	135
	Aldrin	mg/kg	0.1	0.3	0.2	60 - 140	135
	Delta BHC	mg/kg	0.1	0.3	0.2	60 - 140	125
	Dieldrin	mg/kg	0.2	0.2	0.2	60 - 140	120
	Endrin	mg/kg	0.2	0.3	0.2	60 - 140	135
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	115
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	100	100	60 - 140	103

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019129.002	Dichlorvos	mg/kg	0.5	1.4	1.33	60 - 140	105
	Diazinon (Dimpylate)	mg/kg	0.5	1.4	1.33	60 - 140	108
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.2	1.33	60 - 140	92
	Ethion	mg/kg	0.2	1.5	1.33	60 - 140	115
	2-fluorobiphenyl (Surrogate)	%	-	102.0	100	60 - 120	102
	d14-p-terphenyl (Surrogate)	%	-	80.0	100	60 - 140	80
LB019131.002	Dichlorvos	mg/kg	0.5	1.4	1.33	60 - 140	105
	Diazinon (Dimpylate)	mg/kg	0.5	1.4	1.33	60 - 140	108
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.2	1.33	60 - 140	92
	Ethion	mg/kg	0.2	1.5	1.33	60 - 140	115
	2-fluorobiphenyl (Surrogate)	%	-	102.0	100	60 - 120	102
	d14-p-terphenyl (Surrogate)	%	-	80.0	100	60 - 140	80

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019129.002	Naphthalene	mg/kg	0.1	3.9	4	60 - 140	98
	Acenaphthylene	mg/kg	0.1	4.3	4	60 - 140	108
	Acenaphthene	mg/kg	0.1	3.7	4	60 - 140	92
	Phenanthrene	mg/kg	0.1	4.0	4	60 - 140	100
	Anthracene	mg/kg	0.1	4.4	4	60 - 140	110
	Fluoranthene	mg/kg	0.1	4.2	4	60 - 140	105
	Pyrene	mg/kg	0.1	4.2	4	60 - 140	106
	Benzo(a)pyrene	mg/kg	0.1	4.4	4	60 - 140	110
	d5-nitrobenzene (Surrogate)	%	-	98.0	100	60 - 140	98
	2-fluorobiphenyl (Surrogate)	%	-	92.0	100	60 - 140	92
	d14-p-terphenyl (Surrogate)	%	-	105.0	100	60 - 140	105
LB019131.002	Naphthalene	mg/kg	0.1	3.0	4	60 - 140	75
	Acenaphthylene	mg/kg	0.1	3.9	4	60 - 140	98
	Acenaphthene	mg/kg	0.1	4.6	4	60 - 140	116
	Phenanthrene	mg/kg	0.1	4.1	4	60 - 140	102
	Anthracene	mg/kg	0.1	4.0	4	60 - 140	101
	Fluoranthene	mg/kg	0.1	4.6	4	60 - 140	116
	Pyrene	mg/kg	0.1	4.4	4	60 - 140	110
	Benzo(a)pyrene	mg/kg	0.1	4.1	4	60 - 140	102
	d5-nitrobenzene (Surrogate)	%	-	88.0	100	60 - 140	88
	2-fluorobiphenyl (Surrogate)	%	-	82.0	100	60 - 140	82
	d14-p-terphenyl (Surrogate)	%	-	74.0	100	60 - 140	74

PCBs in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR
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Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PCBs in Soil (continued)

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019129.002	Arochlor 1260	mg/kg	0.2	0.6	0.4	60 - 140	138
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	110	100	111
LB019131.002	Arochlor 1260	mg/kg	0.2	0.6	0.4	60 - 140	138
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	110	100	111

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019245.002	Arsenic, As	mg/kg	3	48	50	80 - 120	96
	Cadmium, Cd	mg/kg	0.3	49	50	80 - 120	98
	Chromium, Cr	mg/kg	0.3	49	50	80 - 120	97
	Copper, Cu	mg/kg	0.5	46	50	80 - 120	92
	Lead, Pb	mg/kg	1	49	50	80 - 120	98
	Nickel, Ni	mg/kg	0.5	49	50	80 - 120	98
	Zinc, Zn	mg/kg	0.5	50	50	80 - 120	101
LB019246.002	Arsenic, As	mg/kg	3	48	50	80 - 120	97
	Cadmium, Cd	mg/kg	0.3	49	50	80 - 120	98
	Chromium, Cr	mg/kg	0.3	49	50	80 - 120	98
	Copper, Cu	mg/kg	0.5	46	50	80 - 120	93
	Lead, Pb	mg/kg	1	49	50	80 - 120	98
	Nickel, Ni	mg/kg	0.5	50	50	80 - 120	100
	Zinc, Zn	mg/kg	0.5	50	50	80 - 120	101

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019129.002	TRH C10-C14	mg/kg	20	41	40	60 - 140	103
	TRH C15-C28	mg/kg	50	<50	40	60 - 140	98
	TRH C29-C36	mg/kg	50	<50	40	60 - 140	95
LB019131.002	TRH C10-C14	mg/kg	20	41	40	60 - 140	103
	TRH C15-C28	mg/kg	50	<50	40	60 - 140	100
	TRH C29-C36	mg/kg	50	<50	40	60 - 140	98

VOC's in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number	Parameter		Units	LOR	Result	Expected	Criteria %	Recovery %	
LB019127.002	Halogenated	1,1-dichloroethene	mg/kg	0.1	2.1	2.9	60 - 140	73	
	Aliphatics	1,2-dichloroethane	mg/kg	0.1	2.1	2.9	60 - 140	73	
		Trichloroethene (Trichloroethylene -TCE)		mg/kg	0.1	2.5	2.9	60 - 140	87
	Halogenated	Chlorobenzene	mg/kg	0.1	2.2	2.9	60 - 140	75	
	Monocyclic	Benzene	mg/kg	0.1	2.6	3	60 - 140	85	
	Aromatic	Toluene	mg/kg	0.1	2.8	3	60 - 140	92	
		Ethylbenzene	mg/kg	0.1	2.1	3	60 - 140	70	
		m/p-xylene	mg/kg	0.2	4.5	5.9	60 - 140	76	
	Surrogates	o-xylene	mg/kg	0.1	2.5	2.9	60 - 140	84	
		Dibromofluoromethane (Surrogate)		%	-	93.0	100	60 - 140	93
		d4-1,2-dichloroethane (Surrogate)		%	-	99.0	100	60 - 140	99
		d8-toluene (Surrogate)		%	-	96.0	100	60 - 140	96
		Bromofluorobenzene (Surrogate)		%	-	106.0	100	60 - 140	106
	Trihalomethan	Chloroform	mg/kg	0.1	2.5	2.9	60 - 140	86	
LB019128.002	Halogenated	1,1-dichloroethene	mg/kg	0.1	2.2	2.9	60 - 140	76	
	Aliphatics	1,2-dichloroethane	mg/kg	0.1	2.1	2.9	60 - 140	74	
		Trichloroethene (Trichloroethylene -TCE)		mg/kg	0.1	2.0	2.9	60 - 140	69
	Halogenated	Chlorobenzene	mg/kg	0.1	2.2	2.9	60 - 140	76	
	Monocyclic	Benzene	mg/kg	0.1	2.4	3	60 - 140	79	
	Aromatic	Toluene	mg/kg	0.1	2.5	3	60 - 140	83	
		Ethylbenzene	mg/kg	0.1	1.9	3	60 - 140	65	
		m/p-xylene	mg/kg	0.2	4.2	5.9	60 - 140	71	
	Surrogates	o-xylene	mg/kg	0.1	2.1	2.9	60 - 140	74	
		Dibromofluoromethane (Surrogate)		%	-	91.0	100	60 - 140	91
		d4-1,2-dichloroethane (Surrogate)		%	-	113.0	100	60 - 140	113
		d8-toluene (Surrogate)		%	-	95.0	100	60 - 140	95
		Bromofluorobenzene (Surrogate)		%	-	108.0	100	60 - 140	108
	Trihalomethan	Chloroform	mg/kg	0.1	2.4	2.9	60 - 140	84	
LB019132.002	Monocyclic	Benzene	mg/kg	0.1	2.3	3	60 - 140	76	

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019132.002	Monocyclic	Toluene	mg/kg	0.1	2.7	3	60 - 140 89
	Aromatic	Ethylbenzene	mg/kg	0.1	2.0	3	60 - 140 68
		m/p-xylene	mg/kg	0.2	4.3	5.9	60 - 140 73
		o-xylene	mg/kg	0.1	2.2	2.9	60 - 140 77
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	89.0	100	60 - 140 89
		d4-1,2-dichloroethane (Surrogate)	%	-	100.0	100	60 - 140 100
		d8-toluene (Surrogate)	%	-	95.0	100	60 - 140 95
		Bromofluorobenzene (Surrogate)	%	-	104.0	100	60 - 140 104

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019127.002	TRH C6-C9	mg/kg	20	32	24.4	60 - 140	130
LB019128.002	TRH C6-C9	ma/ka	20	30	24.4	60 - 140	122

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE107585.011	LB019250.004	Mercury	mg/kg	0.05	0.23	<0.05	0.2	115
SE107686.007	LB019251.004	Mercury	mg/kg	0.05	0.24	<0.05	0.2	108
SE107686.026	LB019252.004	Mercury	mg/kg	0.05	0.23	<0.05	0.2	111

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE107686.004	LB019129.007	Naphthalene	mg/kg	0.1	3.8	<0.1	4	95
		Acenaphthylene	mg/kg	0.1	4.3	<0.1	4	108
		Acenaphthene	mg/kg	0.1	3.6	<0.1	4	91
		Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
		Phenanthrene	mg/kg	0.1	4.0	<0.1	4	100
		Anthracene	mg/kg	0.1	4.3	<0.1	4	108
		Fluoranthene	mg/kg	0.1	4.3	<0.1	4	107
		Pyrene	mg/kg	0.1	4.2	<0.1	4	104
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
		Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(b)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(a)pyrene	mg/kg	0.1	4.4	<0.1	4	109
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
		Dibenzo(a&h)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
		Total PAH (Vic EPA)	mg/kg	0.8	33	<0.8	-	-
		Surrogates						
		d5-nitrobenzene (Surrogate)	%	-	93.0	77.0	100	93
		2-fluorobiphenyl (Surrogate)	%	-	93.0	91.0	100	93
		d14-p-terphenyl (Surrogate)	%	-	101.0	104.0	100	101
SE107686.025	LB019131.007	Naphthalene	mg/kg	0.1	3.3	<0.1	4	83
		Acenaphthylene	mg/kg	0.1	4.8	<0.1	4	121
		Acenaphthene	mg/kg	0.1	4.4	<0.1	4	109
		Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
		Phenanthrene	mg/kg	0.1	4.1	<0.1	4	103
		Anthracene	mg/kg	0.1	3.9	<0.1	4	99
		Fluoranthene	mg/kg	0.1	4.6	<0.1	4	116
		Pyrene	mg/kg	0.1	4.3	<0.1	4	106
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
		Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(b)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(a)pyrene	mg/kg	0.1	4.2	<0.1	4	105
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
		Dibenzo(a&h)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
		Total PAH (Vic EPA)	mg/kg	0.8	34	<0.8	-	-
		Surrogates						
		d5-nitrobenzene (Surrogate)	%	-	94.0	82.0	100	94
		2-fluorobiphenyl (Surrogate)	%	-	100.0	82.0	100	100
		d14-p-terphenyl (Surrogate)	%	-	84.0	82.0	100	84

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE107686.002	LB019245.004	Arsenic, As	mg/kg	3	50	6	50	89
		Cadmium, Cd	mg/kg	0.3	45	<0.3	50	90
		Chromium, Cr	mg/kg	0.3	56	10	50	91
		Copper, Cu	mg/kg	0.5	75	37	50	77
		Lead, Pb	mg/kg	1	98	67	50	62 @
		Nickel, Ni	mg/kg	0.5	55	9.5	50	90
		Zinc, Zn	mg/kg	0.5	100	66	50	75
SE107686.022	LB019246.004	Arsenic, As	mg/kg	3	50	14	50	71
		Cadmium, Cd	mg/kg	0.3	46	<0.3	50	91
		Chromium, Cr	mg/kg	0.3	58	23	50	71
		Copper, Cu	mg/kg	0.5	47	3.1	50	89
		Lead, Pb	mg/kg	1	53	9	50	88

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest (continued)

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE107686.022	LB019246.004	Nickel, Ni	mg/kg	0.5	47	0.9	50	92
		Zinc, Zn	mg/kg	0.5	50	3.1	50	94

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE107686.003	LB019129.006	TRH C10-C14	mg/kg	20	47	<20	40	118
		TRH C15-C28	mg/kg	50	370	260	40	268 Ⓢ
		TRH C29-C36	mg/kg	50	140	98	40	98
SE107686.024	LB019131.006	TRH C10-C14	mg/kg	20	39	<20	40	98
		TRH C15-C28	mg/kg	50	<50	<50	40	105
		TRH C29-C36	mg/kg	50	<50	<50	40	110

VOC's in Soil

Method: ME-(AU)-[ENV]AN433/AN434

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE107686.002	LB019127.004	Monocyclic	Benzene	mg/kg	0.1	<0.1	3	101
		Aromatic	Toluene	mg/kg	0.1	<0.1	3	97
			Ethylbenzene	mg/kg	0.1	<0.1	3	96
			m/p-xylene	mg/kg	0.2	<0.2	5.9	96
			o-xylene	mg/kg	0.1	<0.1	2.9	85
		Surrogates	Dibromofluoromethane (Surrogate)	%	-	99.0	100.0	99
			d4-1,2-dichloroethane (Surrogate)	%	-	102.0	101.0	102
			d8-toluene (Surrogate)	%	-	99.0	98.0	99
			Bromofluorobenzene (Surrogate)	%	-	94.0	91.0	94
		Totals	Total Xylenes*	mg/kg	0.3	<0.3	-	-
			Total BTEX*	mg/kg	-	17	0	-

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE107686.002	LB019127.005	TRH C6-C9	mg/kg	20	31	<20	24.4	127
		Surrogates	Trifluorotoluene (Surrogate)	%	-	66	-	66

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here:
<http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf>

- * Non-accredited analysis.
- Sample not analysed for this analyte.
- ^ Analysis performed by external laboratory.

- IS Insufficient sample for analysis.
- LNR Sample listed, but not received.
- LOR Limit of reporting.
- QFH QC result is above the upper tolerance.
- QFL QC result is below the lower tolerance.

- ① At least 2 of 3 surrogates are within acceptance criteria.
- ② RPD failed acceptance criteria due to sample heterogeneity.
- ③ Results less than 5 times LOR preclude acceptance criteria for RPD.
- ④ Recovery failed acceptance criteria due to matrix interference.
- ⑤ Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
- ⑥ LOR was raised due to sample matrix interference.
- ⑦ LOR was raised due to dilution of significantly high concentration of analyte in sample.
- ⑧ Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
- ⑨ Recovery failed acceptance criteria due to sample heterogeneity.
- † Refer to Analytical Report comments for further information.

This document is issued, on the Client's behalf, by the Company under its General Conditions of Service, available on request and accessible at http://www.sgs.com/terms_and_conditions.htm. The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

81300



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Pasig City, Metro Manila, Philippines

☐ Adelaide: Tel (08) 7221 3500 Fax (08) 8172 1968
Level 1, 2-3 Greenhill Road, Wayville SA 5034
☐ Brisbane: Tel (07) 3608 2500 Fax (07) 3852 2805
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2/54 Northbourne Avenue, Canberra ACT 2601
☐ Dillhorn House: Tel: (08) 9328 3488 Fax (08) 9328 3588
Dillhorn House, 2 Bulwer Street, Perth, WA 6000

Project No: GEOTLCOV24303 AC

Task No:

Project Name: SLICEEP

Laboratory: SCS

Samplers Name: Jocelyn Wijaya

Project Manager: Matthew Locke

Special Instructions:

Remainning soil to be returned for Coffey to storage
for 36 months.

Lab. No.	Sample ID	Sample Location	Sample Depth	Sample Date	Time	Matrix (Soil ... etc)	Container Type & Preservative*	T-A-T (Specify)
1	NBH21		0.4-0.5	27/4/12		Soil	Bag & jar	Soil
2	NBH21		1.5-1.95	27/4/12			Bag & jar	
3	NBH21		3.0-3.45	27/4/12			Bag & jar	
4	NBH17		0.4-0.5	27/4/12			Bag & jar	
5	NBH17		2.0-2.1	27/4/12			Bag & jar	
6	NBH17		3.0-3.45	27/4/12			Bag & jar	
7	NBH17		4.5-4.95	27/4/12			Bag & jar	
	NBH17		7.0-7.45	27/4/12			Bag & jar	

Analysis Request Section

BTEX / TPH
METALS
PAHs / PHENOLS
OCs / OPs
Asbestos
VHC
VOC
SVOC
Ass Screening (field pH/Fox)

NOTES

RELINQUISHED BY:

RECEIVED BY:

Signature:

Date:

Company:

Time:

Signature:

Date:

Company:

Time:

Signature:

Date: 02/05/12

Company:

Time: 11:20

Signature:

Date:

Company:

Time:

Sample Receipt Advice: (Lab Use Only)

All Samples Received in Good Condition . . . ☒All Documentation is in Proper Order ☒Samples Received Properly Chilled ☒

Lab. Ref/Batch No.

SE107815

* Container Type & Preservation Codes: P - Plastic, G - Solvent Washed Acid Rinsed Glass Bottle, V - Vial, N - Nitric Acid Preserved
C - Hydrochloric Acid Preserved, S - Sulphuric Acid Preserved, I - Ice

CLIENT DETAILS

Contact **Matthew Locke**
Client **Coffey Geotechnics Pty Ltd**
Address **Unit 8, 12 Mars Road
Lane Cove NSW 2066**

Telephone **02 9911 1099**
Facsimile **02 9911 1002**
Email **matthew_locke@coffey.com**

Project **GEOTLCOV24303AC - SICEEP**
Order Number **81300**
Samples **7**

LABORATORY DETAILS

Manager **Huong Crawford**
Laboratory **SGS Alexandria Environmental**
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Email **au.environmental.sydney@sgs.com**

SGS Reference **SE107815 R0**
Report Number **0000027763**
Date Reported **09 May 2012**
Date Received **02 May 2012**

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(4354).

No respirable fibres detected using trace analysis technique.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.
OC/PCB - The Limit of Reporting (LOR) has been raised due to interferences from the sample matrix.

SIGNATORIES



Andy Sutton
Organics Chemist



Dong Liang
Inorganics Metals Team Leader



Huong Crawford
Laboratory Manager



Ly Kim Ha
Organics Supervisor



Ravee Sivasubramaniam
Hygienist

Parameter	Units	LOR	Sample Number	SE107815.001	SE107815.002	SE107815.003	SE107815.004	SE107815.005
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	NBH21 0.4-0.5	NBH21 1.5-1.95	NBH21 3.0-3.4	NBH17 0.4-0.5	NBH17 2.0-2.1

VOC's in Soil Method: AN433/AN434

Fumigants

2,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
1,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-

Halogenated Aliphatics

Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	-	-	-	-
Chloromethane	mg/kg	1	-	-	-	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	-	-	-	-
Chloroethane	mg/kg	1	-	-	-	-	-
Trichlorofluoromethane	mg/kg	1	-	-	-	-	-
1,1-dichloroethene	mg/kg	0.1	-	-	-	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	-	-	-	-
Allyl chloride	mg/kg	0.1	-	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
1,1-dichloroethane	mg/kg	0.1	-	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
Bromochloromethane	mg/kg	0.1	-	-	-	-	-
1,2-dichloroethane	mg/kg	0.1	-	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,1-dichloropropene	mg/kg	0.1	-	-	-	-	-
Carbon tetrachloride	mg/kg	0.1	-	-	-	-	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	-	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,3-dichloropropane	mg/kg	0.1	-	-	-	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	-	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
cis-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.1	-	-	-	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	-	-	-	-	-

Halogenated Aromatics

Chlorobenzene	mg/kg	0.1	-	-	-	-	-
2-chlorotoluene	mg/kg	0.1	-	-	-	-	-
4-chlorotoluene	mg/kg	0.1	-	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	-	-	-	-	-

Monocyclic Aromatic Hydrocarbons

Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Styrene (Vinyl benzene)	mg/kg	0.1	-	-	-	-	-
Isopropylbenzene (Cumene)	mg/kg	0.1	-	-	-	-	-
n-propylbenzene	mg/kg	0.1	-	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
tert-butylbenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
sec-butylbenzene	mg/kg	0.1	-	-	-	-	-
p-isopropyltoluene	mg/kg	0.1	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107815.001	SE107815.002	SE107815.003	SE107815.004	SE107815.005
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	NBH21 0.4-0.5	NBH21 1.5-1.95	NBH21 3.0-3.4	NBH17 0.4-0.5	NBH17 2.0-2.1

VOC's in Soil Method: AN433/AN434 (continued)

n-butylbenzene	mg/kg	0.1	-	-	-	-	-
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Nitrogenous Compounds

Acrylonitrile	mg/kg	0.1	-	-	-	-	-
2-nitropropane	mg/kg	10	-	-	-	-	-

Oxygenated Compounds

Acetone (2-propanone)	mg/kg	10	-	-	-	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	-	-	-	-	-
Vinyl acetate	mg/kg	10	-	-	-	-	-
MEK (2-butanone)	mg/kg	10	-	-	-	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	-	-	-	-
2-hexanone (MBK)	mg/kg	5	-	-	-	-	-

Polycyclic VOCs

Naphthalene	mg/kg	0.1	-	-	-	-	-
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Sulphonated Compounds

Carbon disulfide	mg/kg	0.5	-	-	-	-	-
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Surrogates

Dibromofluoromethane (Surrogate)	%	-	92	96	95	89	95
d4-1,2-dichloroethane (Surrogate)	%	-	99	106	104	97	105
d8-toluene (Surrogate)	%	-	102	102	103	99	104
Bromofluorobenzene (Surrogate)	%	-	98	108	114	109	111

Totals

Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	-	0	0	0	0	0
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	-	-	-	-
Total VOC*	mg/kg	24	-	-	-	-	-

Trihalomethanes

Chloroform	mg/kg	0.1	-	-	-	-	-
Bromodichloromethane	mg/kg	0.1	-	-	-	-	-
Chlorodibromomethane	mg/kg	0.1	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107815.001	SE107815.002	SE107815.003	SE107815.004	SE107815.005
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	NBH21 0.4-0.5	NBH21 1.5-1.95	NBH21 3.0-3.4	NBH17 0.4-0.5	NBH17 2.0-2.1

Volatile Petroleum Hydrocarbons in Soil Method: AN433/AN434

TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
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Surrogates

Trifluorotoluene (Surrogate)	%	-	91	89	92	97	84
Dibromofluoromethane (Surrogate)	%	-	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-	-

TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403

TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	50	<50	<50	<50	<50	<50
TRH C29-C36	mg/kg	50	<50	<50	<50	<50	<50

Surrogates

TRH (Surrogate)	%	-	-	-	-	-	-
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PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420

Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	0.2	0.2
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	0.3	0.3
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	0.3	0.3
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	0.2	0.2
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	0.2	0.2
Benzo(b)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	0.2	0.2
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	0.1	0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	0.2	0.2
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	0.1	0.1
Total PAH (Vic EPA)	mg/kg	0.8	<0.8	<0.8	<0.8	1.9	1.7

Surrogates

d5-nitrobenzene (Surrogate)	%	-	96	98	98	96	94
2-fluorobiphenyl (Surrogate)	%	-	104	100	98	92	94
d14-p-terphenyl (Surrogate)	%	-	112	104	108	90	92

OC Pesticides in Soil Method: AN400/AN420

Hexachlorobenzene (HCB)	mg/kg	0.1	-	-	-	-	-
Alpha BHC	mg/kg	0.1	-	-	-	-	-
Lindane	mg/kg	0.1	-	-	-	-	-
Heptachlor	mg/kg	0.1	-	-	-	-	-
Aldrin	mg/kg	0.1	-	-	-	-	-
Beta BHC	mg/kg	0.1	-	-	-	-	-
Delta BHC	mg/kg	0.1	-	-	-	-	-
Heptachlor epoxide	mg/kg	0.1	-	-	-	-	-
o,p'-DDE	mg/kg	0.1	-	-	-	-	-
Alpha Endosulfan	mg/kg	0.2	-	-	-	-	-
Gamma Chlordane	mg/kg	0.1	-	-	-	-	-
Alpha Chlordane	mg/kg	0.1	-	-	-	-	-
trans-Nonachlor	mg/kg	0.1	-	-	-	-	-
p,p'-DDE	mg/kg	0.1	-	-	-	-	-
Dieldrin	mg/kg	0.2	-	-	-	-	-
Endrin	mg/kg	0.2	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107815.001	SE107815.002	SE107815.003	SE107815.004	SE107815.005
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	NBH21 0.4-0.5	NBH21 1.5-1.95	NBH21 3.0-3.4	NBH17 0.4-0.5	NBH17 2.0-2.1

OC Pesticides in Soil Method: AN400/AN420 (continued)

o,p'-DDD	mg/kg	0.1	-	-	-	-	-
o,p'-DDT	mg/kg	0.1	-	-	-	-	-
Beta Endosulfan	mg/kg	0.2	-	-	-	-	-
p,p'-DDD	mg/kg	0.1	-	-	-	-	-
p,p'-DDT	mg/kg	0.1	-	-	-	-	-
Endosulfan sulphate	mg/kg	0.1	-	-	-	-	-
Endrin Aldehyde	mg/kg	0.1	-	-	-	-	-
Methoxychlor	mg/kg	0.1	-	-	-	-	-
Endrin Ketone	mg/kg	0.1	-	-	-	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-	-
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OP Pesticides in Soil Method: AN400/AN420

Dichlorvos	mg/kg	0.5	-	-	-	-	-
Dimethoate	mg/kg	0.5	-	-	-	-	-
Diazinon (Dimpylate)	mg/kg	0.5	-	-	-	-	-
Fenitrothion	mg/kg	0.2	-	-	-	-	-
Malathion	mg/kg	0.2	-	-	-	-	-
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	-	-	-	-	-
Parathion-ethyl (Parathion)	mg/kg	0.2	-	-	-	-	-
Bromophos Ethyl	mg/kg	0.2	-	-	-	-	-
Methidathion	mg/kg	0.5	-	-	-	-	-
Ethion	mg/kg	0.2	-	-	-	-	-
Azinphos-methyl (Guthion)	mg/kg	0.2	-	-	-	-	-

Surrogates

2-fluorobiphenyl (Surrogate)	%	-	-	-	-	-	-
d14-p-terphenyl (Surrogate)	%	-	-	-	-	-	-

PCBs in Soil Method: AN400/AN420

Arochlor 1016	mg/kg	0.2	-	-	-	-	-
Arochlor 1221	mg/kg	0.2	-	-	-	-	-
Arochlor 1232	mg/kg	0.2	-	-	-	-	-
Arochlor 1242	mg/kg	0.2	-	-	-	-	-
Arochlor 1248	mg/kg	0.2	-	-	-	-	-
Arochlor 1254	mg/kg	0.2	-	-	-	-	-
Arochlor 1260	mg/kg	0.2	-	-	-	-	-
Arochlor 1262	mg/kg	0.2	-	-	-	-	-
Arochlor 1268	mg/kg	0.2	-	-	-	-	-
Total PCBs (Arochlors)	mg/kg	1	-	-	-	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-	-
---	---	---	---	---	---	---	---

Field pH for Acid Sulphate Soil Method: AN104

PHf	pH Units	-	-	-	6.6	-	-
PHfox	pH Units	-	-	-	2.2	-	-
Reaction*	No unit	-	-	-	XXX	-	-
pH Difference*	pH Units	-10	-	-	4.3	-	-

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: AN040/AN320

Arsenic, As	mg/kg	3	3	4	8	3	<3
Cadmium, Cd	mg/kg	0.3	<0.3	0.6	<0.3	0.3	<0.3
Chromium, Cr	mg/kg	0.3	8.2	18	5.0	11	12
Copper, Cu	mg/kg	0.5	4.6	13	1.0	21	16
Lead, Pb	mg/kg	1	15	9	3	14	28



ANALYTICAL REPORT

SE107815 R0

Parameter	Units	LOR	Sample Number	SE107815.001	SE107815.002	SE107815.003	SE107815.004	SE107815.005
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	NBH21 0.4-0.5	NBH21 1.5-1.95	NBH21 3.0-3.4	NBH17 0.4-0.5	NBH17 2.0-2.1

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: AN040/AN320 (continued)

Nickel, Ni	mg/kg	0.5	4.0	0.7	1.7	57	10
Zinc, Zn	mg/kg	0.5	23	17	4.6	49	33

Mercury in Soil Method: AN312

Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	0.07
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Fibre Identification in soil Method: AN602

FibreID

Asbestos Detected	No unit	-	No	-	-	No	-
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SemiQuant

Estimated Fibres	%w/w	0.01	<0.01	-	-	<0.01	-
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Moisture Content Method: AN002

% Moisture	%	0.5	17	19	14	8.2	21
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Parameter	Units	LOR	Sample Number	SE107815.006	SE107815.007
			Sample Matrix	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012
			Sample Name	NBH17 3.0-3.45	NBH17 4.5-4.95

VOC's in Soil Method: AN433/AN434

Fumigants

2,2-dichloropropane	mg/kg	0.1	<0.1	-
1,2-dichloropropane	mg/kg	0.1	<0.1	-
cis-1,3-dichloropropene	mg/kg	0.1	<0.1	-
trans-1,3-dichloropropene	mg/kg	0.1	<0.1	-

Halogenated Aliphatics

Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	-
Chloromethane	mg/kg	1	<1	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	-
Chloroethane	mg/kg	1	<1	-
Trichlorofluoromethane	mg/kg	1	<1	-
1,1-dichloroethene	mg/kg	0.1	<0.1	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	-
Allyl chloride	mg/kg	0.1	<0.1	-
trans-1,2-dichloroethene	mg/kg	0.1	<0.1	-
1,1-dichloroethane	mg/kg	0.1	<0.1	-
cis-1,2-dichloroethene	mg/kg	0.1	<0.1	-
Bromochloromethane	mg/kg	0.1	<0.1	-
1,2-dichloroethane	mg/kg	0.1	<0.1	-
1,1,1-trichloroethane	mg/kg	0.1	<0.1	-
1,1-dichloropropene	mg/kg	0.1	<0.1	-
Carbon tetrachloride	mg/kg	0.1	<0.1	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1	-
1,1,2-trichloroethane	mg/kg	0.1	<0.1	-
1,3-dichloropropane	mg/kg	0.1	<0.1	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	-
cis-1,4-dichloro-2-butene	mg/kg	1	<1	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	-
1,2,3-trichloropropane	mg/kg	0.1	<0.1	-
trans-1,4-dichloro-2-butene	mg/kg	1	<1	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	-
Hexachlorobutadiene	mg/kg	0.1	<0.1	-

Sample Number	SE107815.006	SE107815.007
Sample Matrix	Soil	Soil
Sample Date	27 Apr 2012	27 Apr 2012
Sample Name	NBH17 3.0-3.45	NBH17 4.5-4.95
Parameter	Units	LOR

VOC's in Soil Method: AN433/AN434 (continued)

Halogenated Aromatics

Chlorobenzene	mg/kg	0.1	<0.1	-
2-chlorotoluene	mg/kg	0.1	<0.1	-
4-chlorotoluene	mg/kg	0.1	<0.1	-
1,3-dichlorobenzene	mg/kg	0.1	<0.1	-
1,4-dichlorobenzene	mg/kg	0.1	<0.1	-
1,2-dichlorobenzene	mg/kg	0.1	<0.1	-
1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	-
1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	-

Monocyclic Aromatic Hydrocarbons

Benzene	mg/kg	0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1
Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	-
Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	-
n-propylbenzene	mg/kg	0.1	<0.1	-
1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	-
tert-butylbenzene	mg/kg	0.1	<0.1	-
1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	-
sec-butylbenzene	mg/kg	0.1	<0.1	-
p-isopropyltoluene	mg/kg	0.1	<0.1	-
n-butylbenzene	mg/kg	0.1	<0.1	-

Nitrogenous Compounds

Acrylonitrile	mg/kg	0.1	<0.1	-
2-nitropropane	mg/kg	10	<10	-

Oxygenated Compounds

Acetone (2-propanone)	mg/kg	10	<10	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	<0.5	-
Vinyl acetate	mg/kg	10	<10	-
MEK (2-butanone)	mg/kg	10	<10	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	-
2-hexanone (MBK)	mg/kg	5	<5	-

Polycyclic VOCs

Naphthalene	mg/kg	0.1	<0.1	-
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Sulphonated Compounds

Carbon disulfide	mg/kg	0.5	<0.5	-
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Surrogates

Dibromofluoromethane (Surrogate)	%	-	91	95
d4-1,2-dichloroethane (Surrogate)	%	-	101	105
d8-toluene (Surrogate)	%	-	97	102
Bromofluorobenzene (Surrogate)	%	-	111	112

Parameter	Sample Number	SE107815.006	SE107815.007
	Sample Matrix	Soil	Soil
	Sample Date	27 Apr 2012	27 Apr 2012
	Sample Name	NBH17 3.0-3.45	NBH17 4.5-4.95
Units	LOR		

VOC's in Soil Method: AN433/AN434 (continued)

Totals

Total Xylenes*	mg/kg	0.3	<0.3	<0.3
Total BTEX*	mg/kg	-	0	0
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3	-
Total VOC*	mg/kg	24	-	-

Trihalomethanes

Chloroform	mg/kg	0.1	<0.1	-
Bromodichloromethane	mg/kg	0.1	<0.1	-
Chlorodibromomethane	mg/kg	0.1	<0.1	-

Volatile Petroleum Hydrocarbons in Soil Method: AN433/AN434

TRH C6-C9	mg/kg	20	<20	<20
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Surrogates

Trifluorotoluene (Surrogate)	%	-	102	86
Dibromofluoromethane (Surrogate)	%	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-
d8-toluene (Surrogate)	%	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-

TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403

TRH C10-C14	mg/kg	20	<20	<20
TRH C15-C28	mg/kg	50	100	76
TRH C29-C36	mg/kg	50	110	<50

Surrogates

TRH (Surrogate)	%	-	-	-
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PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420

Naphthalene	mg/kg	0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	0.1	0.1
Anthracene	mg/kg	0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	0.2	0.2
Pyrene	mg/kg	0.1	0.2	0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	0.1	<0.1
Benzo(b)fluoranthene	mg/kg	0.1	0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1
Total PAH (Vic EPA)	mg/kg	0.8	<0.8	<0.8

Sample Number	SE107815.006	SE107815.007
Sample Matrix	Soil	Soil
Sample Date	27 Apr 2012	27 Apr 2012
Sample Name	NBH17 3.0-3.45	NBH17 4.5-4.95
Parameter	Units	LOR

PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 (continued)

Surrogates

d5-nitrobenzene (Surrogate)	%	-	98	98
2-fluorobiphenyl (Surrogate)	%	-	100	96
d14-p-terphenyl (Surrogate)	%	-	96	90

OC Pesticides in Soil Method: AN400/AN420

Hexachlorobenzene (HCB)	mg/kg	0.1	<1.0 †	-
Alpha BHC	mg/kg	0.1	<1.0 †	-
Lindane	mg/kg	0.1	<1.0 †	-
Heptachlor	mg/kg	0.1	<1.0 †	-
Aldrin	mg/kg	0.1	<1.0 †	-
Beta BHC	mg/kg	0.1	<1.0 †	-
Delta BHC	mg/kg	0.1	<1.0 †	-
Heptachlor epoxide	mg/kg	0.1	<1.0 †	-
o,p'-DDE	mg/kg	0.1	<1.0 †	-
Alpha Endosulfan	mg/kg	0.2	<2.0 †	-
Gamma Chlordane	mg/kg	0.1	<1.0 †	-
Alpha Chlordane	mg/kg	0.1	<1.0 †	-
trans-Nonachlor	mg/kg	0.1	<1.0 †	-
p,p'-DDE	mg/kg	0.1	<1.0 †	-
Dieldrin	mg/kg	0.2	<2.0 †	-
Endrin	mg/kg	0.2	<2.0 †	-
o,p'-DDD	mg/kg	0.1	<1.0 †	-
o,p'-DDT	mg/kg	0.1	<1.0 †	-
Beta Endosulfan	mg/kg	0.2	<2.0 †	-
p,p'-DDD	mg/kg	0.1	<1.0 †	-
p,p'-DDT	mg/kg	0.1	<1.0 †	-
Endosulfan sulphate	mg/kg	0.1	<1.0 †	-
Endrin Aldehyde	mg/kg	0.1	<1.0 †	-
Methoxychlor	mg/kg	0.1	<1.0 †	-
Endrin Ketone	mg/kg	0.1	<1.0 †	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	120	-
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OP Pesticides in Soil Method: AN400/AN420

Dichlorvos	mg/kg	0.5	<0.5	-
Dimethoate	mg/kg	0.5	<0.5	-
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	-
Fenitrothion	mg/kg	0.2	<0.2	-
Malathion	mg/kg	0.2	<0.2	-
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	-
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	-
Bromophos Ethyl	mg/kg	0.2	<0.2	-
Methidathion	mg/kg	0.5	<0.5	-
Ethion	mg/kg	0.2	<0.2	-
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	-

Surrogates

2-fluorobiphenyl (Surrogate)	%	-	100	-
d14-p-terphenyl (Surrogate)	%	-	96	-

PCBs in Soil Method: AN400/AN420

Arochlor 1016	mg/kg	0.2	<2.0 †	-
Arochlor 1221	mg/kg	0.2	<2.0 †	-
Arochlor 1232	mg/kg	0.2	<2.0 †	-
Arochlor 1242	mg/kg	0.2	<2.0 †	-

		Sample Number	SE107815.006	SE107815.007
		Sample Matrix	Soil	Soil
		Sample Date	27 Apr 2012	27 Apr 2012
		Sample Name	NBH17 3.0-3.45	NBH17 4.5-4.95
Parameter	Units	LOR		

PCBs in Soil Method: AN400/AN420 (continued)

Arochlor 1248	mg/kg	0.2	<2.0 †	-
Arochlor 1254	mg/kg	0.2	<2.0 †	-
Arochlor 1260	mg/kg	0.2	<2.0 †	-
Arochlor 1262	mg/kg	0.2	<2.0 †	-
Arochlor 1268	mg/kg	0.2	<2.0 †	-
Total PCBs (Arochlors)	mg/kg	1	<10 †	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	120	-
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Field pH for Acid Sulphate Soil Method: AN104

PHf	pH Units	-	8.3	-
PHfox	pH Units	-	4.0	-
Reaction*	No unit	-	XXXX	-
pH Difference*	pH Units	-10	4.3	-

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: AN040/AN320

Arsenic, As	mg/kg	3	7	8
Cadmium, Cd	mg/kg	0.3	0.4	0.3
Chromium, Cr	mg/kg	0.3	29	27
Copper, Cu	mg/kg	0.5	55	35
Lead, Pb	mg/kg	1	260	150
Nickel, Ni	mg/kg	0.5	26	10
Zinc, Zn	mg/kg	0.5	200	68

Mercury in Soil Method: AN312

Mercury	mg/kg	0.05	1.3	1.0
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Fibre Identification in soil Method: AN602

FibreID

Asbestos Detected	No unit	-	-	-
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SemiQuant

Estimated Fibres	%w/w	0.01	-	-
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Moisture Content Method: AN002

% Moisture	%	0.5	38	35
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MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Field pH for Acid Sulphate Soil Method: ME-(AU)-[ENV]AN104

Parameter	QC Reference	Units	LOR	LCS %Recovery
PHf	LB019668	pH Units	-	NA
PHfox	LB019668	pH Units	-	NA

Mercury in Soil Method: ME-(AU)-[ENV]AN312

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Mercury	LB019590	mg/kg	0.05	<0.05	0%	120%	108%

OC Pesticides in Soil Method: ME-(AU)-[ENV]AN400/AN420

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Hexachlorobenzene (HCB)	LB019470	mg/kg	0.1	<0.1	NA
Alpha BHC	LB019470	mg/kg	0.1	<0.1	NA
Lindane	LB019470	mg/kg	0.1	<0.1	NA
Heptachlor	LB019470	mg/kg	0.1	<0.1	125%
Aldrin	LB019470	mg/kg	0.1	<0.1	130%
Beta BHC	LB019470	mg/kg	0.1	<0.1	NA
Delta BHC	LB019470	mg/kg	0.1	<0.1	115%
Heptachlor epoxide	LB019470	mg/kg	0.1	<0.1	NA
o,p'-DDE	LB019470	mg/kg	0.1	<0.1	NA
Alpha Endosulfan	LB019470	mg/kg	0.2	<0.2	NA
Gamma Chlordane	LB019470	mg/kg	0.1	<0.1	NA
Alpha Chlordane	LB019470	mg/kg	0.1	<0.1	NA
trans-Nonachlor	LB019470	mg/kg	0.1	<0.1	NA
p,p'-DDE	LB019470	mg/kg	0.1	<0.1	NA
Dieldrin	LB019470	mg/kg	0.2	<0.2	115%
Endrin	LB019470	mg/kg	0.2	<0.2	125%
o,p'-DDD	LB019470	mg/kg	0.1	<0.1	NA
o,p'-DDT	LB019470	mg/kg	0.1	<0.1	NA
Beta Endosulfan	LB019470	mg/kg	0.2	<0.2	NA
p,p'-DDD	LB019470	mg/kg	0.1	<0.1	NA
p,p'-DDT	LB019470	mg/kg	0.1	<0.1	95%
Endosulfan sulphate	LB019470	mg/kg	0.1	<0.1	NA
Endrin Aldehyde	LB019470	mg/kg	0.1	<0.1	NA
Methoxychlor	LB019470	mg/kg	0.1	<0.1	NA
Endrin Ketone	LB019470	mg/kg	0.1	<0.1	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Tetrachloro-m-xylene (TCMX) (Surrogate)	LB019470	%	-	128%	122%

OP Pesticides in Soil Method: ME-(AU)-[ENV]AN400/AN420

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Dichlorvos	LB019470	mg/kg	0.5	<0.5	89%
Dimethoate	LB019470	mg/kg	0.5	<0.5	NA
Diazinon (Dimpylate)	LB019470	mg/kg	0.5	<0.5	98%
Fenitrothion	LB019470	mg/kg	0.2	<0.2	NA
Malathion	LB019470	mg/kg	0.2	<0.2	NA
Chlorpyrifos (Chlorpyrifos Ethyl)	LB019470	mg/kg	0.2	<0.2	113%
Parathion-ethyl (Parathion)	LB019470	mg/kg	0.2	<0.2	NA
Bromophos Ethyl	LB019470	mg/kg	0.2	<0.2	NA
Methodathion	LB019470	mg/kg	0.5	<0.5	NA
Ethion	LB019470	mg/kg	0.2	<0.2	101%
Azinphos-methyl (Guthion)	LB019470	mg/kg	0.2	<0.2	NA

Surrogates

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA', the results are less than the LOR and thus the RPD is not applicable.

OP Pesticides in Soil Method: ME-(AU)-[ENV]AN400/AN420 (continued)

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
2-fluorobiphenyl (Surrogate)	LB019470	%	-	104%	90%
d14-p-terphenyl (Surrogate)	LB019470	%	-	102%	82%

PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: ME-(AU)-[ENV]AN420

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Naphthalene	LB019470	mg/kg	0.1	<0.1	103%
Acenaphthylene	LB019470	mg/kg	0.1	<0.1	106%
Acenaphthene	LB019470	mg/kg	0.1	<0.1	104%
Fluorene	LB019470	mg/kg	0.1	<0.1	NA
Phenanthrene	LB019470	mg/kg	0.1	<0.1	101%
Anthracene	LB019470	mg/kg	0.1	<0.1	104%
Fluoranthene	LB019470	mg/kg	0.1	<0.1	113%
Pyrene	LB019470	mg/kg	0.1	<0.1	112%
Benzo(a)anthracene	LB019470	mg/kg	0.1	<0.1	NA
Chrysene	LB019470	mg/kg	0.1	<0.1	NA
Benzo(b)fluoranthene	LB019470	mg/kg	0.1	<0.1	NA
Benzo(k)fluoranthene	LB019470	mg/kg	0.1	<0.1	NA
Benzo(a)pyrene	LB019470	mg/kg	0.1	<0.1	107%
Indeno(1,2,3-cd)pyrene	LB019470	mg/kg	0.1	<0.1	NA
Dibenzo(a,h)anthracene	LB019470	mg/kg	0.1	<0.1	NA
Benzo(ghi)perylene	LB019470	mg/kg	0.1	<0.1	NA
Total PAH (Vic EPA)	LB019470	mg/kg	0.8	<0.8	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
d5-nitrobenzene (Surrogate)	LB019470	%	-	94%	98%
2-fluorobiphenyl (Surrogate)	LB019470	%	-	88%	86%
d14-p-terphenyl (Surrogate)	LB019470	%	-	98%	74%

PCBs in Soil Method: ME-(AU)-[ENV]AN400/AN420

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Arochlor 1016	LB019470	mg/kg	0.2	<0.2	NA
Arochlor 1221	LB019470	mg/kg	0.2	<0.2	NA
Arochlor 1232	LB019470	mg/kg	0.2	<0.2	NA
Arochlor 1242	LB019470	mg/kg	0.2	<0.2	NA
Arochlor 1248	LB019470	mg/kg	0.2	<0.2	NA
Arochlor 1254	LB019470	mg/kg	0.2	<0.2	NA
Arochlor 1260	LB019470	mg/kg	0.2	<0.2	88%
Arochlor 1262	LB019470	mg/kg	0.2	<0.2	NA
Arochlor 1268	LB019470	mg/kg	0.2	<0.2	NA
Total PCBs (Arochlors)	LB019470	mg/kg	1	<1	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Tetrachloro-m-xylene (TCMX) (Surrogate)	LB019470	%	-	128%	123%

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: ME-(AU)-[ENV]AN040/AN320

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Arsenic, As	LB019578	mg/kg	3	<3	31 - 36%	92%	83%
Cadmium, Cd	LB019578	mg/kg	0.3	<0.3	2 - 20%	94%	87%
Chromium, Cr	LB019578	mg/kg	0.3	<0.3	11 - 13%	95%	85%
Copper, Cu	LB019578	mg/kg	0.5	<0.5	2 - 27%	94%	73%
Lead, Pb	LB019578	mg/kg	1	<1	4 - 16%	95%	52%
Nickel, Ni	LB019578	mg/kg	0.5	<0.5	4 - 23%	96%	86%
Zinc, Zn	LB019578	mg/kg	0.5	<0.5	22 - 35%	95%	-70%

TRH (Total Recoverable Hydrocarbons) in Soil Method: ME-(AU)-[ENV]AN403

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
TRH C10-C14	LB019470	mg/kg	20	<20	100%
TRH C15-C28	LB019470	mg/kg	50	<50	95%
TRH C29-C36	LB019470	mg/kg	50	<50	88%

VOC's in Soil Method: ME-(AU)-[ENV]AN433/AN434

Fumigants

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
2,2-dichloropropane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,2-dichloropropane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
cis-1,3-dichloropropene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
trans-1,3-dichloropropene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA

Halogenated Aliphatics

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Dichlorodifluoromethane (CFC-12)	LB019466	mg/kg	1	<1	0%	NA	NA
Chloromethane	LB019466	mg/kg	1	<1	0%	NA	NA
Vinyl chloride (Chloroethene)	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
Chloroethane	LB019466	mg/kg	1	<1	0%	NA	NA
Trichlorofluoromethane	LB019466	mg/kg	1	<1	0%	NA	NA
1,1-dichloroethene	LB019466	mg/kg	0.1	<0.1	0%	83%	110%
Dichloromethane (Methylene chloride)	LB019466	mg/kg	0.5	<0.5	0%	NA	NA
Allyl chloride	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
trans-1,2-dichloroethene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,1-dichloroethane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
cis-1,2-dichloroethene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
Bromochloromethane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,2-dichloroethane	LB019466	mg/kg	0.1	<0.1	0%	78%	103%
1,1,1-trichloroethane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,1-dichloropropene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
Carbon tetrachloride	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
Trichloroethene (Trichloroethylene -TCE)	LB019466	mg/kg	0.1	<0.1	0%	91%	88%
1,1,2-trichloroethane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,3-dichloropropane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
Tetrachloroethene (Perchloroethylene,PCE)	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,1,1,2-tetrachloroethane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
cis-1,4-dichloro-2-butene	LB019466	mg/kg	1	<1	0%	NA	NA
1,1,2,2-tetrachloroethane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,2,3-trichloropropane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
trans-1,4-dichloro-2-butene	LB019466	mg/kg	1	<1	0%	NA	NA
1,2-dibromo-3-chloropropane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
Hexachlorobutadiene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA

Halogenated Aromatics

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

VOC's in Soil Method: ME-(AU)-[ENV]AN433/AN434 (continued)

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Chlorobenzene	LB019466	mg/kg	0.1	<0.1	0%	77%	104%
2-chlorotoluene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
4-chlorotoluene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,3-dichlorobenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,4-dichlorobenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,2-dichlorobenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,2,4-trichlorobenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,2,3-trichlorobenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA

Monocyclic Aromatic Hydrocarbons

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Benzene	LB019466	mg/kg	0.1	<0.1	0%	71%	94%
	LB019469	mg/kg	0.1	<0.1	0%	96%	101%
Toluene	LB019466	mg/kg	0.1	<0.1	0%	79%	108%
	LB019469	mg/kg	0.1	<0.1	0%	88%	96%
Ethylbenzene	LB019466	mg/kg	0.1	<0.1	0%	64%	78%
	LB019469	mg/kg	0.1	<0.1	0%	86%	94%
m/p-xylene	LB019466	mg/kg	0.2	<0.2	0%	90%	86%
	LB019469	mg/kg	0.2	<0.2	0%	91%	100%
o-xylene	LB019466	mg/kg	0.1	<0.1	0%	77%	91%
	LB019469	mg/kg	0.1	<0.1	0%	93%	102%
Styrene (Vinyl benzene)	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
Isopropylbenzene (Cumene)	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
n-propylbenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,3,5-trimethylbenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
tert-butylbenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,2,4-trimethylbenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
sec-butylbenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
p-isopropyltoluene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
n-butylbenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA

Nitrogenous Compounds

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Acrylonitrile	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
2-nitropropane	LB019466	mg/kg	10	<10	0%	NA	NA

Oxygenated Compounds

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Acetone (2-propanone)	LB019466	mg/kg	10	<10	0%	NA	NA
MTBE (Methyl-tert-butyl ether)	LB019466	mg/kg	0.5	<0.5	0%	NA	NA
Vinyl acetate	LB019466	mg/kg	10	<10	0%	NA	NA
MEK (2-butanone)	LB019466	mg/kg	10	<10	0%	NA	NA
MIBK (4-methyl-2-pentanone)	LB019466	mg/kg	1	<1	0%	NA	NA
2-hexanone (MBK)	LB019466	mg/kg	5	<5	0%	NA	NA

Polycyclic VOCs

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Naphthalene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA

Sulphonated Compounds

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

VOC's in Soil Method: ME-(AU)-[ENV]AN433/AN434 (continued)

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Carbon disulfide	LB019466	mg/kg	0.5	<0.5	0%	NA	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Dibromofluoromethane (Surrogate)	LB019466	%	-	93%	2%	93%	93%
	LB019469	%	-	92%	1%	94%	95%
d4-1,2-dichloroethane (Surrogate)	LB019466	%	-	102%	1%	101%	101%
	LB019469	%	-	107%	1%	107%	106%
d8-toluene (Surrogate)	LB019466	%	-	94%	1%	94%	97%
	LB019469	%	-	103%	0%	104%	103%
Bromofluorobenzene (Surrogate)	LB019466	%	-	112%	1%	106%	106%
	LB019469	%	-	122%	4%	116%	113%

Totals

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Total Xylenes*	LB019466	mg/kg	0.3	<0.3	0%	NA	NA
	LB019469	mg/kg	0.3	<0.3	0%	NA	NA
Total BTEX*	LB019466	mg/kg	-	0	NA	NA	NA
	LB019469	mg/kg	-	0	NA	NA	NA
Total Volatile Chlorinated Hydrocarbons*	LB019466	mg/kg	3	<3		NA	NA

Trihalomethanes

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Chloroform	LB019466	mg/kg	0.1	<0.1	0%	81%	104%
Bromodichloromethane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
Chlorodibromomethane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA

Volatile Petroleum Hydrocarbons in Soil Method: ME-(AU)-[ENV]AN433/AN434

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
TRH C6-C9	LB019466	mg/kg	20	<20	0%	127%	114%
	LB019469	mg/kg	20	<20	0%	123%	135%

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Trifluorotoluene (Surrogate)	LB019466	%	-	101%	1%	108%	101%
	LB019469	%	-	71%	2%	76%	104%

METHOD

METHODOLOGY SUMMARY

AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN088	Orbital rolling for Organic pollutants are extracted from soil/sediment by transferring an appropriate mass of sample to a clear soil jar and extracting with 1:1 Dichloromethane/Acetone. Orbital Rolling method is intended for the extraction of semi-volatile organic compounds from soil/sediment samples, and is based somewhat on USEPA method 3570 (Micro Organic extraction and sample preparation). Method 3700.
AN104	pHF is determined on an extract of approximately 2g of as received sample in approximately 10 mL of deionised water with pH determined after standing 30 minutes.
AN104	pHFox is determined on an extract of approximately 2g of as received sample with a few mLs of 30% hydrogen peroxide (adjusted to pH 4.5 to 5.5) with the extract reaction being rated from slight to extreme, with pH determined after reaction is complete and extract has cooled. Referenced to ASS Laboratory Methods Guidelines, method 23Af-Bf, 2004.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN400	OC and OP Pesticides by GC-ECD: The determination of organochlorine (OC) and organophosphorus (OP) pesticides and polychlorinated biphenyls (PCBs) in soils, sludges and groundwater. (Based on USEPA methods 3510, 3550, 8140 and 8080.)
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Petroleum Hydrocarbons (TPH) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the elluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependant on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433/AN434	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC's are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

METHOD

METHODOLOGY SUMMARY

AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

FOOTNOTES

IS	Insufficient sample for analysis.	QFH	QC result is above the upper tolerance
LNR	Sample listed, but not received.	QFL	QC result is below the lower tolerance
*	This analysis is not covered by the scope of accreditation.	-	The sample was not analysed for this analyte
^	Performed by outside laboratory.	NVL	Not Validated
LOR	Limit of Reporting		
↑↓	Raised or Lowered Limit of Reporting		

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here:
<http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf>

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Project **GEOTLCOV24303AC - SICEEP**
Order Number **81300**
Samples 7

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SGS Reference SE107815 R0
Report Number 0000027766
Date Reported 09/05/2012 16:09:19
Date Received 02 May 2012

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(4354).

No respirable fibres detected using trace analysis technique.

Asbestos analysed by Approved Identifier Yusuf Kuthupudin.
OC/PCB - The Limit of Reporting (LOR) has been raised due to interferences from the sample matrix.

SIGNATORIES



Andy Sutton
Organics Chemist



Dong Liang
Inorganics Metals Team Leader



Huong Crawford
Laboratory Manager



Ly Kim Ha
Organics Supervisor



Ravee Sivasubramaniam
Hygienist



ANALYTICAL REPORT

SE107815 R0

RESULTS

Fibre Identification in soil

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w
SE107815.001	NBH21 0.4-0.5	Soil	101g Soil,rocks	27 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01
SE107815.004	NBH17 0.4-0.5	Soil	59g Soil,rocks	27 Apr 2012	No Asbestos Found	<0.01

METHOD

METHODOLOGY SUMMARY

AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

FOOTNOTES

Amosite	-	Brown Asbestos	NA	-	Not Analysed
Chrysotile	-	White Asbestos	LNR	-	Listed, Not Required
Crocidolite	-	Blue Asbestos	*	-	Not Accredited
Amphiboles	-	Amosite and/or Crocidolite			

This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

Sampled by the client.

Where reported: 'Asbestos Detected': Asbestos detected by polarized light microscopy, including dispersion staining.

Where reported: 'No Asbestos Found': No Asbestos Found by polarized light microscopy, including dispersion staining.

Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarized light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos-containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : <http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf>

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STATEMENT OF QA/QC PERFORMANCE

SE107815 R0

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Project **GEOTLCOV24303AC - SICEEP**
Order Number **81300**
Samples **7**

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SGS Reference **SE107815 R0**
Report Number **0000027765**
Date Reported **09 May 2012**

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS Environmental Services' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document and was supplied by the Client. This QA/QC Statement must be read in conjunction with the referenced Analytical Report. The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Duplicate	Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest	1 item
Matrix Spike	Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest	2 items

SAMPLE SUMMARY

Sample counts by matrix	7 Soils	Type of documentation received	COC
Date documentation received	2/5/2012	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	3.5C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice	Samples clearly labelled	Yes
Complete documentation received	Yes		

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

Fibre Identification in soil

Method: ME-(AU)-[ENV]AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
NBH21 0.4-0.5	SE107815.001	LB019561	27 Apr 2012	02 May 2012	27 Apr 2013	07 May 2012	27 Apr 2013	08 May 2012
NBH17 0.4-0.5	SE107815.004	LB019561	27 Apr 2012	02 May 2012	27 Apr 2013	07 May 2012	27 Apr 2013	08 May 2012

Field pH for Acid Sulphate Soil

Method: ME-(AU)-[ENV]AN104

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
NBH21 3.0-3.4	SE107815.003	LB019668	27 Apr 2012	02 May 2012	25 May 2012	08 May 2012	25 May 2012	08 May 2012
NBH17 3.0-3.45	SE107815.006	LB019668	27 Apr 2012	02 May 2012	25 May 2012	08 May 2012	25 May 2012	08 May 2012

Mercury In Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
NBH21 0.4-0.5	SE107815.001	LB019590	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
NBH21 1.5-1.95	SE107815.002	LB019590	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
NBH21 3.0-3.4	SE107815.003	LB019590	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
NBH17 0.4-0.5	SE107815.004	LB019590	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
NBH17 2.0-2.1	SE107815.005	LB019590	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
NBH17 3.0-3.45	SE107815.006	LB019590	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
NBH17 4.5-4.95	SE107815.007	LB019590	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012

Moisture Content

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
NBH21 0.4-0.5	SE107815.001	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
NBH21 1.5-1.95	SE107815.002	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
NBH21 3.0-3.4	SE107815.003	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
NBH17 0.4-0.5	SE107815.004	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
NBH17 2.0-2.1	SE107815.005	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
NBH17 3.0-3.45	SE107815.006	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
NBH17 4.5-4.95	SE107815.007	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012

OC Pesticides In Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
NBH21 0.4-0.5	SE107815.001	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH21 1.5-1.95	SE107815.002	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH21 3.0-3.4	SE107815.003	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 0.4-0.5	SE107815.004	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 2.0-2.1	SE107815.005	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 3.0-3.45	SE107815.006	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 4.5-4.95	SE107815.007	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012

OP Pesticides In Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
NBH21 0.4-0.5	SE107815.001	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH21 1.5-1.95	SE107815.002	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH21 3.0-3.4	SE107815.003	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 0.4-0.5	SE107815.004	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 2.0-2.1	SE107815.005	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 3.0-3.45	SE107815.006	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 4.5-4.95	SE107815.007	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012

PAH (Polynuclear Aromatic Hydrocarbons) In Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
NBH21 0.4-0.5	SE107815.001	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH21 1.5-1.95	SE107815.002	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH21 3.0-3.4	SE107815.003	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 0.4-0.5	SE107815.004	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 2.0-2.1	SE107815.005	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 3.0-3.45	SE107815.006	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 4.5-4.95	SE107815.007	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012

PCBs In Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
NBH21 0.4-0.5	SE107815.001	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH21 1.5-1.95	SE107815.002	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH21 3.0-3.4	SE107815.003	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

PCBs in Soil (continued)

Method: ME-(AU)-[ENV]AN400/AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
NBH17 0.4-0.5	SE107815.004	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 2.0-2.1	SE107815.005	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 3.0-3.45	SE107815.006	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 4.5-4.95	SE107815.007	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
NBH21 0.4-0.5	SE107815.001	LB019578	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
NBH21 1.5-1.95	SE107815.002	LB019578	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
NBH21 3.0-3.4	SE107815.003	LB019578	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
NBH17 0.4-0.5	SE107815.004	LB019578	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
NBH17 2.0-2.1	SE107815.005	LB019578	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
NBH17 3.0-3.45	SE107815.006	LB019578	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
NBH17 4.5-4.95	SE107815.007	LB019578	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
NBH21 0.4-0.5	SE107815.001	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH21 1.5-1.95	SE107815.002	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH21 3.0-3.4	SE107815.003	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 0.4-0.5	SE107815.004	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 2.0-2.1	SE107815.005	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 3.0-3.45	SE107815.006	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 4.5-4.95	SE107815.007	LB019470	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012

VOC's in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
NBH21 0.4-0.5	SE107815.001	LB019469	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
NBH21 1.5-1.95	SE107815.002	LB019469	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
NBH21 3.0-3.4	SE107815.003	LB019469	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
NBH17 0.4-0.5	SE107815.004	LB019469	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
NBH17 2.0-2.1	SE107815.005	LB019469	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
NBH17 3.0-3.45	SE107815.006	LB019466	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 4.5-4.95	SE107815.007	LB019469	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
NBH21 0.4-0.5	SE107815.001	LB019469	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
NBH21 1.5-1.95	SE107815.002	LB019469	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
NBH21 3.0-3.4	SE107815.003	LB019469	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
NBH17 0.4-0.5	SE107815.004	LB019469	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
NBH17 2.0-2.1	SE107815.005	LB019469	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
NBH17 3.0-3.45	SE107815.006	LB019466	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
NBH17 4.5-4.95	SE107815.007	LB019469	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	NBH17 3.0-3.45	SE107815.006	%	60 - 130%	120

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	NBH17 3.0-3.45	SE107815.006	%	60 - 130%	100
d14-p-terphenyl (Surrogate)	NBH17 3.0-3.45	SE107815.006	%	60 - 130%	96

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	NBH21 0.4-0.5	SE107815.001	%	60 - 130%	104
	NBH21 1.5-1.95	SE107815.002	%	60 - 130%	100
	NBH21 3.0-3.4	SE107815.003	%	60 - 130%	98
	NBH17 0.4-0.5	SE107815.004	%	60 - 130%	92
	NBH17 2.0-2.1	SE107815.005	%	60 - 130%	94
	NBH17 3.0-3.45	SE107815.006	%	60 - 130%	100
	NBH17 4.5-4.95	SE107815.007	%	60 - 130%	96
d14-p-terphenyl (Surrogate)	NBH21 0.4-0.5	SE107815.001	%	60 - 130%	112
	NBH21 1.5-1.95	SE107815.002	%	60 - 130%	104
	NBH21 3.0-3.4	SE107815.003	%	60 - 130%	108
	NBH17 0.4-0.5	SE107815.004	%	60 - 130%	90
	NBH17 2.0-2.1	SE107815.005	%	60 - 130%	92
	NBH17 3.0-3.45	SE107815.006	%	60 - 130%	96
	NBH17 4.5-4.95	SE107815.007	%	60 - 130%	90
d5-nitrobenzene (Surrogate)	NBH21 0.4-0.5	SE107815.001	%	60 - 130%	96
	NBH21 1.5-1.95	SE107815.002	%	60 - 130%	98
	NBH21 3.0-3.4	SE107815.003	%	60 - 130%	98
	NBH17 0.4-0.5	SE107815.004	%	60 - 130%	96
	NBH17 2.0-2.1	SE107815.005	%	60 - 130%	94
	NBH17 3.0-3.45	SE107815.006	%	60 - 130%	98
	NBH17 4.5-4.95	SE107815.007	%	60 - 130%	98

PCBs in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	NBH17 3.0-3.45	SE107815.006	%	60 - 130%	120

VOC's in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	NBH21 0.4-0.5	SE107815.001	%	60 - 130%	98
	NBH21 1.5-1.95	SE107815.002	%	60 - 130%	108
	NBH21 3.0-3.4	SE107815.003	%	60 - 130%	114
	NBH17 0.4-0.5	SE107815.004	%	60 - 130%	109
	NBH17 2.0-2.1	SE107815.005	%	60 - 130%	111
	NBH17 3.0-3.45	SE107815.006	%	60 - 130%	111
	NBH17 4.5-4.95	SE107815.007	%	60 - 130%	112
d4-1,2-dichloroethane (Surrogate)	NBH21 0.4-0.5	SE107815.001	%	60 - 130%	99
	NBH21 1.5-1.95	SE107815.002	%	60 - 130%	106
	NBH21 3.0-3.4	SE107815.003	%	60 - 130%	104
	NBH17 0.4-0.5	SE107815.004	%	60 - 130%	97
	NBH17 2.0-2.1	SE107815.005	%	60 - 130%	105
	NBH17 3.0-3.45	SE107815.006	%	60 - 130%	101
	NBH17 4.5-4.95	SE107815.007	%	60 - 130%	105
d8-toluene (Surrogate)	NBH21 0.4-0.5	SE107815.001	%	60 - 130%	102
	NBH21 1.5-1.95	SE107815.002	%	60 - 130%	102
	NBH21 3.0-3.4	SE107815.003	%	60 - 130%	103
	NBH17 0.4-0.5	SE107815.004	%	60 - 130%	99
	NBH17 2.0-2.1	SE107815.005	%	60 - 130%	104
	NBH17 3.0-3.45	SE107815.006	%	60 - 130%	97
	NBH17 4.5-4.95	SE107815.007	%	60 - 130%	102
Dibromofluoromethane (Surrogate)	NBH21 0.4-0.5	SE107815.001	%	60 - 130%	92
	NBH21 1.5-1.95	SE107815.002	%	60 - 130%	96

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433/AN434

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Dibromofluoromethane (Surrogate)	NBH21 3.0-3.4	SE107815.003	%	60 - 130%	95
	NBH17 0.4-0.5	SE107815.004	%	60 - 130%	89
	NBH17 2.0-2.1	SE107815.005	%	60 - 130%	95
	NBH17 3.0-3.45	SE107815.006	%	60 - 130%	91
	NBH17 4.5-4.95	SE107815.007	%	60 - 130%	95

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Trifluorotoluene (Surrogate)	NBH21 0.4-0.5	SE107815.001	%	60 - 130%	91
	NBH21 1.5-1.95	SE107815.002	%	60 - 130%	89
	NBH21 3.0-3.4	SE107815.003	%	60 - 130%	92
	NBH17 0.4-0.5	SE107815.004	%	60 - 130%	97
	NBH17 2.0-2.1	SE107815.005	%	60 - 130%	84
	NBH17 3.0-3.45	SE107815.006	%	60 - 130%	102
	NBH17 4.5-4.95	SE107815.007	%	60 - 130%	86

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB019590.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result
LB019470.001	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Alpha BHC	mg/kg	0.1	<0.1
	Lindane	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	<0.2
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.2	<0.2
	Endrin	mg/kg	0.2	<0.2
	Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	Endrin Aldehyde	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Endrin Ketone	mg/kg	0.1	<0.1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	128

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result
LB019470.001	Dichlorvos	mg/kg	0.5	<0.5
	Dimethoate	mg/kg	0.5	<0.5
	Diazinon (Dimpylate)	mg/kg	0.5	<0.5
	Fenitrothion	mg/kg	0.2	<0.2
	Malathion	mg/kg	0.2	<0.2
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
	Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Bromophos Ethyl	mg/kg	0.2	<0.2
	Methidathion	mg/kg	0.5	<0.5
	Ethion	mg/kg	0.2	<0.2
	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	2-fluorobiphenyl (Surrogate)	%	-	104
	d14-p-terphenyl (Surrogate)	%	-	102
Surrogates				

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB019470.001	Naphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1
	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	<0.1
	Chrysene	mg/kg	0.1	<0.1
	Benzo(a)pyrene	mg/kg	0.1	<0.1
	Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
	Dibenzo(a,h)anthracene	mg/kg	0.1	<0.1
	Benzo(ghi)perylene	mg/kg	0.1	<0.1
	d5-nitrobenzene (Surrogate)	%	-	94
Surrogates				

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB019470.001	2-fluorobiphenyl (Surrogate)	%	-	88
	d14-p-terphenyl (Surrogate)	%	-	98

PCBs in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result
LB019470.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2
	Arochlor 1254	mg/kg	0.2	<0.2
	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1	<1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	128

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB019578.001	Arsenic, As	mg/kg	3	<3
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.3	<0.3
	Copper, Cu	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Nickel, Ni	mg/kg	0.5	<0.5
	Zinc, Zn	mg/kg	0.5	<0.5

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB019470.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	50	<50
	TRH C29-C36	mg/kg	50	<50

VOC's in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number	Parameter	Units	LOR	Result	
LB019466.001	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1
		1,2-dichloropropane	mg/kg	0.1	<0.1
		cis-1,3-dichloropropene	mg/kg	0.1	<0.1
		trans-1,3-dichloropropene	mg/kg	0.1	<0.1
	Halogenated Aliphatics	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1
		Chloromethane	mg/kg	1	<1
		Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1
		Chloroethane	mg/kg	1	<1
		Trichlorofluoromethane	mg/kg	1	<1
		1,1-dichloroethene	mg/kg	0.1	<0.1
		Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5
		Allyl chloride	mg/kg	0.1	<0.1
		trans-1,2-dichloroethene	mg/kg	0.1	<0.1
		1,1-dichloroethane	mg/kg	0.1	<0.1
		cis-1,2-dichloroethene	mg/kg	0.1	<0.1
		Bromochloromethane	mg/kg	0.1	<0.1
		1,2-dichloroethane	mg/kg	0.1	<0.1
		1,1,1-trichloroethane	mg/kg	0.1	<0.1
		1,1-dichloropropene	mg/kg	0.1	<0.1
		Carbon tetrachloride	mg/kg	0.1	<0.1
		Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1
		1,1,2-trichloroethane	mg/kg	0.1	<0.1
		1,3-dichloropropane	mg/kg	0.1	<0.1
		Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1
		1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1
cis-1,4-dichloro-2-butene	mg/kg	1	<1		
1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1		
1,2,3-trichloropropane	mg/kg	0.1	<0.1		

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number		Parameter	Units	LOR	Result
LB019466.001	Halogenated Aliphatics	trans-1,4-dichloro-2-butene	mg/kg	1	<1
		1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1
	Halogenated Aromatics	Hexachlorobutadiene	mg/kg	0.1	<0.1
		Chlorobenzene	mg/kg	0.1	<0.1
		2-chlorotoluene	mg/kg	0.1	<0.1
		4-chlorotoluene	mg/kg	0.1	<0.1
		1,3-dichlorobenzene	mg/kg	0.1	<0.1
		1,4-dichlorobenzene	mg/kg	0.1	<0.1
		1,2-dichlorobenzene	mg/kg	0.1	<0.1
		1,2,4-trichlorobenzene	mg/kg	0.1	<0.1
		1,2,3-trichlorobenzene	mg/kg	0.1	<0.1
	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
		Styrene (Vinyl benzene)	mg/kg	0.1	<0.1
		Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1
		n-propylbenzene	mg/kg	0.1	<0.1
		1,3,5-trimethylbenzene	mg/kg	0.1	<0.1
		tert-butylbenzene	mg/kg	0.1	<0.1
		1,2,4-trimethylbenzene	mg/kg	0.1	<0.1
		sec-butylbenzene	mg/kg	0.1	<0.1
		p-isopropyltoluene	mg/kg	0.1	<0.1
		n-butylbenzene	mg/kg	0.1	<0.1
	Nitrogenous Compounds	Acrylonitrile	mg/kg	0.1	<0.1
		2-nitropropane	mg/kg	10	<10
	Oxygenated Compounds	Acetone (2-propanone)	mg/kg	10	<10
		MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	<0.5
		Vinyl acetate	mg/kg	10	<10
		MEK (2-butanone)	mg/kg	10	<10
		MIBK (4-methyl-2-pentanone)	mg/kg	1	<1
	Polycyclic VOCs	2-hexanone (MBK)	mg/kg	5	<5
		Naphthalene	mg/kg	0.1	<0.1
	Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	93
		d4-1,2-dichloroethane (Surrogate)	%	-	102
		d8-toluene (Surrogate)	%	-	94
		Bromofluorobenzene (Surrogate)	%	-	112
	Totals	Total BTEX*	mg/kg	-	0
	Trihalomethanes	Chloroform	mg/kg	0.1	<0.1
		Bromodichloromethane	mg/kg	0.1	<0.1
		Chlorodibromomethane	mg/kg	0.1	<0.1
LB019469.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	92
		d4-1,2-dichloroethane (Surrogate)	%	-	107
		d8-toluene (Surrogate)	%	-	103
		Bromofluorobenzene (Surrogate)	%	-	122
	Totals	Total BTEX*	mg/kg	-	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number		Parameter	Units	LOR	Result
LB019466.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	Trifluorotoluene (Surrogate)	%	-	101
LB019469.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	Trifluorotoluene (Surrogate)	%	-	71

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]JAN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE107819.003	LB019590.014	Mercury	mg/kg	0.05	0.0266417445	0.0243086419	200	0
SE107819.015	LB019590.024	Mercury	mg/kg	0.05	0.0395320130	0.0349441914	164	0

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

Method: ME-(AU)-[ENV]JAN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE107815.002	LB019578.014	Arsenic, As	mg/kg	3	4	5	99	36
		Cadmium, Cd	mg/kg	0.3	0.6	0.6	82	2
		Chromium, Cr	mg/kg	0.3	18	16	32	11
		Copper, Cu	mg/kg	0.5	13	14	34	2
		Lead, Pb	mg/kg	1	9	9	41	4
		Nickel, Ni	mg/kg	0.5	0.7	0.7	99	4
		Zinc, Zn	mg/kg	0.5	17	24	32	35 @
SE107819.004	LB019578.024	Arsenic, As	mg/kg	3	2.8186551302	4.1140383970	117	31
		Cadmium, Cd	mg/kg	0.3	0.2483434588	0.3675908127	127	20
		Chromium, Cr	mg/kg	0.3	11.0990476531	12.6477510896	33	13
		Copper, Cu	mg/kg	0.5	35.1359495487	6.2026474322	31	27
		Lead, Pb	mg/kg	1	50.8020293605	9.7601382102	32	16
		Nickel, Ni	mg/kg	0.5	30.9107038604	4.4617092435	32	23
		Zinc, Zn	mg/kg	0.5	38.7382477073	10.713297643	31	22

VOC's in Soil

Method: ME-(AU)-[ENV]JAN433/AN434

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE107815.007	LB019469.011	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0	
			Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0	
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0	
			Surrogates	Dibromofluoromethane (Surrogate)	%	-	95.0	94.0	50	1
				d4-1,2-dichloroethane (Surrogate)	%	-	105.0	104.0	50	1
		d8-toluene (Surrogate)		%	-	102.0	102.0	50	0	
		Bromofluorobenzene (Surrogate)		%	-	112.0	116.0	50	4	
		Totals	Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0	
Total BTEX*	mg/kg		-	0	0	200	NA			
SE107866.002	LB019466.009	Fumigants	2,2-dichloropropane	mg/kg	0.1	0	0	200	0	
			1,2-dichloropropane	mg/kg	0.1	0	0	200	0	
			cis-1,3-dichloropropene	mg/kg	0.1	0	0	200	0	
			trans-1,3-dichloropropene	mg/kg	0.1	0	0	200	0	
		Halogenated	Dichlorodifluoromethane (CFC-12)	mg/kg	1	0	0	200	0	
			Aliphatics	Chloromethane	mg/kg	1	0	0	200	0
		Vinyl chloride (Chloroethene)		mg/kg	0.1	0	0	200	0	
		Chloroethane		mg/kg	1	0	0	200	0	
		Trichlorofluoromethane		mg/kg	1	0	0	200	0	
		1,1-dichloroethene		mg/kg	0.1	0	0	200	0	
		Dichloromethane (Methylene chloride)		mg/kg	0.5	0	0	200	0	
		Allyl chloride		mg/kg	0.1	0	0	200	0	
		trans-1,2-dichloroethene		mg/kg	0.1	0	0	200	0	
		1,1-dichloroethane		mg/kg	0.1	0	0	200	0	
		cis-1,2-dichloroethene		mg/kg	0.1	0	0	200	0	
		Bromochloromethane		mg/kg	0.1	0	0	200	0	
		1,2-dichloroethane		mg/kg	0.1	0	0	200	0	
		1,1,1-trichloroethane		mg/kg	0.1	0	0	200	0	
		1,1-dichloropropene		mg/kg	0.1	0	0	200	0	
		Carbon tetrachloride		mg/kg	0.1	0	0	200	0	
		Trichloroethene (Trichloroethylene -TCE)		mg/kg	0.1	0	0	200	0	
		1,1,2-trichloroethane		mg/kg	0.1	0	0	200	0	
		1,3-dichloropropane		mg/kg	0.1	0	0	200	0	
		Tetrachloroethene (Perchloroethylene,PCE)		mg/kg	0.1	0	0	200	0	
		1,1,1,2-tetrachloroethane		mg/kg	0.1	0	0	200	0	
		cis-1,4-dichloro-2-butene	mg/kg	1	0	0	200	0		
		1,1,2,2-tetrachloroethane	mg/kg	0.1	0	0	200	0		

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433/AN434

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE107866.002	LB019466.009	Halogenated Aliphatics	1,2,3-trichloropropane	mg/kg	0.1	0	0	200	0
			trans-1,4-dichloro-2-butene	mg/kg	1	0	0	200	0
		Halogenated Aromatics	1,2-dibromo-3-chloropropane	mg/kg	0.1	0	0	200	0
			Hexachlorobutadiene	mg/kg	0.1	0	0	200	0
			Chlorobenzene	mg/kg	0.1	0	0	200	0
			2-chlorotoluene	mg/kg	0.1	0	0	200	0
			4-chlorotoluene	mg/kg	0.1	0	0	200	0
			1,3-dichlorobenzene	mg/kg	0.1	0	0	200	0
			1,4-dichlorobenzene	mg/kg	0.1	0	0	200	0
			1,2-dichlorobenzene	mg/kg	0.1	0	0	200	0
			1,2,4-trichlorobenzene	mg/kg	0.1	0	0	200	0
			1,2,3-trichlorobenzene	mg/kg	0.1	0	0	200	0
		Monocyclic Aromatic	Benzene	mg/kg	0.1	0	0	200	0
			Toluene	mg/kg	0.1	0	0	200	0
			Ethylbenzene	mg/kg	0.1	0	0	200	0
			m/p-xylene	mg/kg	0.2	0	0	200	0
			o-xylene	mg/kg	0.1	0	0	200	0
			Styrene (Vinyl benzene)	mg/kg	0.1	0	0	200	0
			Isopropylbenzene (Cumene)	mg/kg	0.1	0	0	200	0
			n-propylbenzene	mg/kg	0.1	0	0	200	0
			1,3,5-trimethylbenzene	mg/kg	0.1	0	0	200	0
			tert-butylbenzene	mg/kg	0.1	0	0	200	0
			1,2,4-trimethylbenzene	mg/kg	0.1	0	0	200	0
			sec-butylbenzene	mg/kg	0.1	0	0	200	0
			p-isopropyltoluene	mg/kg	0.1	0	0	200	0
			n-butylbenzene	mg/kg	0.1	0	0	200	0
			Nitrogenous Compounds	Acrylonitrile	mg/kg	0.1	0	0	200
		Oxygenated Compounds	2-nitropropane	mg/kg	10	0	0	200	0
			Acetone (2-propanone)	mg/kg	10	0	0	200	0
			MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	0	0	200	0
			Vinyl acetate	mg/kg	10	0	0	200	0
			MEK (2-butanone)	mg/kg	10	0	0	200	0
			MIBK (4-methyl-2-pentanone)	mg/kg	1	0	0	200	0
		Polycyclic	2-hexanone (MBK)	mg/kg	5	0	0	200	0
			Naphthalene	mg/kg	0.1	0	0	200	0
		Sulphonated	Carbon disulfide	mg/kg	0.5	0	0	200	0
		Surrogates	Dibromofluoromethane (Surrogate)	%	-	89	87	50	2
			d4-1,2-dichloroethane (Surrogate)	%	-	97	96	50	1
			d8-toluene (Surrogate)	%	-	96	95	50	1
			Bromofluorobenzene (Surrogate)	%	-	112	113	50	1
		Totals	Total Xylenes*	mg/kg	0.3	0	0	200	0
			Total BTEX*	mg/kg	-	0	0	200	NA
		Trihalomethanes	Chloroform	mg/kg	0.1	0	0	200	0
			Bromodichloromethane	mg/kg	0.1	0	0	200	0
			Chlorodibromomethane	mg/kg	0.1	0	0	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE107815.007	LB019469.011	TRH C6-C9	mg/kg	20	<20	<20	200	0	
		Surrogates	Trifluorotoluene (Surrogate)	%	-	86	88	30	2
SE107866.002	LB019466.009	TRH C6-C9	mg/kg	20	0	0	200	0	
		Surrogates	Trifluorotoluene (Surrogate)	%	-	101	100	30	1

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019590.002	Mercury	mg/kg	0.05	0.24	0.2	70 - 130	120

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019470.002	Heptachlor	mg/kg	0.1	0.3	0.2	60 - 140	125
	Aldrin	mg/kg	0.1	0.3	0.2	60 - 140	130
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	115
	Dieldrin	mg/kg	0.2	0.2	0.2	60 - 140	115
	Endrin	mg/kg	0.2	0.3	0.2	60 - 140	125
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	95
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	120	100	60 - 140	122

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019470.002	Dichlorvos	mg/kg	0.5	1.2	1.33	60 - 140	89
	Diazinon (Dimpylate)	mg/kg	0.5	1.3	1.33	60 - 140	98
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.5	1.33	60 - 140	113
	Ethion	mg/kg	0.2	1.3	1.33	60 - 140	101
Surrogates	2-fluorobiphenyl (Surrogate)	%	-	90.0	100	60 - 120	90
	d14-p-terphenyl (Surrogate)	%	-	82.0	100	60 - 140	82

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019470.002	Naphthalene	mg/kg	0.1	4.1	4	60 - 140	103
	Acenaphthylene	mg/kg	0.1	4.2	4	60 - 140	106
	Acenaphthene	mg/kg	0.1	4.1	4	60 - 140	104
	Phenanthrene	mg/kg	0.1	4.1	4	60 - 140	101
	Anthracene	mg/kg	0.1	4.2	4	60 - 140	104
	Fluoranthene	mg/kg	0.1	4.5	4	60 - 140	113
	Pyrene	mg/kg	0.1	4.5	4	60 - 140	112
	Benzo(a)pyrene	mg/kg	0.1	4.3	4	60 - 140	107
	d5-nitrobenzene (Surrogate)	%	-	98.0	100	60 - 140	98
	2-fluorobiphenyl (Surrogate)	%	-	86.0	100	60 - 140	86
	d14-p-terphenyl (Surrogate)	%	-	74.0	100	60 - 140	74

PCBs in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019470.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	88
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	120	100	60 - 140	123

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

Method: ME-(AU)-[ENV]AN400/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019578.002	Arsenic, As	mg/kg	3	46	50	80 - 120	92
	Cadmium, Cd	mg/kg	0.3	47	50	80 - 120	94
	Chromium, Cr	mg/kg	0.3	48	50	80 - 120	95
	Copper, Cu	mg/kg	0.5	47	50	80 - 120	94
	Lead, Pb	mg/kg	1	48	50	80 - 120	95
	Nickel, Ni	mg/kg	0.5	48	50	80 - 120	96
	Zinc, Zn	mg/kg	0.5	47	50	80 - 120	95

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019470.002	TRH C10-C14	mg/kg	20	40	40	60 - 140	100
	TRH C15-C28	mg/kg	50	<50	40	60 - 140	95
	TRH C29-C36	mg/kg	50	<50	40	60 - 140	88

VOC's in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB019466.002	Halogenated	1,1-dichloroethene	mg/kg	0.1	2.4	2.9	60 - 140	83
	Aliphatics	1,2-dichloroethane	mg/kg	0.1	2.3	2.9	60 - 140	78
		Trichloroethene (Trichloroethylene - TCE)	mg/kg	0.1	2.6	2.9	60 - 140	91

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019466.002	Halogenated	Chlorobenzene	mg/kg	0.1	2.2	2.9	60 - 140 77
	Monocyclic	Benzene	mg/kg	0.1	2.1	3	60 - 140 71
	Aromatic	Toluene	mg/kg	0.1	2.4	3	60 - 140 79
		Ethylbenzene	mg/kg	0.1	1.9	3	60 - 140 64
		m/p-xylene	mg/kg	0.2	5.3	5.9	60 - 140 90
		o-xylene	mg/kg	0.1	2.2	2.9	60 - 140 77
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	93.0	100	60 - 140 93
		d4-1,2-dichloroethane (Surrogate)	%	-	101.0	100	60 - 140 101
		d8-toluene (Surrogate)	%	-	94.0	100	60 - 140 94
		Bromofluorobenzene (Surrogate)	%	-	106.0	100	60 - 140 106
	Trihalomethan	Chloroform	mg/kg	0.1	2.4	2.9	60 - 140 81
LB019469.002	Monocyclic	Benzene	mg/kg	0.1	2.9	3	60 - 140 96
	Aromatic	Toluene	mg/kg	0.1	2.6	3	60 - 140 88
		Ethylbenzene	mg/kg	0.1	2.6	3	60 - 140 86
		m/p-xylene	mg/kg	0.2	5.3	5.9	60 - 140 91
		o-xylene	mg/kg	0.1	2.7	2.9	60 - 140 93
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	94.0	100	60 - 140 94
		d4-1,2-dichloroethane (Surrogate)	%	-	107.0	100	60 - 140 107
		d8-toluene (Surrogate)	%	-	104.0	100	60 - 140 104
		Bromofluorobenzene (Surrogate)	%	-	116.0	100	60 - 140 116

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019466.002	TRH C6-C9	mg/kg	20	31	24.4	60 - 140	127
LB019469.002	TRH C6-C9	mg/kg	20	30	24.4	60 - 140	123

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE107815.001	LB019590.004	Mercury	mg/kg	0.05	0.24	<0.05	0.2	108

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE107804.010	LB019578.004	Arsenic, As	mg/kg	3	120	82	50	83
		Cadmium, Cd	mg/kg	0.3	44	0.5	50	87
		Chromium, Cr	mg/kg	0.3	57	14	50	85
		Copper, Cu	mg/kg	0.5	170	130	50	73
		Lead, Pb	mg/kg	1	190	170	50	52 ☹
		Nickel, Ni	mg/kg	0.5	58	15	50	86
		Zinc, Zn	mg/kg	0.5	190	230	50	-70 ☹

VOC's in Soil

Method: ME-(AU)-[ENV]AN433/AN434

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE107815.001	LB019469.004	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1	3	101
			Toluene	mg/kg	0.1	<0.1	3	96
		Surrogates	Ethylbenzene	mg/kg	0.1	<0.1	3	94
			m/p-xylene	mg/kg	0.2	<0.2	5.9	100
			o-xylene	mg/kg	0.1	<0.1	2.9	102
			Dibromofluoromethane (Surrogate)	%	-	95.0	100	95
			d4-1,2-dichloroethane (Surrogate)	%	-	106.0	100	106
			d8-toluene (Surrogate)	%	-	103.0	100	103
			Bromofluorobenzene (Surrogate)	%	-	113.0	100	113
		Totals	Total Xylenes*	mg/kg	0.3	<0.3	-	-
			Total BTEX*	mg/kg	-	18	0	-
SE107815.006	LB019466.004	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	-
			1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	-
			cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	-
			trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	-
		Halogenated Aliphatics	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	-
			Chloromethane	mg/kg	1	<1	<1	-
			Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	-
			Chloroethane	mg/kg	1	<1	<1	-
			Trichlorofluoromethane	mg/kg	1	<1	<1	-
			1,1-dichloroethene	mg/kg	0.1	<0.1	2.9	110
			Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	-
			Allyl chloride	mg/kg	0.1	<0.1	<0.1	-
			trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	-
			1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1	-
			cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	-
			Bromochloromethane	mg/kg	0.1	<0.1	<0.1	-
			1,2-dichloroethane	mg/kg	0.1	3.0	<0.1	2.9
			1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	-
			1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	-
			Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	-
			Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	2.6	<0.1	2.9
			1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	-
			1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	-
			Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	-
			1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	-
			cis-1,4-dichloro-2-butene	mg/kg	1	<1	<1	-
			1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	-
			1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	-
			trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	-
			1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	-
			Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	-
		Halogenated Aromatics	Chlorobenzene	mg/kg	0.1	3.0	<0.1	2.9
			2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	-
			4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	-

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433/AN434

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%	
SE107815.006	LB019466.004	Halogenated	1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-	-	
			Aromatics	1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-	-
		1,2-dichlorobenzene		mg/kg	0.1	<0.1	<0.1	-	-	
		1,2,4-trichlorobenzene		mg/kg	0.1	<0.1	<0.1	-	-	
		1,2,3-trichlorobenzene		mg/kg	0.1	<0.1	<0.1	-	-	
		Monocyclic		Benzene	mg/kg	0.1	2.8	<0.1	3	94
			Aromatic	Toluene	mg/kg	0.1	3.3	<0.1	3	108
		Ethylbenzene		mg/kg	0.1	2.4	<0.1	3	78	
		m/p-xylene		mg/kg	0.2	5.1	<0.2	5.9	86	
		o-xylene		mg/kg	0.1	2.6	<0.1	2.9	91	
		Styrene (Vinyl benzene)		mg/kg	0.1	<0.1	<0.1	-	-	
		Isopropylbenzene (Cumene)		mg/kg	0.1	<0.1	<0.1	-	-	
		n-propylbenzene		mg/kg	0.1	<0.1	<0.1	-	-	
		1,3,5-trimethylbenzene		mg/kg	0.1	<0.1	<0.1	-	-	
		tert-butylbenzene		mg/kg	0.1	<0.1	<0.1	-	-	
		1,2,4-trimethylbenzene		mg/kg	0.1	<0.1	<0.1	-	-	
		sec-butylbenzene		mg/kg	0.1	<0.1	<0.1	-	-	
		p-isopropyltoluene		mg/kg	0.1	<0.1	<0.1	-	-	
		n-butylbenzene		mg/kg	0.1	<0.1	<0.1	-	-	
		Nitrogenous		Acrylonitrile	mg/kg	0.1	<0.1	<0.1	-	-
			Compounds	2-nitropropane	mg/kg	10	<10	<10	-	-
		Oxygenated		Acetone (2-propanone)	mg/kg	10	<10	<10	-	-
			Compounds	MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	<0.5	<0.5	-	-
				Vinyl acetate	mg/kg	10	<10	<10	-	-
				MEK (2-butanone)	mg/kg	10	<10	<10	-	-
				MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	-	-
			2-hexanone (MBK)	mg/kg	5	<5	<5	-	-	
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	-	-	
		Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5	<0.5	-	-	
		Surrogates	Dibromofluoromethane (Surrogate)	%	-	93.0	91.0	100	93	
			d4-1,2-dichloroethane (Surrogate)	%	-	101.0	101.0	100	101	
			d8-toluene (Surrogate)	%	-	97.0	97.0	100	97	
			Bromofluorobenzene (Surrogate)	%	-	106.0	111.0	100	106	
		Totals	Total Xylenes*	mg/kg	0.3	7.7	<0.3	-	-	
			Total BTEX*	mg/kg	-	16	0	-	-	
			Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3	<3	-	-	
		Trihalomethanes	Chloroform	mg/kg	0.1	3.0	<0.1	2.9	104	
			Bromodichloromethane	mg/kg	0.1	<0.1	<0.1	-	-	
			Chlorodibromomethane	mg/kg	0.1	<0.1	<0.1	-	-	

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE107815.001	LB019469.005	TRH C6-C9	mg/kg	20	33	<20	24.4	135
		Surrogates	Trifluorotoluene (Surrogate)	%	-	104	91	104
SE107815.006	LB019466.005	TRH C6-C9	mg/kg	20	28	<20	24.4	114
		Surrogates	Trifluorotoluene (Surrogate)	%	-	101	102	101

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here:
<http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf>

- * Non-accredited analysis.
- Sample not analysed for this analyte.
- ^ Analysis performed by external laboratory.

- IS Insufficient sample for analysis.
- LNR Sample listed, but not received.
- LOR Limit of reporting.
- QFH QC result is above the upper tolerance.
- QFL QC result is below the lower tolerance.

- ① At least 2 of 3 surrogates are within acceptance criteria.
- ② RPD failed acceptance criteria due to sample heterogeneity.
- ③ Results less than 5 times LOR preclude acceptance criteria for RPD.
- ④ Recovery failed acceptance criteria due to matrix interference.
- ⑤ Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
- ⑥ LOR was raised due to sample matrix interference.
- ⑦ LOR was raised due to dilution of significantly high concentration of analyte in sample.
- ⑧ Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
- ⑨ Recovery failed acceptance criteria due to sample heterogeneity.
- † Refer to Analytical Report comments for further information.

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92348

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C - Hydrochloric Acid Preserved, **S** - Sulphuric Acid Preserved, **I** - Ice

852101817

NOTES

3

SE 107819

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

92349



Philippines: ☐ 3rd Floor, JMT Bldg, ADB Ave, Ortigas Ctr, Pasig City, Metro Manila, Philippines Tel (+63) (2) 638 9886 Fax (+63) (2) 667 3518
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Project No: GEOTLCOV24303AC

Task No:

Project Name: SICEEP

Laboratory: 898

Samplers Name:

Adrianne Gervase DB

Project Manager:

Special Instructions:

Please keep all remaining soil & return to Coffey.
 Remaining soil is required to be stored for 36 months.

Lab. No.	Sample ID	Sample Location	Sample Depth	Sample Date	Time	Matrix (Soil, etc)	Container Type & Preservative*	T-A-T (Specify)	Analysis Request Section	NOTES
16	DUP13	BH8-01-02	01-02	23-04-12	-	Soil	1 for 1 + Ice	5 days	BTEX / TPH	
17	BH8-01-06	BH8-01-06	01-06	-	-	-	-	-	METALS	
18	BH8-01-16	BH8-01-16	01-16	-	-	-	-	-	PAHs	
19	BH8-01-31	BH8-01-31	01-31	-	-	-	-	-	OCs / OPs	
	BH8-01-46	BH8-01-46	01-46	-	-	-	-	-	Asbestos	
	BH8-01-61	BH8-01-61	01-61	-	-	-	-	-	VOC	
	BH8-01-78	BH8-01-78	01-78	-	-	-	-	-	SVOC	
	BH8-01-88	BH8-01-88	01-88	-	-	-	-	-	ASS screening (field pH / etc)	

RELINQUISHED BY:

RECEIVED BY:

Signature:

Date:

Time:

Signature:

Company:

Date:

Time:

Sample Receipt Advice: (Lab Use Only)

All Samples Received in Good Condition ☒

All Documentation is in Proper Order ☒

Samples Received Properly Chilled ☒

Signature:

Date:

Time:

Signature:

Company:

Date:

Time:

* Container Type & Preservation Codes: P - Plastic, G - Solvent Washed Acid Rinsed Glass Bottle, V - Vial, N - Nitric Acid Preserved
 C - Hydrochloric Acid Preserved, S - Sulphuric Acid Preserved, I - Ice

Lab. Ref/Batch No.

SB107819

CLIENT DETAILS

Contact **Matthew Locke**
 Client **Coffey Geotechnics Pty Ltd**
 Address **Unit 8, 12 Mars Road
Lane Cove NSW 2066**

Telephone **02 9911 1099**
 Facsimile **02 9911 1002**
 Email **matthew_locke@coffey.com**

Project **GEOTLCOV24303AC - SICEEP**
 Order Number **92348-349**
 Samples **19**

LABORATORY DETAILS

Manager **Huong Crawford**
 Laboratory **SGS Alexandria Environmental**
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 Email **au.environmental.sydney@sgs.com**

SGS Reference **SE107819 R0**
 Report Number **0000027775**
 Date Reported **09 May 2012**
 Date Received **02 May 2012**

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
 Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(4354).

No respirable fibres detected using trace analysis technique.

Sample #14,15: A portion of the sample supplied has been sub-sampled for asbestos according to SGS In-house procedures. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied.

SGS Environmental Services recommends supplying approximately 50-100g of sample in a separate container.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

SIGNATORIES



Andy Sutton
Organics Chemist



Dong Liang
Inorganics Metals Team Leader



Huong Crawford
Laboratory Manager



Ly Kim Ha
Organics Supervisor



Ravee Sivasubramaniam
Hygienist



ANALYTICAL REPORT

SE107819 R0

Parameter	Units	LOR	Sample Number	SE107819.001	SE107819.002	SE107819.003	SE107819.004	SE107819.005
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	BH27_1.5-1.9	BH27_3.0-3.4	BH27_4.5-4.9	BH30_0.5-0.6	TB7

VOC's in Soil Method: AN433/AN434

Fumigants

2,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
1,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-

Halogenated Aliphatics

Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	-	-	-	-
Chloromethane	mg/kg	1	-	-	-	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	-	-	-	-
Chloroethane	mg/kg	1	-	-	-	-	-
Trichlorofluoromethane	mg/kg	1	-	-	-	-	-
1,1-dichloroethene	mg/kg	0.1	-	-	-	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	-	-	-	-
Allyl chloride	mg/kg	0.1	-	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
1,1-dichloroethane	mg/kg	0.1	-	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
Bromochloromethane	mg/kg	0.1	-	-	-	-	-
1,2-dichloroethane	mg/kg	0.1	-	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,1-dichloropropene	mg/kg	0.1	-	-	-	-	-
Carbon tetrachloride	mg/kg	0.1	-	-	-	-	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	-	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,3-dichloropropane	mg/kg	0.1	-	-	-	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	-	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
cis-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.1	-	-	-	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	-	-	-	-	-

Halogenated Aromatics

Chlorobenzene	mg/kg	0.1	-	-	-	-	-
2-chlorotoluene	mg/kg	0.1	-	-	-	-	-
4-chlorotoluene	mg/kg	0.1	-	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	-	-	-	-	-

Monocyclic Aromatic Hydrocarbons

Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Styrene (Vinyl benzene)	mg/kg	0.1	-	-	-	-	-
Isopropylbenzene (Cumene)	mg/kg	0.1	-	-	-	-	-
n-propylbenzene	mg/kg	0.1	-	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
tert-butylbenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
sec-butylbenzene	mg/kg	0.1	-	-	-	-	-
p-isopropyltoluene	mg/kg	0.1	-	-	-	-	-

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			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	BH27_1.5-1.9	BH27_3.0-3.4	BH27_4.5-4.9	BH30_0.5-0.6	TB7

VOC's in Soil Method: AN433/AN434 (continued)

n-butylbenzene	mg/kg	0.1	-	-	-	-	-
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Nitrogenous Compounds

Acrylonitrile	mg/kg	0.1	-	-	-	-	-
2-nitropropane	mg/kg	10	-	-	-	-	-

Oxygenated Compounds

Acetone (2-propanone)	mg/kg	10	-	-	-	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	-	-	-	-	-
Vinyl acetate	mg/kg	10	-	-	-	-	-
MEK (2-butanone)	mg/kg	10	-	-	-	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	-	-	-	-
2-hexanone (MBK)	mg/kg	5	-	-	-	-	-

Polycyclic VOCs

Naphthalene	mg/kg	0.1	-	-	-	-	-
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Sulphonated Compounds

Carbon disulfide	mg/kg	0.5	-	-	-	-	-
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Surrogates

Dibromofluoromethane (Surrogate)	%	-	97	99	97	97	97
d4-1,2-dichloroethane (Surrogate)	%	-	101	102	101	101	100
d8-toluene (Surrogate)	%	-	100	99	101	101	100
Bromofluorobenzene (Surrogate)	%	-	98	109	102	100	100

Totals

Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	-	0	0	0	0	0
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	-	-	-	-
Total VOC*	mg/kg	24	-	-	-	-	-

Trihalomethanes

Chloroform	mg/kg	0.1	-	-	-	-	-
Bromodichloromethane	mg/kg	0.1	-	-	-	-	-
Chlorodibromomethane	mg/kg	0.1	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107819.001	SE107819.002	SE107819.003	SE107819.004	SE107819.005
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	BH27_1.5-1.9	BH27_3.0-3.4	BH27_4.5-4.9	BH30_0.5-0.6	TB7

Volatile Petroleum Hydrocarbons in Soil Method: AN433/AN434

TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
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Surrogates

Trifluorotoluene (Surrogate)	%	-	86	78	80	67	66
Dibromofluoromethane (Surrogate)	%	-	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-	-

TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403

TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	50	<50	<50	<50	<50	<50
TRH C29-C36	mg/kg	50	<50	<50	<50	<50	<50

Surrogates

TRH (Surrogate)	%	-	-	-	-	-	-
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PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420

Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	0.1	-
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	0.2	-
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	0.3	-
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	2.0	-
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	0.7	-
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	2.6	-
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	2.4	-
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	1.2	-
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	0.9	-
Benzo(b)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	1.1	-
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	0.6	-
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	1.0	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	0.5	-
Dibenzo(a,h)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	0.6	-
Total PAH (Vic EPA)	mg/kg	0.8	<0.8	<0.8	<0.8	14	-

Surrogates

d5-nitrobenzene (Surrogate)	%	-	122	112	126	110	-
2-fluorobiphenyl (Surrogate)	%	-	126	104	112	106	-
d14-p-terphenyl (Surrogate)	%	-	118	102	106	102	-

OC Pesticides in Soil Method: AN400/AN420

Hexachlorobenzene (HCB)	mg/kg	0.1	-	-	-	-	-
Alpha BHC	mg/kg	0.1	-	-	-	-	-
Lindane	mg/kg	0.1	-	-	-	-	-
Heptachlor	mg/kg	0.1	-	-	-	-	-
Aldrin	mg/kg	0.1	-	-	-	-	-
Beta BHC	mg/kg	0.1	-	-	-	-	-
Delta BHC	mg/kg	0.1	-	-	-	-	-
Heptachlor epoxide	mg/kg	0.1	-	-	-	-	-
o,p'-DDE	mg/kg	0.1	-	-	-	-	-
Alpha Endosulfan	mg/kg	0.2	-	-	-	-	-
Gamma Chlordane	mg/kg	0.1	-	-	-	-	-
Alpha Chlordane	mg/kg	0.1	-	-	-	-	-
trans-Nonachlor	mg/kg	0.1	-	-	-	-	-
p,p'-DDE	mg/kg	0.1	-	-	-	-	-
Dieldrin	mg/kg	0.2	-	-	-	-	-
Endrin	mg/kg	0.2	-	-	-	-	-

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			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	BH27_1.5-1.9	BH27_3.0-3.4	BH27_4.5-4.9	BH30_0.5-0.6	TB7

OC Pesticides in Soil Method: AN400/AN420 (continued)

o,p'-DDD	mg/kg	0.1	-	-	-	-	-
o,p'-DDT	mg/kg	0.1	-	-	-	-	-
Beta Endosulfan	mg/kg	0.2	-	-	-	-	-
p,p'-DDD	mg/kg	0.1	-	-	-	-	-
p,p'-DDT	mg/kg	0.1	-	-	-	-	-
Endosulfan sulphate	mg/kg	0.1	-	-	-	-	-
Endrin Aldehyde	mg/kg	0.1	-	-	-	-	-
Methoxychlor	mg/kg	0.1	-	-	-	-	-
Endrin Ketone	mg/kg	0.1	-	-	-	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-	-
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OP Pesticides in Soil Method: AN400/AN420

Dichlorvos	mg/kg	0.5	-	-	-	-	-
Dimethoate	mg/kg	0.5	-	-	-	-	-
Diazinon (Dimpylate)	mg/kg	0.5	-	-	-	-	-
Fenitrothion	mg/kg	0.2	-	-	-	-	-
Malathion	mg/kg	0.2	-	-	-	-	-
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	-	-	-	-	-
Parathion-ethyl (Parathion)	mg/kg	0.2	-	-	-	-	-
Bromophos Ethyl	mg/kg	0.2	-	-	-	-	-
Methidathion	mg/kg	0.5	-	-	-	-	-
Ethion	mg/kg	0.2	-	-	-	-	-
Azinphos-methyl (Guthion)	mg/kg	0.2	-	-	-	-	-

Surrogates

2-fluorobiphenyl (Surrogate)	%	-	-	-	-	-	-
d14-p-terphenyl (Surrogate)	%	-	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107819.001	SE107819.002	SE107819.003	SE107819.004	SE107819.005
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	BH27_1.5-1.9	BH27_3.0-3.4	BH27_4.5-4.9	BH30_0.5-0.6	TB7

PCBs in Soil Method: AN400/AN420

Arochlor 1016	mg/kg	0.2	-	-	-	-	-
Arochlor 1221	mg/kg	0.2	-	-	-	-	-
Arochlor 1232	mg/kg	0.2	-	-	-	-	-
Arochlor 1242	mg/kg	0.2	-	-	-	-	-
Arochlor 1248	mg/kg	0.2	-	-	-	-	-
Arochlor 1254	mg/kg	0.2	-	-	-	-	-
Arochlor 1260	mg/kg	0.2	-	-	-	-	-
Arochlor 1262	mg/kg	0.2	-	-	-	-	-
Arochlor 1268	mg/kg	0.2	-	-	-	-	-
Total PCBs (Arochors)	mg/kg	1	-	-	-	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-	-
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Field pH for Acid Sulphate Soil Method: AN104

PHf	pH Units	-	-	-	-	-	-
PHfox	pH Units	-	-	-	-	-	-
Reaction*	No unit	-	-	-	-	-	-
pH Difference*	pH Units	-10	-	-	-	-	-

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: AN040/AN320

Arsenic, As	mg/kg	3	6	5	<3	<3	-
Cadmium, Cd	mg/kg	0.3	0.3	<0.3	<0.3	<0.3	-
Chromium, Cr	mg/kg	0.3	6.9	17	16	11	-
Copper, Cu	mg/kg	0.5	2.3	13	8.6	35	-
Lead, Pb	mg/kg	1	9	30	15	51	-
Nickel, Ni	mg/kg	0.5	<0.5	12	3.7	31	-
Zinc, Zn	mg/kg	0.5	21	27	3.7	89	-

Mercury in Soil Method: AN312

Mercury	mg/kg	0.05	<0.05	0.08	<0.05	0.28	-
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Fibre Identification in soil Method: AN602

FibreID

Asbestos Detected	No unit	-	No	-	-	No	-
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SemiQuant

Estimated Fibres	%w/w	0.01	<0.01	-	-	<0.01	-
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Moisture Content Method: AN002

% Moisture	%	0.5	17	23	25	10	<0.5
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VOCs in Water Method: AN433/AN434

Monocyclic Aromatic Hydrocarbons

Benzene	µg/L	0.5	-	-	-	-	-
Toluene	µg/L	0.5	-	-	-	-	-
Ethylbenzene	µg/L	0.5	-	-	-	-	-
m/p-xylene	µg/L	1	-	-	-	-	-
o-xylene	µg/L	0.5	-	-	-	-	-

Surrogates

Dibromofluoromethane (Surrogate)	%	-	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-	-



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VOCs in Water Method: AN433/AN434 (continued)

Totals

Total Xylenes	µg/L	1.5	-	-	-	-	-
Total BTEX	µg/L	3	-	-	-	-	-

Volatile Petroleum Hydrocarbons in Water Method: AN433/AN434

TRH C6-C9	µg/L	40	-	-	-	-	-
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Surrogates

Trifluorotoluene (Surrogate)	%	-	-	-	-	-	-
Dibromofluoromethane (Surrogate)	%	-	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-	-

TRH (Total Recoverable Hydrocarbons) in Water Method: AN403

TRH C10-C14	µg/L	100	-	-	-	-	-
TRH C15-C28	µg/L	200	-	-	-	-	-
TRH C29-C36	µg/L	200	-	-	-	-	-

Surrogates

TRH (Surrogate)	%	-	-	-	-	-	-
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PAH (Polynuclear Aromatic Hydrocarbons) in Water Method: AN420

Naphthalene	µg/L	0.1	-	-	-	-	-
Acenaphthylene	µg/L	0.1	-	-	-	-	-
Acenaphthene	µg/L	0.1	-	-	-	-	-
Fluorene	µg/L	0.1	-	-	-	-	-
Phenanthrene	µg/L	0.1	-	-	-	-	-
Anthracene	µg/L	0.1	-	-	-	-	-
Fluoranthene	µg/L	0.1	-	-	-	-	-
Pyrene	µg/L	0.1	-	-	-	-	-
Benzo(a)anthracene	µg/L	0.1	-	-	-	-	-
Chrysene	µg/L	0.1	-	-	-	-	-
Benzo(a)pyrene	µg/L	0.1	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/L	0.1	-	-	-	-	-
Dibenzo(a,h)anthracene	µg/L	0.1	-	-	-	-	-
Benzo(ghi)perylene	µg/L	0.1	-	-	-	-	-
Benzo(b)fluoranthene	µg/L	0.1	-	-	-	-	-
Benzo(k)fluoranthene	µg/L	0.1	-	-	-	-	-
Total PAH (Vic EPA 16)*	µg/L	1	-	-	-	-	-

Surrogates

d5-nitrobenzene (Surrogate)	%	-	-	-	-	-	-
2-fluorobiphenyl (Surrogate)	%	-	-	-	-	-	-
d14-p-terphenyl (Surrogate)	%	-	-	-	-	-	-

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Sample Name	BH27_1.5-1.9	BH27_3.0-3.4	BH27_4.5-4.9	BH30_0.5-0.6	TB7
Parameter	Units	LOR			

Trace Metals (Dissolved) in Water by ICPMS Method: AN318

Arsenic, As	µg/L	1	-	-	-	-	-
Cadmium, Cd	µg/L	0.1	-	-	-	-	-
Chromium, Cr	µg/L	1	-	-	-	-	-
Copper, Cu	µg/L	1	-	-	-	-	-
Lead, Pb	µg/L	1	-	-	-	-	-
Nickel, Ni	µg/L	1	-	-	-	-	-
Zinc, Zn	µg/L	1	-	-	-	-	-

Mercury (dissolved) in Water Method: AN311/AN312

Mercury	mg/L	0.0001	-	-	-	-	-
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Sample Number	SE107819.006	SE107819.007	SE107819.008	SE107819.009	SE107819.010
Sample Matrix	Soil	Water	Soil	Soil	Soil
Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
Sample Name	TS7	QCB	BH30_1.5-1.9	BH30_3.0-5.4	BH30_4.5-4.9
Parameter	Units	LOR			

VOC's in Soil Method: AN433/AN434

Fumigants

2,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
1,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-

Halogenated Aliphatics

Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	-	-	-	-
Chloromethane	mg/kg	1	-	-	-	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	-	-	-	-
Chloroethane	mg/kg	1	-	-	-	-	-
Trichlorofluoromethane	mg/kg	1	-	-	-	-	-
1,1-dichloroethene	mg/kg	0.1	-	-	-	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	-	-	-	-
Allyl chloride	mg/kg	0.1	-	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
1,1-dichloroethane	mg/kg	0.1	-	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
Bromochloromethane	mg/kg	0.1	-	-	-	-	-
1,2-dichloroethane	mg/kg	0.1	-	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,1-dichloropropene	mg/kg	0.1	-	-	-	-	-
Carbon tetrachloride	mg/kg	0.1	-	-	-	-	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	-	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,3-dichloropropane	mg/kg	0.1	-	-	-	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	-	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
cis-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.1	-	-	-	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	-	-	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE107819.006 Soil 27 Apr 2012 TS7	SE107819.007 Water 27 Apr 2012 QCB	SE107819.008 Soil 27 Apr 2012 BH30_1.5-1.9	SE107819.009 Soil 27 Apr 2012 BH30_3.0-5.4	SE107819.010 Soil 27 Apr 2012 BH30_4.5-4.9
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VOC's in Soil Method: AN433/AN434 (continued)

Halogenated Aromatics

Chlorobenzene	mg/kg	0.1	-	-	-	-	-
2-chlorotoluene	mg/kg	0.1	-	-	-	-	-
4-chlorotoluene	mg/kg	0.1	-	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	-	-	-	-	-

Monocyclic Aromatic Hydrocarbons

Benzene	mg/kg	0.1	[89%]	-	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	[91%]	-	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	[84%]	-	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	[91%]	-	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	[87%]	-	<0.1	<0.1	<0.1
Styrene (Vinyl benzene)	mg/kg	0.1	-	-	-	-	-
Isopropylbenzene (Cumene)	mg/kg	0.1	-	-	-	-	-
n-propylbenzene	mg/kg	0.1	-	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
tert-butylbenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
sec-butylbenzene	mg/kg	0.1	-	-	-	-	-
p-isopropyltoluene	mg/kg	0.1	-	-	-	-	-
n-butylbenzene	mg/kg	0.1	-	-	-	-	-

Nitrogenous Compounds

Acrylonitrile	mg/kg	0.1	-	-	-	-	-
2-nitropropane	mg/kg	10	-	-	-	-	-

Oxygenated Compounds

Acetone (2-propanone)	mg/kg	10	-	-	-	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	-	-	-	-	-
Vinyl acetate	mg/kg	10	-	-	-	-	-
MEK (2-butanone)	mg/kg	10	-	-	-	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	-	-	-	-
2-hexanone (MBK)	mg/kg	5	-	-	-	-	-

Polycyclic VOCs

Naphthalene	mg/kg	0.1	-	-	-	-	-
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Sulphonated Compounds

Carbon disulfide	mg/kg	0.5	-	-	-	-	-
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Surrogates

Dibromofluoromethane (Surrogate)	%	-	96	-	97	98	97
d4-1,2-dichloroethane (Surrogate)	%	-	95	-	102	101	101
d8-toluene (Surrogate)	%	-	94	-	101	101	100
Bromofluorobenzene (Surrogate)	%	-	67	-	96	103	102

Parameter	Units	LOR	Sample Number	SE107819.006	SE107819.007	SE107819.008	SE107819.009	SE107819.010
			Sample Matrix	Soil	Water	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	TS7	QCB	BH30_1.5-1.9	BH30_3.0-5.4	BH30_4.5-4.9

VOC's in Soil Method: AN433/AN434 (continued)

Totals

Total Xylenes*	mg/kg	0.3	-	-	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	-	-	-	0	0	0
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	-	-	-	-
Total VOC*	mg/kg	24	-	-	-	-	-

Trihalomethanes

Chloroform	mg/kg	0.1	-	-	-	-	-
Bromodichloromethane	mg/kg	0.1	-	-	-	-	-
Chlorodibromomethane	mg/kg	0.1	-	-	-	-	-

Volatile Petroleum Hydrocarbons in Soil Method: AN433/AN434

TRH C6-C9	mg/kg	20	-	-	<20	<20	<20
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Surrogates

Trifluorotoluene (Surrogate)	%	-	-	-	76	73	72
Dibromofluoromethane (Surrogate)	%	-	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-	-

TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403

TRH C10-C14	mg/kg	20	-	-	<20	<20	<20
TRH C15-C28	mg/kg	50	-	-	<50	<50	<50
TRH C29-C36	mg/kg	50	-	-	<50	<50	<50

Surrogates

TRH (Surrogate)	%	-	-	-	-	-	-
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PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420

Naphthalene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	-	-	<0.1	0.8	<0.1
Anthracene	mg/kg	0.1	-	-	<0.1	0.3	<0.1
Fluoranthene	mg/kg	0.1	-	-	<0.1	1.2	<0.1
Pyrene	mg/kg	0.1	-	-	<0.1	1.2	<0.1
Benzo(a)anthracene	mg/kg	0.1	-	-	<0.1	0.5	<0.1
Chrysene	mg/kg	0.1	-	-	<0.1	0.4	<0.1
Benzo(b)fluoranthene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	-	-	<0.1	0.4	<0.1
Benzo(a)pyrene	mg/kg	0.1	-	-	<0.1	0.6	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	-	-	<0.1	0.4	<0.1
Dibenzo(a,h)anthracene	mg/kg	0.1	-	-	<0.1	0.2	<0.1
Benzo(ghi)perylene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1
Total PAH (Vic EPA)	mg/kg	0.8	-	-	<0.8	<0.8	<0.8



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Sample Number	SE107819.006	SE107819.007	SE107819.008	SE107819.009	SE107819.010
Sample Matrix	Soil	Water	Soil	Soil	Soil
Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
Sample Name	TS7	QCB	BH30_1.5-1.9	BH30_3.0-5.4	BH30_4.5-4.9
Parameter	Units	LOR			

PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 (continued)

Surrogates

d5-nitrobenzene (Surrogate)	%	-	-	-	124	118	120
2-fluorobiphenyl (Surrogate)	%	-	-	-	114	110	119
d14-p-terphenyl (Surrogate)	%	-	-	-	108	104	100

OC Pesticides in Soil Method: AN400/AN420

Hexachlorobenzene (HCB)	mg/kg	0.1	-	-	-	-	-
Alpha BHC	mg/kg	0.1	-	-	-	-	-
Lindane	mg/kg	0.1	-	-	-	-	-
Heptachlor	mg/kg	0.1	-	-	-	-	-
Aldrin	mg/kg	0.1	-	-	-	-	-
Beta BHC	mg/kg	0.1	-	-	-	-	-
Delta BHC	mg/kg	0.1	-	-	-	-	-
Heptachlor epoxide	mg/kg	0.1	-	-	-	-	-
o,p'-DDE	mg/kg	0.1	-	-	-	-	-
Alpha Endosulfan	mg/kg	0.2	-	-	-	-	-
Gamma Chlordane	mg/kg	0.1	-	-	-	-	-
Alpha Chlordane	mg/kg	0.1	-	-	-	-	-
trans-Nonachlor	mg/kg	0.1	-	-	-	-	-
p,p'-DDE	mg/kg	0.1	-	-	-	-	-
Dieldrin	mg/kg	0.2	-	-	-	-	-
Endrin	mg/kg	0.2	-	-	-	-	-
o,p'-DDD	mg/kg	0.1	-	-	-	-	-
o,p'-DDT	mg/kg	0.1	-	-	-	-	-
Beta Endosulfan	mg/kg	0.2	-	-	-	-	-
p,p'-DDD	mg/kg	0.1	-	-	-	-	-
p,p'-DDT	mg/kg	0.1	-	-	-	-	-
Endosulfan sulphate	mg/kg	0.1	-	-	-	-	-
Endrin Aldehyde	mg/kg	0.1	-	-	-	-	-
Methoxychlor	mg/kg	0.1	-	-	-	-	-
Endrin Ketone	mg/kg	0.1	-	-	-	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-	-
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OP Pesticides in Soil Method: AN400/AN420

Dichlorvos	mg/kg	0.5	-	-	-	-	-
Dimethoate	mg/kg	0.5	-	-	-	-	-
Diazinon (Dimpylate)	mg/kg	0.5	-	-	-	-	-
Fenitrothion	mg/kg	0.2	-	-	-	-	-
Malathion	mg/kg	0.2	-	-	-	-	-
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	-	-	-	-	-
Parathion-ethyl (Parathion)	mg/kg	0.2	-	-	-	-	-
Bromophos Ethyl	mg/kg	0.2	-	-	-	-	-
Methidathion	mg/kg	0.5	-	-	-	-	-
Ethion	mg/kg	0.2	-	-	-	-	-
Azinphos-methyl (Guthion)	mg/kg	0.2	-	-	-	-	-



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Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE107819.006 Soil 27 Apr 2012 TS7	SE107819.007 Water 27 Apr 2012 QCB	SE107819.008 Soil 27 Apr 2012 BH30_1.5-1.9	SE107819.009 Soil 27 Apr 2012 BH30_3.0-5.4	SE107819.010 Soil 27 Apr 2012 BH30_4.5-4.9
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OP Pesticides in Soil Method: AN400/AN420 (continued)

Surrogates

2-fluorobiphenyl (Surrogate)	%	-	-	-	-	-	-	-
d14-p-terphenyl (Surrogate)	%	-	-	-	-	-	-	-

PCBs in Soil Method: AN400/AN420

Arochlor 1016	mg/kg	0.2	-	-	-	-	-	-
Arochlor 1221	mg/kg	0.2	-	-	-	-	-	-
Arochlor 1232	mg/kg	0.2	-	-	-	-	-	-
Arochlor 1242	mg/kg	0.2	-	-	-	-	-	-
Arochlor 1248	mg/kg	0.2	-	-	-	-	-	-
Arochlor 1254	mg/kg	0.2	-	-	-	-	-	-
Arochlor 1260	mg/kg	0.2	-	-	-	-	-	-
Arochlor 1262	mg/kg	0.2	-	-	-	-	-	-
Arochlor 1268	mg/kg	0.2	-	-	-	-	-	-
Total PCBs (Arochlors)	mg/kg	1	-	-	-	-	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-	-	-
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Field pH for Acid Sulphate Soil Method: AN104

PHf	pH Units	-	-	-	-	-	-	8.1
PHfox	pH Units	-	-	-	-	-	-	2.5
Reaction*	No unit	-	-	-	-	-	-	XXXX
pH Difference*	pH Units	-10	-	-	-	-	-	5.6

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: AN040/AN320

Arsenic, As	mg/kg	3	-	-	4	<3	9
Cadmium, Cd	mg/kg	0.3	-	-	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	-	-	11	9.7	260
Copper, Cu	mg/kg	0.5	-	-	8.7	4.7	33
Lead, Pb	mg/kg	1	-	-	18	27	19
Nickel, Ni	mg/kg	0.5	-	-	3.2	2.1	25
Zinc, Zn	mg/kg	0.5	-	-	23	32	9.4

Mercury in Soil Method: AN312

Mercury	mg/kg	0.05	-	-	0.08	0.08	<0.05
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Fibre Identification in soil Method: AN602

FibreID

Asbestos Detected	No unit	-	-	-	-	-	-
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SemiQuant

Estimated Fibres	%w/w	0.01	-	-	-	-	-
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Moisture Content Method: AN002

% Moisture	%	0.5	-	-	16	18	26
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VOCs in Water Method: AN433/AN434

Monocyclic Aromatic Hydrocarbons

Benzene	µg/L	0.5	-	<0.5	-	-	-
Toluene	µg/L	0.5	-	<0.5	-	-	-
Ethylbenzene	µg/L	0.5	-	<0.5	-	-	-
m/p-xylene	µg/L	1	-	<1	-	-	-
o-xylene	µg/L	0.5	-	<0.5	-	-	-



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Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE107819.006 Soil 27 Apr 2012 TS7	SE107819.007 Water 27 Apr 2012 QCB	SE107819.008 Soil 27 Apr 2012 BH30_1.5-1.9	SE107819.009 Soil 27 Apr 2012 BH30_3.0-5.4	SE107819.010 Soil 27 Apr 2012 BH30_4.5-4.9
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VOCs in Water Method: AN433/AN434 (continued)

Surrogates

Dibromofluoromethane (Surrogate)	%	-	-	-	104	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	108	-	-	-
d8-toluene (Surrogate)	%	-	-	-	100	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	119	-	-	-

Totals

Total Xylenes	µg/L	1.5	-	-	<1.5	-	-	-
Total BTEX	µg/L	3	-	-	<3	-	-	-

Volatile Petroleum Hydrocarbons in Water Method: AN433/AN434

TRH C6-C9	µg/L	40	-	-	<40	-	-	-
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Surrogates

Trifluorotoluene (Surrogate)	%	-	-	-	100	-	-	-
Dibromofluoromethane (Surrogate)	%	-	-	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-	-	-

TRH (Total Recoverable Hydrocarbons) in Water Method: AN403

TRH C10-C14	µg/L	100	-	-	<100	-	-	-
TRH C15-C28	µg/L	200	-	-	<200	-	-	-
TRH C29-C36	µg/L	200	-	-	<200	-	-	-

Surrogates

TRH (Surrogate)	%	-	-	-	-	-	-	-
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PAH (Polynuclear Aromatic Hydrocarbons) in Water Method: AN420

Naphthalene	µg/L	0.1	-	-	<0.1	-	-	-
Acenaphthylene	µg/L	0.1	-	-	<0.1	-	-	-
Acenaphthene	µg/L	0.1	-	-	<0.1	-	-	-
Fluorene	µg/L	0.1	-	-	<0.1	-	-	-
Phenanthrene	µg/L	0.1	-	-	<0.1	-	-	-
Anthracene	µg/L	0.1	-	-	<0.1	-	-	-
Fluoranthene	µg/L	0.1	-	-	<0.1	-	-	-
Pyrene	µg/L	0.1	-	-	<0.1	-	-	-
Benzo(a)anthracene	µg/L	0.1	-	-	<0.1	-	-	-
Chrysene	µg/L	0.1	-	-	<0.1	-	-	-
Benzo(a)pyrene	µg/L	0.1	-	-	<0.1	-	-	-
Indeno(1,2,3-cd)pyrene	µg/L	0.1	-	-	<0.1	-	-	-
Dibenzo(a,h)anthracene	µg/L	0.1	-	-	<0.1	-	-	-
Benzo(ghi)perylene	µg/L	0.1	-	-	<0.1	-	-	-
Benzo(b)fluoranthene	µg/L	0.1	-	-	<0.1	-	-	-
Benzo(k)fluoranthene	µg/L	0.1	-	-	<0.1	-	-	-
Total PAH (Vic EPA 16)*	µg/L	1	-	-	<1	-	-	-



ANALYTICAL REPORT

SE107819 R0

Parameter	Units	LOR
Sample Number	SE107819.006	SE107819.007
Sample Matrix	Soil	Water
Sample Date	27 Apr 2012	27 Apr 2012
Sample Name	TS7	QCB
		SE107819.008
		Soil
		27 Apr 2012
		BH30_1.5-1.9
		SE107819.009
		Soil
		27 Apr 2012
		BH30_3.0-5.4
		SE107819.010
		Soil
		27 Apr 2012
		BH30_4.5-4.9

PAH (Polynuclear Aromatic Hydrocarbons) in Water Method: AN420 (continued)

Surrogates

d5-nitrobenzene (Surrogate)	%	-	-	79	-	-	-
2-fluorobiphenyl (Surrogate)	%	-	-	80	-	-	-
d14-p-terphenyl (Surrogate)	%	-	-	106	-	-	-

Trace Metals (Dissolved) in Water by ICPMS Method: AN318

Arsenic, As	µg/L	1	-	<1	-	-	-
Cadmium, Cd	µg/L	0.1	-	<0.1	-	-	-
Chromium, Cr	µg/L	1	-	<1	-	-	-
Copper, Cu	µg/L	1	-	<1	-	-	-
Lead, Pb	µg/L	1	-	<1	-	-	-
Nickel, Ni	µg/L	1	-	<1	-	-	-
Zinc, Zn	µg/L	1	-	33	-	-	-

Mercury (dissolved) in Water Method: AN311/AN312

Mercury	mg/L	0.0001	-	<0.0001	-	-	-
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Parameter	Units	LOR
Sample Number	SE107819.011	SE107819.012
Sample Matrix	Soil	Soil
Sample Date	27 Apr 2012	27 Apr 2012
Sample Name	BH15_Surface	BH15_0.5-0.6
		SE107819.013
		Soil
		27 Apr 2012
		BH15_1.5-1.6
		SE107819.014
		Soil
		27 Apr 2012
		DUP12
		SE107819.015
		Soil
		27 Apr 2012
		DUP15

VOC's in Soil Method: AN433/AN434

Fumigants

2,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
1,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-

Halogenated Aliphatics

Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	-	-	-	-
Chloromethane	mg/kg	1	-	-	-	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	-	-	-	-
Chloroethane	mg/kg	1	-	-	-	-	-
Trichlorofluoromethane	mg/kg	1	-	-	-	-	-
1,1-dichloroethene	mg/kg	0.1	-	-	-	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	-	-	-	-
Allyl chloride	mg/kg	0.1	-	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
1,1-dichloroethane	mg/kg	0.1	-	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
Bromochloromethane	mg/kg	0.1	-	-	-	-	-
1,2-dichloroethane	mg/kg	0.1	-	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,1-dichloropropene	mg/kg	0.1	-	-	-	-	-
Carbon tetrachloride	mg/kg	0.1	-	-	-	-	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	-	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,3-dichloropropane	mg/kg	0.1	-	-	-	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	-	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
cis-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.1	-	-	-	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107819.011	SE107819.012	SE107819.013	SE107819.014	SE107819.015
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	BH15_Surface	BH15_0.5-0.6	BH15_1.5-1.6	DUP12	DUP15

VOC's in Soil Method: AN433/AN434 (continued)

Halogenated Aromatics

Chlorobenzene	mg/kg	0.1	-	-	-	-	-
2-chlorotoluene	mg/kg	0.1	-	-	-	-	-
4-chlorotoluene	mg/kg	0.1	-	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	-	-	-	-	-

Monocyclic Aromatic Hydrocarbons

Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Styrene (Vinyl benzene)	mg/kg	0.1	-	-	-	-	-
Isopropylbenzene (Cumene)	mg/kg	0.1	-	-	-	-	-
n-propylbenzene	mg/kg	0.1	-	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
tert-butylbenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
sec-butylbenzene	mg/kg	0.1	-	-	-	-	-
p-isopropyltoluene	mg/kg	0.1	-	-	-	-	-
n-butylbenzene	mg/kg	0.1	-	-	-	-	-

Nitrogenous Compounds

Acrylonitrile	mg/kg	0.1	-	-	-	-	-
2-nitropropane	mg/kg	10	-	-	-	-	-

Oxygenated Compounds

Acetone (2-propanone)	mg/kg	10	-	-	-	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	-	-	-	-	-
Vinyl acetate	mg/kg	10	-	-	-	-	-
MEK (2-butanone)	mg/kg	10	-	-	-	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	-	-	-	-
2-hexanone (MBK)	mg/kg	5	-	-	-	-	-

Polycyclic VOCs

Naphthalene	mg/kg	0.1	-	-	-	-	-
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Sulphonated Compounds

Carbon disulfide	mg/kg	0.5	-	-	-	-	-
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Surrogates

Dibromofluoromethane (Surrogate)	%	-	98	98	97	98	96
d4-1,2-dichloroethane (Surrogate)	%	-	100	101	101	102	100
d8-toluene (Surrogate)	%	-	100	101	101	102	98
Bromofluorobenzene (Surrogate)	%	-	105	104	100	105	102



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Parameter	Units	LOR	Sample Number	SE107819.011	SE107819.012	SE107819.013	SE107819.014	SE107819.015
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	BH15_Surface	BH15_0.5-0.6	BH15_1.5-1.6	DUP12	DUP15

VOC's in Soil Method: AN433/AN434 (continued)

Totals

Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	-	0	0	0	0	0
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	-	-	-	-
Total VOC*	mg/kg	24	-	-	-	-	-

Trihalomethanes

Chloroform	mg/kg	0.1	-	-	-	-	-
Bromodichloromethane	mg/kg	0.1	-	-	-	-	-
Chlorodibromomethane	mg/kg	0.1	-	-	-	-	-

Volatile Petroleum Hydrocarbons in Soil Method: AN433/AN434

TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
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Surrogates

Trifluorotoluene (Surrogate)	%	-	75	67	72	64	66
Dibromofluoromethane (Surrogate)	%	-	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-	-

TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403

TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	50	<50	<50	61	59	94
TRH C29-C36	mg/kg	50	<50	51	54	<50	170

Surrogates

TRH (Surrogate)	%	-	-	-	-	-	-
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PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420

Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	0.1	0.3	0.1
Acenaphthene	mg/kg	0.1	<0.1	0.2	<0.1	<0.1	0.2
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	0.2	<0.1
Phenanthrene	mg/kg	0.1	<0.1	2.0	0.7	2.1	1.8
Anthracene	mg/kg	0.1	<0.1	0.5	0.2	0.5	0.5
Fluoranthene	mg/kg	0.1	<0.1	3.6	1.4	3.0	3.4
Pyrene	mg/kg	0.1	<0.1	3.2	1.4	2.6	3.0
Benzo(a)anthracene	mg/kg	0.1	<0.1	1.4	0.9	1.4	1.4
Chrysene	mg/kg	0.1	<0.1	1.0	0.7	1.0	1.1
Benzo(b)fluoranthene	mg/kg	0.1	<0.1	1.3	1.0	1.3	1.4
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	0.7	0.5	0.6	0.7
Benzo(a)pyrene	mg/kg	0.1	<0.1	1.2	0.9	1.2	1.3
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	0.7	0.5	0.6	0.7
Dibenzo(a,h)anthracene	mg/kg	0.1	<0.1	0.1	<0.1	0.1	0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	0.8	0.6	0.7	0.8
Total PAH (Vic EPA)	mg/kg	0.8	<0.8	17	8.9	16	17

Parameter	Units	LOR	Sample Number	SE107819.011	SE107819.012	SE107819.013	SE107819.014	SE107819.015
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	BH15_Surface	BH15_0.5-0.6	BH15_1.5-1.6	DUP12	DUP15

PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 (continued)

Surrogates

d5-nitrobenzene (Surrogate)	%	-	126	118	128	107	103
2-fluorobiphenyl (Surrogate)	%	-	118	114	122	99	100
d14-p-terphenyl (Surrogate)	%	-	110	112	112	89	94

OC Pesticides in Soil Method: AN400/AN420

Hexachlorobenzene (HCB)	mg/kg	0.1	-	-	-	-	-
Alpha BHC	mg/kg	0.1	-	-	-	-	-
Lindane	mg/kg	0.1	-	-	-	-	-
Heptachlor	mg/kg	0.1	-	-	-	-	-
Aldrin	mg/kg	0.1	-	-	-	-	-
Beta BHC	mg/kg	0.1	-	-	-	-	-
Delta BHC	mg/kg	0.1	-	-	-	-	-
Heptachlor epoxide	mg/kg	0.1	-	-	-	-	-
o,p'-DDE	mg/kg	0.1	-	-	-	-	-
Alpha Endosulfan	mg/kg	0.2	-	-	-	-	-
Gamma Chlordane	mg/kg	0.1	-	-	-	-	-
Alpha Chlordane	mg/kg	0.1	-	-	-	-	-
trans-Nonachlor	mg/kg	0.1	-	-	-	-	-
p,p'-DDE	mg/kg	0.1	-	-	-	-	-
Dieldrin	mg/kg	0.2	-	-	-	-	-
Endrin	mg/kg	0.2	-	-	-	-	-
o,p'-DDD	mg/kg	0.1	-	-	-	-	-
o,p'-DDT	mg/kg	0.1	-	-	-	-	-
Beta Endosulfan	mg/kg	0.2	-	-	-	-	-
p,p'-DDD	mg/kg	0.1	-	-	-	-	-
p,p'-DDT	mg/kg	0.1	-	-	-	-	-
Endosulfan sulphate	mg/kg	0.1	-	-	-	-	-
Endrin Aldehyde	mg/kg	0.1	-	-	-	-	-
Methoxychlor	mg/kg	0.1	-	-	-	-	-
Endrin Ketone	mg/kg	0.1	-	-	-	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-	-
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OP Pesticides in Soil Method: AN400/AN420

Dichlorvos	mg/kg	0.5	-	-	-	-	-
Dimethoate	mg/kg	0.5	-	-	-	-	-
Diazinon (Dimpylate)	mg/kg	0.5	-	-	-	-	-
Fenitrothion	mg/kg	0.2	-	-	-	-	-
Malathion	mg/kg	0.2	-	-	-	-	-
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	-	-	-	-	-
Parathion-ethyl (Parathion)	mg/kg	0.2	-	-	-	-	-
Bromophos Ethyl	mg/kg	0.2	-	-	-	-	-
Methidathion	mg/kg	0.5	-	-	-	-	-
Ethion	mg/kg	0.2	-	-	-	-	-
Azinphos-methyl (Guthion)	mg/kg	0.2	-	-	-	-	-



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Parameter	Units	LOR	Sample Number	SE107819.011	SE107819.012	SE107819.013	SE107819.014	SE107819.015
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	BH15_Surface	BH15_0.5-0.6	BH15_1.5-1.6	DUP12	DUP15

OP Pesticides in Soil Method: AN400/AN420 (continued)

Surrogates

2-fluorobiphenyl (Surrogate)	%	-	-	-	-	-	-
d14-p-terphenyl (Surrogate)	%	-	-	-	-	-	-

PCBs in Soil Method: AN400/AN420

Arochlor 1016	mg/kg	0.2	-	-	-	-	-
Arochlor 1221	mg/kg	0.2	-	-	-	-	-
Arochlor 1232	mg/kg	0.2	-	-	-	-	-
Arochlor 1242	mg/kg	0.2	-	-	-	-	-
Arochlor 1248	mg/kg	0.2	-	-	-	-	-
Arochlor 1254	mg/kg	0.2	-	-	-	-	-
Arochlor 1260	mg/kg	0.2	-	-	-	-	-
Arochlor 1262	mg/kg	0.2	-	-	-	-	-
Arochlor 1268	mg/kg	0.2	-	-	-	-	-
Total PCBs (Arochlors)	mg/kg	1	-	-	-	-	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-	-
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Field pH for Acid Sulphate Soil Method: AN104

PHf	pH Units	-	-	-	-	-	-
PHfox	pH Units	-	-	-	-	-	-
Reaction*	No unit	-	-	-	-	-	-
pH Difference*	pH Units	-10	-	-	-	-	-

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: AN040/AN320

Arsenic, As	mg/kg	3	<3	<3	3	4	<3
Cadmium, Cd	mg/kg	0.3	<0.3	0.8	0.3	<0.3	0.9
Chromium, Cr	mg/kg	0.3	3.8	25	21	13	28
Copper, Cu	mg/kg	0.5	2.8	50	13	30	63
Lead, Pb	mg/kg	1	3	17	40	70	18
Nickel, Ni	mg/kg	0.5	2.4	9.4	4.0	21	10
Zinc, Zn	mg/kg	0.5	16	36	34	89	35

Mercury in Soil Method: AN312

Mercury	mg/kg	0.05	<0.05	<0.05	0.15	0.21	<0.05
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Fibre Identification in soil Method: AN602

FibreID

Asbestos Detected	No unit	-	No	No	-	No	No
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SemiQuant

Estimated Fibres	%w/w	0.01	<0.01	<0.01	-	<0.01	<0.01
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Moisture Content Method: AN002

% Moisture	%	0.5	8.8	26	22	11	11
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VOCs in Water Method: AN433/AN434

Monocyclic Aromatic Hydrocarbons

Benzene	µg/L	0.5	-	-	-	-	-
Toluene	µg/L	0.5	-	-	-	-	-
Ethylbenzene	µg/L	0.5	-	-	-	-	-
m/p-xylene	µg/L	1	-	-	-	-	-
o-xylene	µg/L	0.5	-	-	-	-	-



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Parameter	Units	LOR	Sample Number	SE107819.011	SE107819.012	SE107819.013	SE107819.014	SE107819.015
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	BH15_Surface	BH15_0.5-0.6	BH15_1.5-1.6	DUP12	DUP15

VOCs in Water Method: AN433/AN434 (continued)

Surrogates

Dibromofluoromethane (Surrogate)	%	-	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-	-

Totals

Total Xylenes	µg/L	1.5	-	-	-	-	-
Total BTEX	µg/L	3	-	-	-	-	-

Volatile Petroleum Hydrocarbons in Water Method: AN433/AN434

TRH C6-C9	µg/L	40	-	-	-	-	-
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Surrogates

Trifluorotoluene (Surrogate)	%	-	-	-	-	-	-
Dibromofluoromethane (Surrogate)	%	-	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-	-

TRH (Total Recoverable Hydrocarbons) in Water Method: AN403

TRH C10-C14	µg/L	100	-	-	-	-	-
TRH C15-C28	µg/L	200	-	-	-	-	-
TRH C29-C36	µg/L	200	-	-	-	-	-

Surrogates

TRH (Surrogate)	%	-	-	-	-	-	-
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PAH (Polynuclear Aromatic Hydrocarbons) in Water Method: AN420

Naphthalene	µg/L	0.1	-	-	-	-	-
Acenaphthylene	µg/L	0.1	-	-	-	-	-
Acenaphthene	µg/L	0.1	-	-	-	-	-
Fluorene	µg/L	0.1	-	-	-	-	-
Phenanthrene	µg/L	0.1	-	-	-	-	-
Anthracene	µg/L	0.1	-	-	-	-	-
Fluoranthene	µg/L	0.1	-	-	-	-	-
Pyrene	µg/L	0.1	-	-	-	-	-
Benzo(a)anthracene	µg/L	0.1	-	-	-	-	-
Chrysene	µg/L	0.1	-	-	-	-	-
Benzo(a)pyrene	µg/L	0.1	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/L	0.1	-	-	-	-	-
Dibenzo(a,h)anthracene	µg/L	0.1	-	-	-	-	-
Benzo(ghi)perylene	µg/L	0.1	-	-	-	-	-
Benzo(b)fluoranthene	µg/L	0.1	-	-	-	-	-
Benzo(k)fluoranthene	µg/L	0.1	-	-	-	-	-
Total PAH (Vic EPA 16)*	µg/L	1	-	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107819.011	SE107819.012	SE107819.013	SE107819.014	SE107819.015
			Sample Matrix	Soil	Soil	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	BH15_Surface	BH15_0.5-0.6	BH15_1.5-1.6	DUP12	DUP15

PAH (Polynuclear Aromatic Hydrocarbons) in Water Method: AN420 (continued)

Surrogates

d5-nitrobenzene (Surrogate)	%	-	-	-	-	-	-
2-fluorobiphenyl (Surrogate)	%	-	-	-	-	-	-
d14-p-terphenyl (Surrogate)	%	-	-	-	-	-	-

Trace Metals (Dissolved) in Water by ICPMS Method: AN318

Arsenic, As	µg/L	1	-	-	-	-	-
Cadmium, Cd	µg/L	0.1	-	-	-	-	-
Chromium, Cr	µg/L	1	-	-	-	-	-
Copper, Cu	µg/L	1	-	-	-	-	-
Lead, Pb	µg/L	1	-	-	-	-	-
Nickel, Ni	µg/L	1	-	-	-	-	-
Zinc, Zn	µg/L	1	-	-	-	-	-

Mercury (dissolved) in Water Method: AN311/AN312

Mercury	mg/L	0.0001	-	-	-	-	-
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Parameter	Units	LOR	Sample Number	SE107819.016	SE107819.017	SE107819.018	SE107819.019
			Sample Matrix	Soil	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	BH8_0.1-0.2	BH8_0.5-0.6	BH8_1.5-1.6	BH8_3.0-3.1

VOC's in Soil Method: AN433/AN434

Fumigants

2,2-dichloropropane	mg/kg	0.1	-	-	<0.1	-
1,2-dichloropropane	mg/kg	0.1	-	-	<0.1	-
cis-1,3-dichloropropene	mg/kg	0.1	-	-	<0.1	-
trans-1,3-dichloropropene	mg/kg	0.1	-	-	<0.1	-

Halogenated Aliphatics

Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	-	<1	-
Chloromethane	mg/kg	1	-	-	<1	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	-	<0.1	-
Chloroethane	mg/kg	1	-	-	<1	-
Trichlorofluoromethane	mg/kg	1	-	-	<1	-
1,1-dichloroethene	mg/kg	0.1	-	-	<0.1	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	-	<0.5	-
Allyl chloride	mg/kg	0.1	-	-	<0.1	-
trans-1,2-dichloroethene	mg/kg	0.1	-	-	<0.1	-
1,1-dichloroethane	mg/kg	0.1	-	-	<0.1	-
cis-1,2-dichloroethene	mg/kg	0.1	-	-	<0.1	-
Bromochloromethane	mg/kg	0.1	-	-	<0.1	-
1,2-dichloroethane	mg/kg	0.1	-	-	<0.1	-
1,1,1-trichloroethane	mg/kg	0.1	-	-	<0.1	-
1,1-dichloropropene	mg/kg	0.1	-	-	<0.1	-
Carbon tetrachloride	mg/kg	0.1	-	-	<0.1	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	-	-	<0.1	-
1,1,2-trichloroethane	mg/kg	0.1	-	-	<0.1	-
1,3-dichloropropane	mg/kg	0.1	-	-	<0.1	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	-	<0.1	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	-	<0.1	-
cis-1,4-dichloro-2-butene	mg/kg	1	-	-	<1	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	-	<0.1	-
1,2,3-trichloropropane	mg/kg	0.1	-	-	<0.1	-
trans-1,4-dichloro-2-butene	mg/kg	1	-	-	<1	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	-	<0.1	-
Hexachlorobutadiene	mg/kg	0.1	-	-	<0.1	-

Parameter	Units	LOR	Sample Number	SE107819.016	SE107819.017	SE107819.018	SE107819.019
			Sample Matrix	Soil	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	BH8_0.1-0.2	BH8_0.5-0.6	BH8_1.5-1.6	BH8_3.0-3.1

VOC's in Soil Method: AN433/AN434 (continued)

Halogenated Aromatics

Chlorobenzene	mg/kg	0.1	-	-	<0.1	-
2-chlorotoluene	mg/kg	0.1	-	-	<0.1	-
4-chlorotoluene	mg/kg	0.1	-	-	<0.1	-
1,3-dichlorobenzene	mg/kg	0.1	-	-	<0.1	-
1,4-dichlorobenzene	mg/kg	0.1	-	-	<0.1	-
1,2-dichlorobenzene	mg/kg	0.1	-	-	<0.1	-
1,2,4-trichlorobenzene	mg/kg	0.1	-	-	<0.1	-
1,2,3-trichlorobenzene	mg/kg	0.1	-	-	<0.1	-

Monocyclic Aromatic Hydrocarbons

Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Styrene (Vinyl benzene)	mg/kg	0.1	-	-	<0.1	-
Isopropylbenzene (Cumene)	mg/kg	0.1	-	-	<0.1	-
n-propylbenzene	mg/kg	0.1	-	-	<0.1	-
1,3,5-trimethylbenzene	mg/kg	0.1	-	-	<0.1	-
tert-butylbenzene	mg/kg	0.1	-	-	<0.1	-
1,2,4-trimethylbenzene	mg/kg	0.1	-	-	<0.1	-
sec-butylbenzene	mg/kg	0.1	-	-	<0.1	-
p-isopropyltoluene	mg/kg	0.1	-	-	<0.1	-
n-butylbenzene	mg/kg	0.1	-	-	<0.1	-

Nitrogenous Compounds

Acrylonitrile	mg/kg	0.1	-	-	<0.1	-
2-nitropropane	mg/kg	10	-	-	<10	-

Oxygenated Compounds

Acetone (2-propanone)	mg/kg	10	-	-	<10	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	-	-	<0.5	-
Vinyl acetate	mg/kg	10	-	-	<10	-
MEK (2-butanone)	mg/kg	10	-	-	<10	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	-	<1	-
2-hexanone (MBK)	mg/kg	5	-	-	<5	-

Polycyclic VOCs

Naphthalene	mg/kg	0.1	-	-	<0.1	-
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Sulphonated Compounds

Carbon disulfide	mg/kg	0.5	-	-	<0.5	-
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Surrogates

Dibromofluoromethane (Surrogate)	%	-	97	97	92	98
d4-1,2-dichloroethane (Surrogate)	%	-	100	100	101	101
d8-toluene (Surrogate)	%	-	100	100	96	102
Bromofluorobenzene (Surrogate)	%	-	102	98	108	101

Parameter	Units	LOR	Sample Number	SE107819.016	SE107819.017	SE107819.018	SE107819.019
			Sample Matrix	Soil	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	BH8_0.1-0.2	BH8_0.5-0.6	BH8_1.5-1.6	BH8_3.0-3.1

VOC's in Soil Method: AN433/AN434 (continued)

Totals

Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	-	0	0	0	0
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	-	<3	-
Total VOC*	mg/kg	24	-	-	-	-

Trihalomethanes

Chloroform	mg/kg	0.1	-	-	<0.1	-
Bromodichloromethane	mg/kg	0.1	-	-	<0.1	-
Chlorodibromomethane	mg/kg	0.1	-	-	<0.1	-

Volatile Petroleum Hydrocarbons in Soil Method: AN433/AN434

TRH C6-C9	mg/kg	20	<20	<20	<20	<20
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Surrogates

Trifluorotoluene (Surrogate)	%	-	67	72	102	60
Dibromofluoromethane (Surrogate)	%	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-

TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403

TRH C10-C14	mg/kg	20	<20	<20	<20	<20
TRH C15-C28	mg/kg	50	<50	<50	230	<50
TRH C29-C36	mg/kg	50	<50	<50	96	<50

Surrogates

TRH (Surrogate)	%	-	-	-	-	-
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PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420

Naphthalene	mg/kg	0.1	<0.1	<0.1	1.0	0.2
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	3.7	0.3
Acenaphthene	mg/kg	0.1	<0.1	<0.1	0.8	0.3
Fluorene	mg/kg	0.1	<0.1	<0.1	3.0	0.3
Phenanthrene	mg/kg	0.1	<0.1	0.2	15	1.8
Anthracene	mg/kg	0.1	<0.1	<0.1	4.1	0.6
Fluoranthene	mg/kg	0.1	<0.1	0.4	11	3.7
Pyrene	mg/kg	0.1	<0.1	0.4	10	4.2
Benzo(a)anthracene	mg/kg	0.1	<0.1	0.2	5.7	2.0
Chrysene	mg/kg	0.1	<0.1	0.2	4.6	1.4
Benzo(b)fluoranthene	mg/kg	0.1	<0.1	0.2	4.7	2.0
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	0.1	2.1	0.8
Benzo(a)pyrene	mg/kg	0.1	<0.1	0.2	4.9	1.8
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	2.7	0.9
Dibenzo(a,h)anthracene	mg/kg	0.1	<0.1	<0.1	0.6	0.2
Benzo(ghi)perylene	mg/kg	0.1	<0.1	0.1	3.0	1.0
Total PAH (Vic EPA)	mg/kg	0.8	<0.8	1.9	77	21

Sample Number	SE107819.016	SE107819.017	SE107819.018	SE107819.019
Sample Matrix	Soil	Soil	Soil	Soil
Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
Sample Name	BH8_0.1-0.2	BH8_0.5-0.6	BH8_1.5-1.6	BH8_3.0-3.1
Parameter	Units	LOR		

PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 (continued)

Surrogates

d5-nitrobenzene (Surrogate)	%	-	111	115	122	121
2-fluorobiphenyl (Surrogate)	%	-	100	112	116	117
d14-p-terphenyl (Surrogate)	%	-	95	104	105	103

OC Pesticides in Soil Method: AN400/AN420

Hexachlorobenzene (HCB)	mg/kg	0.1	-	-	<0.1	-
Alpha BHC	mg/kg	0.1	-	-	<0.1	-
Lindane	mg/kg	0.1	-	-	<0.1	-
Heptachlor	mg/kg	0.1	-	-	<0.1	-
Aldrin	mg/kg	0.1	-	-	<0.1	-
Beta BHC	mg/kg	0.1	-	-	<0.1	-
Delta BHC	mg/kg	0.1	-	-	<0.1	-
Heptachlor epoxide	mg/kg	0.1	-	-	<0.1	-
o,p'-DDE	mg/kg	0.1	-	-	<0.1	-
Alpha Endosulfan	mg/kg	0.2	-	-	<0.2	-
Gamma Chlordane	mg/kg	0.1	-	-	<0.1	-
Alpha Chlordane	mg/kg	0.1	-	-	<0.1	-
trans-Nonachlor	mg/kg	0.1	-	-	<0.1	-
p,p'-DDE	mg/kg	0.1	-	-	<0.1	-
Dieldrin	mg/kg	0.2	-	-	<0.2	-
Endrin	mg/kg	0.2	-	-	<0.2	-
o,p'-DDD	mg/kg	0.1	-	-	<0.1	-
o,p'-DDT	mg/kg	0.1	-	-	<0.1	-
Beta Endosulfan	mg/kg	0.2	-	-	<0.2	-
p,p'-DDD	mg/kg	0.1	-	-	<0.1	-
p,p'-DDT	mg/kg	0.1	-	-	<0.1	-
Endosulfan sulphate	mg/kg	0.1	-	-	<0.1	-
Endrin Aldehyde	mg/kg	0.1	-	-	<0.1	-
Methoxychlor	mg/kg	0.1	-	-	<0.1	-
Endrin Ketone	mg/kg	0.1	-	-	<0.1	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	126	-
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OP Pesticides in Soil Method: AN400/AN420

Dichlorvos	mg/kg	0.5	-	-	<0.5	-
Dimethoate	mg/kg	0.5	-	-	<0.5	-
Diazinon (Dimpylate)	mg/kg	0.5	-	-	<0.5	-
Fenitrothion	mg/kg	0.2	-	-	<0.2	-
Malathion	mg/kg	0.2	-	-	<0.2	-
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	-	-	<0.2	-
Parathion-ethyl (Parathion)	mg/kg	0.2	-	-	<0.2	-
Bromophos Ethyl	mg/kg	0.2	-	-	<0.2	-
Methidathion	mg/kg	0.5	-	-	<0.5	-
Ethion	mg/kg	0.2	-	-	<0.2	-
Azinphos-methyl (Guthion)	mg/kg	0.2	-	-	<0.2	-

Parameter	Units	LOR	Sample Number	SE107819.016	SE107819.017	SE107819.018	SE107819.019
			Sample Matrix	Soil	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	BH8_0.1-0.2	BH8_0.5-0.6	BH8_1.5-1.6	BH8_3.0-3.1

OP Pesticides in Soil Method: AN400/AN420 (continued)

Surrogates

2-fluorobiphenyl (Surrogate)	%	-	-	-	117	-
d14-p-terphenyl (Surrogate)	%	-	-	-	105	-

PCBs in Soil Method: AN400/AN420

Arochlor 1016	mg/kg	0.2	-	-	<0.2	-
Arochlor 1221	mg/kg	0.2	-	-	<0.2	-
Arochlor 1232	mg/kg	0.2	-	-	<0.2	-
Arochlor 1242	mg/kg	0.2	-	-	<0.2	-
Arochlor 1248	mg/kg	0.2	-	-	<0.2	-
Arochlor 1254	mg/kg	0.2	-	-	<0.2	-
Arochlor 1260	mg/kg	0.2	-	-	<0.2	-
Arochlor 1262	mg/kg	0.2	-	-	<0.2	-
Arochlor 1268	mg/kg	0.2	-	-	<0.2	-
Total PCBs (Arochlors)	mg/kg	1	-	-	<1	-

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	126	-
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Field pH for Acid Sulphate Soil Method: AN104

PHf	pH Units	-	-	-	8.5	-
PHfox	pH Units	-	-	-	6.5	-
Reaction*	No unit	-	-	-	XX	-
pH Difference*	pH Units	-10	-	-	2.0	-

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: AN040/AN320

Arsenic, As	mg/kg	3	<3	<3	6	7
Cadmium, Cd	mg/kg	0.3	0.4	0.5	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	11	25	8.2	12
Copper, Cu	mg/kg	0.5	52	34	25	64
Lead, Pb	mg/kg	1	4	16	66	82
Nickel, Ni	mg/kg	0.5	100	84	3.4	9.4
Zinc, Zn	mg/kg	0.5	50	68	57	88

Mercury in Soil Method: AN312

Mercury	mg/kg	0.05	<0.05	<0.05	0.14	0.12
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Fibre Identification in soil Method: AN602

FibreID

Asbestos Detected	No unit	-	No	No	-	-
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SemiQuant

Estimated Fibres	%w/w	0.01	<0.01	<0.01	-	-
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Moisture Content Method: AN002

% Moisture	%	0.5	6.6	7.7	13	19
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VOCs in Water Method: AN433/AN434

Monocyclic Aromatic Hydrocarbons

Benzene	µg/L	0.5	-	-	-	-
Toluene	µg/L	0.5	-	-	-	-
Ethylbenzene	µg/L	0.5	-	-	-	-
m/p-xylene	µg/L	1	-	-	-	-
o-xylene	µg/L	0.5	-	-	-	-

Parameter	Units	LOR	Sample Number	SE107819.016	SE107819.017	SE107819.018	SE107819.019
			Sample Matrix	Soil	Soil	Soil	Soil
			Sample Date	27 Apr 2012	27 Apr 2012	27 Apr 2012	27 Apr 2012
			Sample Name	BH8_0.1-0.2	BH8_0.5-0.6	BH8_1.5-1.6	BH8_3.0-3.1

VOCs in Water Method: AN433/AN434 (continued)

Surrogates

Dibromofluoromethane (Surrogate)	%	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-

Totals

Total Xylenes	µg/L	1.5	-	-	-	-
Total BTEX	µg/L	3	-	-	-	-

Volatile Petroleum Hydrocarbons in Water Method: AN433/AN434

TRH C6-C9	µg/L	40	-	-	-	-
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Surrogates

Trifluorotoluene (Surrogate)	%	-	-	-	-	-
Dibromofluoromethane (Surrogate)	%	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-

TRH (Total Recoverable Hydrocarbons) in Water Method: AN403

TRH C10-C14	µg/L	100	-	-	-	-
TRH C15-C28	µg/L	200	-	-	-	-
TRH C29-C36	µg/L	200	-	-	-	-

Surrogates

TRH (Surrogate)	%	-	-	-	-	-
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PAH (Polynuclear Aromatic Hydrocarbons) in Water Method: AN420

Naphthalene	µg/L	0.1	-	-	-	-
Acenaphthylene	µg/L	0.1	-	-	-	-
Acenaphthene	µg/L	0.1	-	-	-	-
Fluorene	µg/L	0.1	-	-	-	-
Phenanthrene	µg/L	0.1	-	-	-	-
Anthracene	µg/L	0.1	-	-	-	-
Fluoranthene	µg/L	0.1	-	-	-	-
Pyrene	µg/L	0.1	-	-	-	-
Benzo(a)anthracene	µg/L	0.1	-	-	-	-
Chrysene	µg/L	0.1	-	-	-	-
Benzo(a)pyrene	µg/L	0.1	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/L	0.1	-	-	-	-
Dibenzo(a,h)anthracene	µg/L	0.1	-	-	-	-
Benzo(ghi)perylene	µg/L	0.1	-	-	-	-
Benzo(b)fluoranthene	µg/L	0.1	-	-	-	-
Benzo(k)fluoranthene	µg/L	0.1	-	-	-	-
Total PAH (Vic EPA 16)*	µg/L	1	-	-	-	-

Parameter	Units	LOR
Sample Number	SE107819.016	SE107819.017
Sample Matrix	Soil	Soil
Sample Date	27 Apr 2012	27 Apr 2012
Sample Name	BH8_0.1-0.2	BH8_0.5-0.6
		BH8_1.5-1.6
		BH8_3.0-3.1

PAH (Polynuclear Aromatic Hydrocarbons) in Water Method: AN420 (continued)

Surrogates

d5-nitrobenzene (Surrogate)	%	-	-	-	-	-
2-fluorobiphenyl (Surrogate)	%	-	-	-	-	-
d14-p-terphenyl (Surrogate)	%	-	-	-	-	-

Trace Metals (Dissolved) in Water by ICPMS Method: AN318

Arsenic, As	µg/L	1	-	-	-	-
Cadmium, Cd	µg/L	0.1	-	-	-	-
Chromium, Cr	µg/L	1	-	-	-	-
Copper, Cu	µg/L	1	-	-	-	-
Lead, Pb	µg/L	1	-	-	-	-
Nickel, Ni	µg/L	1	-	-	-	-
Zinc, Zn	µg/L	1	-	-	-	-

Mercury (dissolved) in Water Method: AN311/AN312

Mercury	mg/L	0.0001	-	-	-	-
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MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Field pH for Acid Sulphate Soil Method: ME-(AU)-[ENV]AN104

Parameter	QC Reference	Units	LOR	LCS %Recovery
PHf	LB019668	pH Units	-	NA
PHfox	LB019668	pH Units	-	NA

Mercury (dissolved) in Water Method: ME-(AU)-[ENV]AN311/AN312

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Mercury	LB019477	mg/L	0.0001	<0.0001	0%	103%	97%

Mercury in Soil Method: ME-(AU)-[ENV]AN312

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery	MSD %RPD
Mercury	LB019590	mg/kg	0.05	<0.05	0%	120%	108%	
	LB019591	mg/kg	0.05	<0.05	13%	120%	125%	NA

OC Pesticides in Soil Method: ME-(AU)-[ENV]AN400/AN420

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Hexachlorobenzene (HCB)	LB019471	mg/kg	0.1	<0.1	NA
Alpha BHC	LB019471	mg/kg	0.1	<0.1	NA
Lindane	LB019471	mg/kg	0.1	<0.1	NA
Heptachlor	LB019471	mg/kg	0.1	<0.1	125%
Aldrin	LB019471	mg/kg	0.1	<0.1	130%
Beta BHC	LB019471	mg/kg	0.1	<0.1	NA
Delta BHC	LB019471	mg/kg	0.1	<0.1	115%
Heptachlor epoxide	LB019471	mg/kg	0.1	<0.1	NA
o,p'-DDE	LB019471	mg/kg	0.1	<0.1	NA
Alpha Endosulfan	LB019471	mg/kg	0.2	<0.2	NA
Gamma Chlordane	LB019471	mg/kg	0.1	<0.1	NA
Alpha Chlordane	LB019471	mg/kg	0.1	<0.1	NA
trans-Nonachlor	LB019471	mg/kg	0.1	<0.1	NA
p,p'-DDE	LB019471	mg/kg	0.1	<0.1	NA
Dieldrin	LB019471	mg/kg	0.2	<0.2	115%
Endrin	LB019471	mg/kg	0.2	<0.2	125%
o,p'-DDD	LB019471	mg/kg	0.1	<0.1	NA
o,p'-DDT	LB019471	mg/kg	0.1	<0.1	NA
Beta Endosulfan	LB019471	mg/kg	0.2	<0.2	NA
p,p'-DDD	LB019471	mg/kg	0.1	<0.1	NA
p,p'-DDT	LB019471	mg/kg	0.1	<0.1	95%
Endosulfan sulphate	LB019471	mg/kg	0.1	<0.1	NA
Endrin Aldehyde	LB019471	mg/kg	0.1	<0.1	NA
Methoxychlor	LB019471	mg/kg	0.1	<0.1	NA
Endrin Ketone	LB019471	mg/kg	0.1	<0.1	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Tetrachloro-m-xylene (TCMX) (Surrogate)	LB019410	%	-	%	
	LB019471	%	-	128%	122%

OP Pesticides in Soil Method: ME-(AU)-[ENV]AN400/AN420

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Dichlorvos	LB019410	mg/kg	0.5	NVL	NVL
	LB019471	mg/kg	0.5	<0.5	89%
Dimethoate	LB019410	mg/kg	0.5	NVL	NVL
	LB019471	mg/kg	0.5	<0.5	NA
Diazinon (Dimpylate)	LB019410	mg/kg	0.5	NVL	NVL
	LB019471	mg/kg	0.5	<0.5	98%

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA', the results are less than the LOR and thus the RPD is not applicable.

OP Pesticides in Soil Method: ME-(AU)-[ENV]AN400/AN420 (continued)

				MB	LCS
					%Recovery
Fenitrothion	LB019410	mg/kg	0.2	NVL	NVL
	LB019471	mg/kg	0.2	<0.2	NA
Malathion	LB019410	mg/kg	0.2	NVL	NVL
	LB019471	mg/kg	0.2	<0.2	NA
Chlorpyrifos (Chlorpyrifos Ethyl)	LB019410	mg/kg	0.2	NVL	127%
	LB019471	mg/kg	0.2	<0.2	113%
Parathion-ethyl (Parathion)	LB019410	mg/kg	0.2	NVL	NVL
	LB019471	mg/kg	0.2	<0.2	NA
Bromophos Ethyl	LB019410	mg/kg	0.2	NVL	NVL
	LB019471	mg/kg	0.2	<0.2	NA
Methidathion	LB019410	mg/kg	0.5	NVL	NVL
	LB019471	mg/kg	0.5	<0.5	NA
Ethion	LB019410	mg/kg	0.2	NVL	NVL
	LB019471	mg/kg	0.2	<0.2	101%
Azinphos-methyl (Guthion)	LB019410	mg/kg	0.2	NVL	NVL
	LB019471	mg/kg	0.2	<0.2	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
2-fluorobiphenyl (Surrogate)	LB019410	%	-	0%	0%
	LB019471	%	-	104%	90%
d14-p-terphenyl (Surrogate)	LB019410	%	-	0%	0%
	LB019471	%	-	102%	82%

PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: ME-(AU)-[ENV]AN420

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Naphthalene	LB019471	mg/kg	0.1	<0.1	0%	78%
Acenaphthylene	LB019471	mg/kg	0.1	<0.1	0%	104%
Acenaphthene	LB019471	mg/kg	0.1	<0.1	0%	100%
Fluorene	LB019471	mg/kg	0.1	<0.1	0%	NA
Phenanthrene	LB019471	mg/kg	0.1	<0.1	0%	101%
Anthracene	LB019471	mg/kg	0.1	<0.1	0%	102%
Fluoranthene	LB019471	mg/kg	0.1	<0.1	0%	107%
Pyrene	LB019471	mg/kg	0.1	<0.1	0%	108%
Benzo(a)anthracene	LB019471	mg/kg	0.1	<0.1	0%	NA
Chrysene	LB019471	mg/kg	0.1	<0.1	0%	NA
Benzo(b)fluoranthene	LB019471	mg/kg	0.1	<0.1	0%	NA
Benzo(k)fluoranthene	LB019471	mg/kg	0.1	<0.1	0%	NA
Benzo(a)pyrene	LB019471	mg/kg	0.1	<0.1	0%	116%
Indeno(1,2,3-cd)pyrene	LB019471	mg/kg	0.1	<0.1	0%	NA
Dibenzo(a,h)anthracene	LB019471	mg/kg	0.1	<0.1	0%	NA
Benzo(ghi)perylene	LB019471	mg/kg	0.1	<0.1	0%	NA
Total PAH (Vic EPA)	LB019471	mg/kg	0.8	<0.8	0%	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
d5-nitrobenzene (Surrogate)	LB019471	%	-	104%	0%	100%
2-fluorobiphenyl (Surrogate)	LB019471	%	-	96%	0%	96%
d14-p-terphenyl (Surrogate)	LB019471	%	-	96%	2%	86%

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA', the results are less than the LOR and thus the RPD is not applicable.

PAH (Polynuclear Aromatic Hydrocarbons) in Water Method: ME-(AU)-[ENV]AN420

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Naphthalene	LB019405	µg/L	0.1	<0.1	95%
Acenaphthylene	LB019405	µg/L	0.1	<0.1	97%
Acenaphthene	LB019405	µg/L	0.1	<0.1	94%
Fluorene	LB019405	µg/L	0.1	<0.1	NA
Phenanthrene	LB019405	µg/L	0.1	<0.1	95%
Anthracene	LB019405	µg/L	0.1	<0.1	85%
Fluoranthene	LB019405	µg/L	0.1	<0.1	105%
Pyrene	LB019405	µg/L	0.1	<0.1	103%
Benzo(a)anthracene	LB019405	µg/L	0.1	<0.1	NA
Chrysene	LB019405	µg/L	0.1	<0.1	NA
Benzo(a)pyrene	LB019405	µg/L	0.1	<0.1	100%
Indeno(1,2,3-cd)pyrene	LB019405	µg/L	0.1	<0.1	NA
Dibenzo(a,h)anthracene	LB019405	µg/L	0.1	<0.1	NA
Benzo(ghi)perylene	LB019405	µg/L	0.1	<0.1	NA
Benzo(b)fluoranthene	LB019405	µg/L	0.1	<0.1	NA
Benzo(k)fluoranthene	LB019405	µg/L	0.1	<0.1	NA
Total PAH (Vic EPA 16)*	LB019405	µg/L	1	<1	

Surrogates

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
d5-nitrobenzene (Surrogate)	LB019405	%	-	104%	106%
2-fluorobiphenyl (Surrogate)	LB019405	%	-	84%	92%
d14-p-terphenyl (Surrogate)	LB019405	%	-	94%	89%

PCBs in Soil Method: ME-(AU)-[ENV]AN400/AN420

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Arochlor 1016	LB019471	mg/kg	0.2	<0.2	NA
Arochlor 1221	LB019471	mg/kg	0.2	<0.2	NA
Arochlor 1232	LB019471	mg/kg	0.2	<0.2	NA
Arochlor 1242	LB019471	mg/kg	0.2	<0.2	NA
Arochlor 1248	LB019471	mg/kg	0.2	<0.2	NA
Arochlor 1254	LB019471	mg/kg	0.2	<0.2	NA
Arochlor 1260	LB019471	mg/kg	0.2	<0.2	88%
Arochlor 1262	LB019471	mg/kg	0.2	<0.2	NA
Arochlor 1268	LB019471	mg/kg	0.2	<0.2	NA
Total PCBs (Arochlors)	LB019471	mg/kg	1	<1	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Tetrachloro-m-xylene (TCMX) (Surrogate)	LB019471	%	-	128%	123%

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: ME-(AU)-[ENV]AN040/AN320

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Arsenic, As	LB019578	mg/kg	3	<3	31 - 36%	92%	83%
	LB019579	mg/kg	3	<3	0 - 2%	96%	98%
Cadmium, Cd	LB019578	mg/kg	0.3	<0.3	2 - 20%	94%	87%
	LB019579	mg/kg	0.3	<0.3	0 - 2%	98%	90%
Chromium, Cr	LB019578	mg/kg	0.3	<0.3	11 - 13%	95%	85%
	LB019579	mg/kg	0.3	<0.3	39 - 68%	99%	84%
Copper, Cu	LB019578	mg/kg	0.5	<0.5	2 - 27%	94%	73%
	LB019579	mg/kg	0.5	<0.5	8 - 51%	100%	98%
Lead, Pb	LB019578	mg/kg	1	<1	4 - 16%	95%	52%
	LB019579	mg/kg	1	<1	5 - 39%	99%	118%

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA', the results are less than the LOR and thus the RPD is not applicable.

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: ME-(AU)-[ENV]AN040/AN320 (continued)

				MB	DUP %RPD	LCS %Recovery	MS %Recovery
Nickel, Ni	LB019578	mg/kg	0.5	<0.5	4 - 23%	96%	86%
	LB019579	mg/kg	0.5	<0.5	15 - 50%	99%	92%
Zinc, Zn	LB019578	mg/kg	0.5	<0.5	22 - 35%	95%	-70%
	LB019579	mg/kg	0.5	<0.5	7 - 18%	98%	127%

Trace Metals (Dissolved) in Water by ICPMS Method: ME-(AU)-[ENV]AN318

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Arsenic, As	LB019487	µg/L	1	<1	0%	99%
Cadmium, Cd	LB019487	µg/L	0.1	<0.1	0%	100%
Chromium, Cr	LB019487	µg/L	1	<1	0%	108%
Copper, Cu	LB019487	µg/L	1	<1	3%	111%
Lead, Pb	LB019487	µg/L	1	<1	0%	98%
Nickel, Ni	LB019487	µg/L	1	<1	3%	108%
Zinc, Zn	LB019487	µg/L	1	<1	2%	113%

TRH (Total Recoverable Hydrocarbons) in Soil Method: ME-(AU)-[ENV]AN403

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
TRH C10-C14	LB019410	mg/kg	20	<20		103%
	LB019471	mg/kg	20	<20	0%	103%
TRH C15-C28	LB019410	mg/kg	50	<50		103%
	LB019471	mg/kg	50	<50	0%	103%
TRH C29-C36	LB019410	mg/kg	50	<50		105%
	LB019471	mg/kg	50	<50	0%	105%

TRH (Total Recoverable Hydrocarbons) in Water Method: ME-(AU)-[ENV]AN403

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
TRH C10-C14	LB019405	µg/L	100	<100	105%
TRH C15-C28	LB019405	µg/L	200	<200	103%
TRH C29-C36	LB019405	µg/L	200	<200	103%

VOC's in Soil Method: ME-(AU)-[ENV]AN433/AN434

Fumigants

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
2,2-dichloropropane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,2-dichloropropane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
cis-1,3-dichloropropene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
trans-1,3-dichloropropene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA

Halogenated Aliphatics

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Dichlorodifluoromethane (CFC-12)	LB019466	mg/kg	1	<1	0%	NA	NA
Chloromethane	LB019466	mg/kg	1	<1	0%	NA	NA
Vinyl chloride (Chloroethene)	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
Chloroethane	LB019466	mg/kg	1	<1	0%	NA	NA
Trichlorofluoromethane	LB019466	mg/kg	1	<1	0%	NA	NA
1,1-dichloroethene	LB019466	mg/kg	0.1	<0.1	0%	83%	110%
Dichloromethane (Methylene chloride)	LB019466	mg/kg	0.5	<0.5	0%	NA	NA
Allyl chloride	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
trans-1,2-dichloroethene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,1-dichloroethane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
cis-1,2-dichloroethene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
Bromochloromethane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,2-dichloroethane	LB019466	mg/kg	0.1	<0.1	0%	78%	103%

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

VOC's in Soil Method: ME-(AU)-[ENV]AN433/AN434 (continued)

				MB	DUP %RPD	LCS %Recovery	MS %Recovery
1,1,1-trichloroethane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,1-dichloropropene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
Carbon tetrachloride	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
Trichloroethene (Trichloroethylene -TCE)	LB019466	mg/kg	0.1	<0.1	0%	91%	88%
1,1,2-trichloroethane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,3-dichloropropane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
Tetrachloroethene (Perchloroethylene,PCE)	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,1,1,2-tetrachloroethane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
cis-1,4-dichloro-2-butene	LB019466	mg/kg	1	<1	0%	NA	NA
1,1,2,2-tetrachloroethane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,2,3-trichloropropane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
trans-1,4-dichloro-2-butene	LB019466	mg/kg	1	<1	0%	NA	NA
1,2-dibromo-3-chloropropane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
Hexachlorobutadiene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA

Halogenated Aromatics

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Chlorobenzene	LB019466	mg/kg	0.1	<0.1	0%	77%	104%
2-chlorotoluene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
4-chlorotoluene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,3-dichlorobenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,4-dichlorobenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,2-dichlorobenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,2,4-trichlorobenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,2,3-trichlorobenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA

Monocyclic Aromatic Hydrocarbons

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Benzene	LB019466	mg/kg	0.1	<0.1	0%	71%	94%
	LB019468	mg/kg	0.1	<0.1	0%	97%	82%
Toluene	LB019466	mg/kg	0.1	<0.1	0%	79%	108%
	LB019468	mg/kg	0.1	<0.1	0%	94%	80%
Ethylbenzene	LB019466	mg/kg	0.1	<0.1	0%	64%	78%
	LB019468	mg/kg	0.1	<0.1	0%	90%	78%
m/p-xylene	LB019466	mg/kg	0.2	<0.2	0%	90%	86%
	LB019468	mg/kg	0.2	<0.2	0%	95%	83%
o-xylene	LB019466	mg/kg	0.1	<0.1	0%	77%	91%
	LB019468	mg/kg	0.1	<0.1	0%	91%	78%
Styrene (Vinyl benzene)	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
Isopropylbenzene (Cumene)	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
n-propylbenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,3,5-trimethylbenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
tert-butylbenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
1,2,4-trimethylbenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
sec-butylbenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
p-isopropyltoluene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
n-butylbenzene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA

Nitrogenous Compounds

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Acrylonitrile	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
2-nitropropane	LB019466	mg/kg	10	<10	0%	NA	NA

Oxygenated Compounds

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA', the results are less than the LOR and thus the RPD is not applicable.

VOC's in Soil Method: ME-(AU)-[ENV]AN433/AN434 (continued)

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Acetone (2-propanone)	LB019466	mg/kg	10	<10	0%	NA	NA
MtBE (Methyl-tert-butyl ether)	LB019466	mg/kg	0.5	<0.5	0%	NA	NA
Vinyl acetate	LB019466	mg/kg	10	<10	0%	NA	NA
MEK (2-butanone)	LB019466	mg/kg	10	<10	0%	NA	NA
MIBK (4-methyl-2-pentanone)	LB019466	mg/kg	1	<1	0%	NA	NA
2-hexanone (MBK)	LB019466	mg/kg	5	<5	0%	NA	NA

Polycyclic VOCs

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Naphthalene	LB019466	mg/kg	0.1	<0.1	0%	NA	NA

Sulphonated Compounds

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Carbon disulfide	LB019466	mg/kg	0.5	<0.5	0%	NA	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Dibromofluoromethane (Surrogate)	LB019466	%	-	93%	2%	93%	93%
	LB019468	%	-	97%	1%	97%	98%
d4-1,2-dichloroethane (Surrogate)	LB019466	%	-	102%	1%	101%	101%
	LB019468	%	-	105%	1%	102%	102%
d8-toluene (Surrogate)	LB019466	%	-	94%	1%	94%	97%
	LB019468	%	-	101%	1%	100%	101%
Bromofluorobenzene (Surrogate)	LB019466	%	-	112%	1%	106%	106%
	LB019468	%	-	98%	5%	99%	106%

Totals

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Total Xylenes*	LB019466	mg/kg	0.3	<0.3	0%	NA	NA
	LB019468	mg/kg	0.3	<0.3	0%	NA	NA
Total BTEX*	LB019466	mg/kg	-	0	NA	NA	NA
	LB019468	mg/kg	-	0	NA	NA	NA
Total Volatile Chlorinated Hydrocarbons*	LB019466	mg/kg	3	<3		NA	NA

Trihalomethanes

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Chloroform	LB019466	mg/kg	0.1	<0.1	0%	81%	104%
Bromodichloromethane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA
Chlorodibromomethane	LB019466	mg/kg	0.1	<0.1	0%	NA	NA

VOCs in Water Method: ME-(AU)-[ENV]AN433/AN434

Monocyclic Aromatic Hydrocarbons

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Benzene	LB019495	µg/L	0.5	<0.5	112%
Toluene	LB019495	µg/L	0.5	<0.5	115%
Ethylbenzene	LB019495	µg/L	0.5	<0.5	120%
m/p-xylene	LB019495	µg/L	1	<1	121%
o-xylene	LB019495	µg/L	0.5	<0.5	124%

Surrogates

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Dibromofluoromethane (Surrogate)	LB019495	%	-	104%	101%
d4-1,2-dichloroethane (Surrogate)	LB019495	%	-	106%	101%

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

VOCs in Water Method: ME-(AU)-[ENV]AN433/AN434 (continued)

				MB	LCS %Recovery
d8-toluene (Surrogate)	LB019495	%	-	99%	104%
Bromofluorobenzene (Surrogate)	LB019495	%	-	117%	100%

Volatile Petroleum Hydrocarbons in Soil Method: ME-(AU)-[ENV]AN433/AN434

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
TRH C6-C9	LB019466	mg/kg	20	<20	0%	127%	114%
	LB019468	mg/kg	20	<20	0%	134%	113%

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Trifluorotoluene (Surrogate)	LB019466	%	-	101%	1%	108%	101%
	LB019468	%	-	81%	2 - 11%	73%	90%

Volatile Petroleum Hydrocarbons in Water Method: ME-(AU)-[ENV]AN433/AN434

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
TRH C6-C9	LB019495	µg/L	40	<40	92%

Surrogates

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Trifluorotoluene (Surrogate)	LB019495	%	-	99%	104%

METHOD

METHODOLOGY SUMMARY

AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN020	Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN083	Separatory funnels are used for aqueous samples and extracted by transferring an appropriate volume (mass) of liquid into a separatory funnel and adding 3 serial aliquots of dichloromethane. Samples receive a single extraction at pH 7 to recover base / neutral analytes and two extractions at pH < 2 to recover acidic analytes. QC samples are prepared by spiking organic free water with target analytes and extracting as per samples.
AN088	Orbital rolling for Organic pollutants are extracted from soil/sediment by transferring an appropriate mass of sample to a clear soil jar and extracting with 1:1 Dichloromethane/Acetone. Orbital Rolling method is intended for the extraction of semi-volatile organic compounds from soil/sediment samples, and is based somewhat on USEPA method 3570 (Micro Organic extraction and sample preparation). Method 3700.
AN104	pHF is determined on an extract of approximately 2g of as received sample in approximately 10 mL of deionised water with pH determined after standing 30 minutes.
AN104	pHFox is determined on an extract of approximately 2g of as received sample with a few mLs of 30% hydrogen peroxide (adjusted to pH 4.5 to 5.5) with the extract reaction being rated from slight to extreme, with pH determined after reaction is complete and extract has cooled. Referenced to ASS Laboratory Methods Guidelines, method 23Af-Bf, 2004.
AN311/AN312	Mercury by Cold Vapour AAS in Waters: Mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN318	Determination of elements at trace level in waters by ICP-MS technique, in accordance with USEPA 6020A.
AN400	OC and OP Pesticides by GC-ECD: The determination of organochlorine (OC) and organophosphorus (OP) pesticides and polychlorinated biphenyls (PCBs) in soils, sludges and groundwater. (Based on USEPA methods 3510, 3550, 8140 and 8080.)
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Petroleum Hydrocarbons (TPH) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the elluent solvents.

METHOD

METHODOLOGY SUMMARY

AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependant on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433/AN434	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC's are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

FOOTNOTES

IS	Insufficient sample for analysis.	QFH	QC result is above the upper tolerance
LNR	Sample listed, but not received.	QFL	QC result is below the lower tolerance
*	This analysis is not covered by the scope of accreditation.	-	The sample was not analysed for this analyte
^	Performed by outside laboratory.	NVL	Not Validated
LOR	Limit of Reporting		
↑↓	Raised or Lowered Limit of Reporting		

Samples analysed as received.

Solid samples expressed on a dry weight basis.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here:
<http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf>

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Project **GEOTLCOV24303AC - SICEEP**
Order Number **92348-349**
Samples 19

LABORATORY DETAILS

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SGS Reference SE107819 R0
Report Number 0000027777
Date Reported 09/05/2012 16:26:56
Date Received 02 May 2012

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(4354).

No respirable fibres detected using trace analysis technique.

Sample #14,15: A portion of the sample supplied has been sub-sampled for asbestos according to SGS In-house procedures. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied.

SGS Environmental Services recommends supplying approximately 50-100g of sample in a separate container.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

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Organics Chemist



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Inorganics Metals Team Leader



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Laboratory Manager



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Organics Supervisor



Ravee Sivasubramaniam
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RESULTS

Fibre Identification in soil

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w
SE107819.001	BH27_1.5-1.9	Soil	29g Soil,rocks	27 Apr 2012	No Asbestos Found	<0.01
SE107819.004	BH30_0.5-0.6	Soil	48g Soil,rocks,clay	27 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01
SE107819.011	BH15_Surface	Soil	68g Soil,rocks	27 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01
SE107819.012	BH15_0.5-0.6	Soil	49g Soil,rocks,clay	27 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01
SE107819.014	DUP12	Soil	82g Soil,rocks,clay	27 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01
SE107819.015	DUP15	Soil	87g Soil,rocks,clay	27 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01
SE107819.016	BH8_0.1-0.2	Soil	125g Soil,rocks	27 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01
SE107819.017	BH8_0.5-0.6	Soil	114g Soil,rocks	27 Apr 2012	No Asbestos Found Organic Fibres Detected	<0.01

METHOD

METHODOLOGY SUMMARY

AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

FOOTNOTES

Amosite	-	Brown Asbestos	NA	-	Not Analysed
Chrysotile	-	White Asbestos	LNR	-	Listed, Not Required
Crocidolite	-	Blue Asbestos	*	-	Not Accredited
Amphiboles	-	Amosite and/or Crocidolite			

This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

Sampled by the client.

Where reported: 'Asbestos Detected': Asbestos detected by polarized light microscopy, including dispersion staining.

Where reported: 'No Asbestos Found': No Asbestos Found by polarized light microscopy, including dispersion staining.

Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarized light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos-containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : <http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf>

This document is issued, on the Client's behalf, by the Company under its General Conditions of Service available on request and accessible at http://www.au.sgs.com/terms_and_conditions_au. The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any other holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents.

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STATEMENT OF QA/QC PERFORMANCE

SE107819 R0

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Project **GEOTLCOV24303AC - SICEEP**
Order Number **92348-349**
Samples **19**

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SGS Reference **SE107819 R0**
Report Number **0000027776**
Date Reported **09 May 2012**

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS Environmental Services' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document and was supplied by the Client. This QA/QC Statement must be read in conjunction with the referenced Analytical Report. The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Duplicate	Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest	1 item
	Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest	5 items
Matrix Spike	Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest	2 items

SAMPLE SUMMARY

Sample counts by matrix	18 Soils, 1 Water	Type of documentation received	COC
Date documentation received	2/5/2012	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	3.6°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice	Samples clearly labelled	Yes
Complete documentation received	Yes		

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

Fibre Identification in soil

Method: ME-(AU)-[ENV]AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH27_1.5-1.9	SE107819.001	LB019561	27 Apr 2012	02 May 2012	27 Apr 2013	07 May 2012	27 Apr 2013	08 May 2012
BH30_0.5-0.6	SE107819.004	LB019561	27 Apr 2012	02 May 2012	27 Apr 2013	07 May 2012	27 Apr 2013	08 May 2012
BH15_Surface	SE107819.011	LB019561	27 Apr 2012	02 May 2012	27 Apr 2013	07 May 2012	27 Apr 2013	08 May 2012
BH15_0.5-0.6	SE107819.012	LB019561	27 Apr 2012	02 May 2012	27 Apr 2013	07 May 2012	27 Apr 2013	08 May 2012
DUP12	SE107819.014	LB019561	27 Apr 2012	02 May 2012	27 Apr 2013	07 May 2012	27 Apr 2013	08 May 2012
DUP15	SE107819.015	LB019561	27 Apr 2012	02 May 2012	27 Apr 2013	07 May 2012	27 Apr 2013	08 May 2012
BH8_0.1-0.2	SE107819.016	LB019561	27 Apr 2012	02 May 2012	27 Apr 2013	07 May 2012	27 Apr 2013	08 May 2012
BH8_0.5-0.6	SE107819.017	LB019561	27 Apr 2012	02 May 2012	27 Apr 2013	07 May 2012	27 Apr 2013	08 May 2012

Field pH for Acid Sulphate Soil

Method: ME-(AU)-[ENV]AN104

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH30_4.5-4.9	SE107819.010	LB019668	27 Apr 2012	02 May 2012	25 May 2012	08 May 2012	25 May 2012	08 May 2012
BH8_1.5-1.6	SE107819.018	LB019668	27 Apr 2012	02 May 2012	25 May 2012	08 May 2012	25 May 2012	08 May 2012

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311/AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QCB	SE107819.007	LB019477	27 Apr 2012	02 May 2012	25 May 2012	04 May 2012	25 May 2012	04 May 2012

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH27_1.5-1.9	SE107819.001	LB019590	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
BH27_3.0-3.4	SE107819.002	LB019590	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
BH27_4.5-4.9	SE107819.003	LB019590	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
BH30_0.5-0.6	SE107819.004	LB019590	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
BH30_1.5-1.9	SE107819.008	LB019590	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
BH30_3.0-5.4	SE107819.009	LB019590	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
BH30_4.5-4.9	SE107819.010	LB019590	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
BH15_Surface	SE107819.011	LB019590	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
BH15_0.5-0.6	SE107819.012	LB019590	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
BH15_1.5-1.6	SE107819.013	LB019590	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
DUP12	SE107819.014	LB019590	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
DUP15	SE107819.015	LB019590	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
BH8_0.1-0.2	SE107819.016	LB019591	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
BH8_0.5-0.6	SE107819.017	LB019591	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
BH8_1.5-1.6	SE107819.018	LB019591	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012
BH8_3.0-3.1	SE107819.019	LB019591	27 Apr 2012	02 May 2012	25 May 2012	07 May 2012	25 May 2012	09 May 2012

Moisture Content

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH27_1.5-1.9	SE107819.001	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
BH27_3.0-3.4	SE107819.002	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
BH27_4.5-4.9	SE107819.003	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
BH30_0.5-0.6	SE107819.004	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
TB7	SE107819.005	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
BH30_1.5-1.9	SE107819.008	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
BH30_3.0-5.4	SE107819.009	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
BH30_4.5-4.9	SE107819.010	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
BH15_Surface	SE107819.011	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
BH15_0.5-0.6	SE107819.012	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
BH15_1.5-1.6	SE107819.013	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
DUP12	SE107819.014	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
DUP15	SE107819.015	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
BH8_0.1-0.2	SE107819.016	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
BH8_0.5-0.6	SE107819.017	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
BH8_1.5-1.6	SE107819.018	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012
BH8_3.0-3.1	SE107819.019	LB019440	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	09 May 2012	08 May 2012

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH27_1.5-1.9	SE107819.001	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH27_3.0-3.4	SE107819.002	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN400/AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH27_4.5-4.9	SE107819.003	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH30_0.5-0.6	SE107819.004	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
TB7	SE107819.005	LB019410	27 Apr 2012	02 May 2012	11 May 2012	03 May 2012	12 Jun 2012	08 May 2012
BH30_1.5-1.9	SE107819.008	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH30_3.0-5.4	SE107819.009	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH30_4.5-4.9	SE107819.010	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH15_Surface	SE107819.011	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH15_0.5-0.6	SE107819.012	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH15_1.5-1.6	SE107819.013	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
DUP12	SE107819.014	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
DUP15	SE107819.015	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_0.1-0.2	SE107819.016	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_0.5-0.6	SE107819.017	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_1.5-1.6	SE107819.018	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_3.0-3.1	SE107819.019	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH27_1.5-1.9	SE107819.001	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH27_3.0-3.4	SE107819.002	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH27_4.5-4.9	SE107819.003	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH30_0.5-0.6	SE107819.004	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
TB7	SE107819.005	LB019410	27 Apr 2012	02 May 2012	11 May 2012	03 May 2012	12 Jun 2012	08 May 2012
BH30_1.5-1.9	SE107819.008	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH30_3.0-5.4	SE107819.009	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH30_4.5-4.9	SE107819.010	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH15_Surface	SE107819.011	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH15_0.5-0.6	SE107819.012	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH15_1.5-1.6	SE107819.013	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
DUP12	SE107819.014	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
DUP15	SE107819.015	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_0.1-0.2	SE107819.016	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_0.5-0.6	SE107819.017	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_1.5-1.6	SE107819.018	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_3.0-3.1	SE107819.019	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH27_1.5-1.9	SE107819.001	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH27_3.0-3.4	SE107819.002	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH27_4.5-4.9	SE107819.003	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH30_0.5-0.6	SE107819.004	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH30_1.5-1.9	SE107819.008	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH30_3.0-5.4	SE107819.009	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH30_4.5-4.9	SE107819.010	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH15_Surface	SE107819.011	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH15_0.5-0.6	SE107819.012	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH15_1.5-1.6	SE107819.013	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
DUP12	SE107819.014	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
DUP15	SE107819.015	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_0.1-0.2	SE107819.016	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_0.5-0.6	SE107819.017	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_1.5-1.6	SE107819.018	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_3.0-3.1	SE107819.019	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012

PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QCB	SE107819.007	LB019405	27 Apr 2012	02 May 2012	04 May 2012	03 May 2012	12 Jun 2012	08 May 2012

PCBs in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Name	Sample No.	QC Ref
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SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

PCBs in Soil (continued)

Method: ME-(AU)-[ENV]AN400/AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH27_1.5-1.9	SE107819.001	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH27_3.0-3.4	SE107819.002	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH27_4.5-4.9	SE107819.003	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH30_0.5-0.6	SE107819.004	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH30_1.5-1.9	SE107819.008	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH30_3.0-5.4	SE107819.009	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH30_4.5-4.9	SE107819.010	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH15_Surface	SE107819.011	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH15_0.5-0.6	SE107819.012	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH15_1.5-1.6	SE107819.013	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
DUP12	SE107819.014	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
DUP15	SE107819.015	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_0.1-0.2	SE107819.016	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_0.5-0.6	SE107819.017	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_1.5-1.6	SE107819.018	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_3.0-3.1	SE107819.019	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH27_1.5-1.9	SE107819.001	LB019578	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
BH27_3.0-3.4	SE107819.002	LB019578	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
BH27_4.5-4.9	SE107819.003	LB019578	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
BH30_0.5-0.6	SE107819.004	LB019578	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
BH30_1.5-1.9	SE107819.008	LB019579	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
BH30_3.0-5.4	SE107819.009	LB019579	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
BH30_4.5-4.9	SE107819.010	LB019579	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
BH15_Surface	SE107819.011	LB019579	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
BH15_0.5-0.6	SE107819.012	LB019579	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
BH15_1.5-1.6	SE107819.013	LB019579	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
DUP12	SE107819.014	LB019579	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
DUP15	SE107819.015	LB019579	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
BH8_0.1-0.2	SE107819.016	LB019579	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
BH8_0.5-0.6	SE107819.017	LB019579	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
BH8_1.5-1.6	SE107819.018	LB019579	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012
BH8_3.0-3.1	SE107819.019	LB019579	27 Apr 2012	02 May 2012	24 Oct 2012	07 May 2012	24 Oct 2012	09 May 2012

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QCB	SE107819.007	LB019487	27 Apr 2012	02 May 2012	24 Oct 2012	04 May 2012	24 Oct 2012	07 May 2012

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH27_1.5-1.9	SE107819.001	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH27_3.0-3.4	SE107819.002	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH27_4.5-4.9	SE107819.003	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH30_0.5-0.6	SE107819.004	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
TB7	SE107819.005	LB019410	27 Apr 2012	02 May 2012	11 May 2012	03 May 2012	12 Jun 2012	08 May 2012
BH30_1.5-1.9	SE107819.008	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH30_3.0-5.4	SE107819.009	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH30_4.5-4.9	SE107819.010	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH15_Surface	SE107819.011	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH15_0.5-0.6	SE107819.012	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH15_1.5-1.6	SE107819.013	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
DUP12	SE107819.014	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
DUP15	SE107819.015	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_0.1-0.2	SE107819.016	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_0.5-0.6	SE107819.017	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_1.5-1.6	SE107819.018	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_3.0-3.1	SE107819.019	LB019471	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QCB	SE107819.007	LB019405	27 Apr 2012	02 May 2012	04 May 2012	03 May 2012	12 Jun 2012	07 May 2012

VOC's in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH27_1.5-1.9	SE107819.001	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH27_3.0-3.4	SE107819.002	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH27_4.5-4.9	SE107819.003	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH30_0.5-0.6	SE107819.004	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
TB7	SE107819.005	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
TS7	SE107819.006	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH30_1.5-1.9	SE107819.008	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH30_3.0-5.4	SE107819.009	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH30_4.5-4.9	SE107819.010	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH15_Surface	SE107819.011	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH15_0.5-0.6	SE107819.012	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH15_1.5-1.6	SE107819.013	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
DUP12	SE107819.014	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
DUP15	SE107819.015	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH8_0.1-0.2	SE107819.016	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH8_0.5-0.6	SE107819.017	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH8_1.5-1.6	SE107819.018	LB019466	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_3.0-3.1	SE107819.019	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012

VOCs in Water

Method: ME-(AU)-[ENV]AN433/AN434

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QCB	SE107819.007	LB019495	27 Apr 2012	02 May 2012	04 May 2012	04 May 2012	13 Jun 2012	07 May 2012

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH27_1.5-1.9	SE107819.001	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH27_3.0-3.4	SE107819.002	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH27_4.5-4.9	SE107819.003	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH30_0.5-0.6	SE107819.004	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
TB7	SE107819.005	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
TS7	SE107819.006	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH30_1.5-1.9	SE107819.008	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH30_3.0-5.4	SE107819.009	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH30_4.5-4.9	SE107819.010	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH15_Surface	SE107819.011	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH15_0.5-0.6	SE107819.012	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH15_1.5-1.6	SE107819.013	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
DUP12	SE107819.014	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
DUP15	SE107819.015	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH8_0.1-0.2	SE107819.016	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH8_0.5-0.6	SE107819.017	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012
BH8_1.5-1.6	SE107819.018	LB019466	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	08 May 2012
BH8_3.0-3.1	SE107819.019	LB019468	27 Apr 2012	02 May 2012	11 May 2012	04 May 2012	13 Jun 2012	07 May 2012

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433/AN434

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QCB	SE107819.007	LB019495	27 Apr 2012	02 May 2012	04 May 2012	04 May 2012	13 Jun 2012	07 May 2012

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH8_1.5-1.6	SE107819.018	%	60 - 130%	126

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH8_1.5-1.6	SE107819.018	%	60 - 130%	117
d14-p-terphenyl (Surrogate)	BH8_1.5-1.6	SE107819.018	%	60 - 130%	105

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH27_1.5-1.9	SE107819.001	%	60 - 130%	126
	BH27_3.0-3.4	SE107819.002	%	60 - 130%	104
	BH27_4.5-4.9	SE107819.003	%	60 - 130%	112
	BH30_0.5-0.6	SE107819.004	%	60 - 130%	106
	BH30_1.5-1.9	SE107819.008	%	60 - 130%	114
	BH30_3.0-5.4	SE107819.009	%	60 - 130%	110
	BH30_4.5-4.9	SE107819.010	%	60 - 130%	119
	BH15_Surface	SE107819.011	%	60 - 130%	118
	BH15_0.5-0.6	SE107819.012	%	60 - 130%	114
	BH15_1.5-1.6	SE107819.013	%	60 - 130%	122
	DUP12	SE107819.014	%	60 - 130%	99
	DUP15	SE107819.015	%	60 - 130%	100
	BH8_0.1-0.2	SE107819.016	%	60 - 130%	100
	BH8_0.5-0.6	SE107819.017	%	60 - 130%	112
	BH8_1.5-1.6	SE107819.018	%	60 - 130%	116
	BH8_3.0-3.1	SE107819.019	%	60 - 130%	117
d14-p-terphenyl (Surrogate)	BH27_1.5-1.9	SE107819.001	%	60 - 130%	118
	BH27_3.0-3.4	SE107819.002	%	60 - 130%	102
	BH27_4.5-4.9	SE107819.003	%	60 - 130%	106
	BH30_0.5-0.6	SE107819.004	%	60 - 130%	102
	BH30_1.5-1.9	SE107819.008	%	60 - 130%	106
	BH30_3.0-5.4	SE107819.009	%	60 - 130%	104
	BH30_4.5-4.9	SE107819.010	%	60 - 130%	100
	BH15_Surface	SE107819.011	%	60 - 130%	110
	BH15_0.5-0.6	SE107819.012	%	60 - 130%	112
	BH15_1.5-1.6	SE107819.013	%	60 - 130%	112
	DUP12	SE107819.014	%	60 - 130%	89
	DUP15	SE107819.015	%	60 - 130%	94
	BH8_0.1-0.2	SE107819.016	%	60 - 130%	95
	BH8_0.5-0.6	SE107819.017	%	60 - 130%	104
	BH8_1.5-1.6	SE107819.018	%	60 - 130%	105
	BH8_3.0-3.1	SE107819.019	%	60 - 130%	103
d5-nitrobenzene (Surrogate)	BH27_1.5-1.9	SE107819.001	%	60 - 130%	122
	BH27_3.0-3.4	SE107819.002	%	60 - 130%	112
	BH27_4.5-4.9	SE107819.003	%	60 - 130%	126
	BH30_0.5-0.6	SE107819.004	%	60 - 130%	110
	BH30_1.5-1.9	SE107819.008	%	60 - 130%	124
	BH30_3.0-5.4	SE107819.009	%	60 - 130%	118
	BH30_4.5-4.9	SE107819.010	%	60 - 130%	120
	BH15_Surface	SE107819.011	%	60 - 130%	126
	BH15_0.5-0.6	SE107819.012	%	60 - 130%	118
	BH15_1.5-1.6	SE107819.013	%	60 - 130%	128
	DUP12	SE107819.014	%	60 - 130%	107
	DUP15	SE107819.015	%	60 - 130%	103
	BH8_0.1-0.2	SE107819.016	%	60 - 130%	111
	BH8_0.5-0.6	SE107819.017	%	60 - 130%	115
	BH8_1.5-1.6	SE107819.018	%	60 - 130%	122
	BH8_3.0-3.1	SE107819.019	%	60 - 130%	121

PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units
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Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Water (continued)

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	QCB	SE107819.007	%	40 - 130%	80
d14-p-terphenyl (Surrogate)	QCB	SE107819.007	%	40 - 130%	106
d5-nitrobenzene (Surrogate)	QCB	SE107819.007	%	40 - 130%	79

PCBs in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH8_1.5-1.6	SE107819.018	%	60 - 130%	126

VOC's in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH27_1.5-1.9	SE107819.001	%	60 - 130%	98
	BH27_3.0-3.4	SE107819.002	%	60 - 130%	109
	BH27_4.5-4.9	SE107819.003	%	60 - 130%	102
	BH30_0.5-0.6	SE107819.004	%	60 - 130%	100
	TB7	SE107819.005	%	60 - 130%	100
	TS7	SE107819.006	%	60 - 130%	67
	BH30_1.5-1.9	SE107819.008	%	60 - 130%	96
	BH30_3.0-5.4	SE107819.009	%	60 - 130%	103
	BH30_4.5-4.9	SE107819.010	%	60 - 130%	102
	BH15_Surface	SE107819.011	%	60 - 130%	105
	BH15_0.5-0.6	SE107819.012	%	60 - 130%	104
	BH15_1.5-1.6	SE107819.013	%	60 - 130%	100
	DUP12	SE107819.014	%	60 - 130%	105
	DUP15	SE107819.015	%	60 - 130%	102
	BH8_0.1-0.2	SE107819.016	%	60 - 130%	102
	BH8_0.5-0.6	SE107819.017	%	60 - 130%	98
	BH8_1.5-1.6	SE107819.018	%	60 - 130%	108
d4-1,2-dichloroethane (Surrogate)	BH8_3.0-3.1	SE107819.019	%	60 - 130%	101
	BH27_1.5-1.9	SE107819.001	%	60 - 130%	101
	BH27_3.0-3.4	SE107819.002	%	60 - 130%	102
	BH27_4.5-4.9	SE107819.003	%	60 - 130%	101
	BH30_0.5-0.6	SE107819.004	%	60 - 130%	101
	TB7	SE107819.005	%	60 - 130%	100
	TS7	SE107819.006	%	60 - 130%	95
	BH30_1.5-1.9	SE107819.008	%	60 - 130%	102
	BH30_3.0-5.4	SE107819.009	%	60 - 130%	101
	BH30_4.5-4.9	SE107819.010	%	60 - 130%	101
	BH15_Surface	SE107819.011	%	60 - 130%	100
	BH15_0.5-0.6	SE107819.012	%	60 - 130%	101
	BH15_1.5-1.6	SE107819.013	%	60 - 130%	101
	DUP12	SE107819.014	%	60 - 130%	102
	DUP15	SE107819.015	%	60 - 130%	100
	BH8_0.1-0.2	SE107819.016	%	60 - 130%	100
	BH8_0.5-0.6	SE107819.017	%	60 - 130%	100
	BH8_1.5-1.6	SE107819.018	%	60 - 130%	101
d8-toluene (Surrogate)	BH8_3.0-3.1	SE107819.019	%	60 - 130%	101
	BH27_1.5-1.9	SE107819.001	%	60 - 130%	100
	BH27_3.0-3.4	SE107819.002	%	60 - 130%	99
	BH27_4.5-4.9	SE107819.003	%	60 - 130%	101
	BH30_0.5-0.6	SE107819.004	%	60 - 130%	101
	TB7	SE107819.005	%	60 - 130%	100
	TS7	SE107819.006	%	60 - 130%	94
	BH30_1.5-1.9	SE107819.008	%	60 - 130%	101
	BH30_3.0-5.4	SE107819.009	%	60 - 130%	101
	BH30_4.5-4.9	SE107819.010	%	60 - 130%	100
	BH15_Surface	SE107819.011	%	60 - 130%	100
	BH15_0.5-0.6	SE107819.012	%	60 - 130%	101
	BH15_1.5-1.6	SE107819.013	%	60 - 130%	101
	DUP12	SE107819.014	%	60 - 130%	102
	DUP15	SE107819.015	%	60 - 130%	98

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433/AN434

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	BH8_0.1-0.2	SE107819.016	%	60 - 130%	100
	BH8_0.5-0.6	SE107819.017	%	60 - 130%	100
	BH8_1.5-1.6	SE107819.018	%	60 - 130%	96
	BH8_3.0-3.1	SE107819.019	%	60 - 130%	102
Dibromofluoromethane (Surrogate)	BH27_1.5-1.9	SE107819.001	%	60 - 130%	97
	BH27_3.0-3.4	SE107819.002	%	60 - 130%	99
	BH27_4.5-4.9	SE107819.003	%	60 - 130%	97
	BH30_0.5-0.6	SE107819.004	%	60 - 130%	97
	TB7	SE107819.005	%	60 - 130%	97
	TS7	SE107819.006	%	60 - 130%	96
	BH30_1.5-1.9	SE107819.008	%	60 - 130%	97
	BH30_3.0-5.4	SE107819.009	%	60 - 130%	98
	BH30_4.5-4.9	SE107819.010	%	60 - 130%	97
	BH15_Surface	SE107819.011	%	60 - 130%	98
	BH15_0.5-0.6	SE107819.012	%	60 - 130%	98
	BH15_1.5-1.6	SE107819.013	%	60 - 130%	97
	DUP12	SE107819.014	%	60 - 130%	98
	DUP15	SE107819.015	%	60 - 130%	96
	BH8_0.1-0.2	SE107819.016	%	60 - 130%	97
	BH8_0.5-0.6	SE107819.017	%	60 - 130%	97
	BH8_1.5-1.6	SE107819.018	%	60 - 130%	92
	BH8_3.0-3.1	SE107819.019	%	60 - 130%	98

VOCs in Water

Method: ME-(AU)-[ENV]AN433/AN434

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	QCB	SE107819.007	%	60 - 130%	119
d4-1,2-dichloroethane (Surrogate)	QCB	SE107819.007	%	40 - 130%	108
d8-toluene (Surrogate)	QCB	SE107819.007	%	60 - 130%	100
Dibromofluoromethane (Surrogate)	QCB	SE107819.007	%	60 - 130%	104

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Trifluorotoluene (Surrogate)	BH27_1.5-1.9	SE107819.001	%	60 - 130%	86
	BH27_3.0-3.4	SE107819.002	%	60 - 130%	78
	BH27_4.5-4.9	SE107819.003	%	60 - 130%	80
	BH30_0.5-0.6	SE107819.004	%	60 - 130%	67
	TB7	SE107819.005	%	60 - 130%	66
	BH30_1.5-1.9	SE107819.008	%	60 - 130%	76
	BH30_3.0-5.4	SE107819.009	%	60 - 130%	73
	BH30_4.5-4.9	SE107819.010	%	60 - 130%	72
	BH15_Surface	SE107819.011	%	60 - 130%	75
	BH15_0.5-0.6	SE107819.012	%	60 - 130%	67
	BH15_1.5-1.6	SE107819.013	%	60 - 130%	72
	DUP12	SE107819.014	%	60 - 130%	64
	DUP15	SE107819.015	%	60 - 130%	66
	BH8_0.1-0.2	SE107819.016	%	60 - 130%	67
	BH8_0.5-0.6	SE107819.017	%	60 - 130%	72
	BH8_1.5-1.6	SE107819.018	%	60 - 130%	102
	BH8_3.0-3.1	SE107819.019	%	60 - 130%	60

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433/AN434

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Trifluorotoluene (Surrogate)	QCB	SE107819.007	%	40 - 130%	100

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311/AN312

Sample Number	Parameter	Units	LOR	Result
LB019477.001	Mercury	mg/L	0.0001	<0.0001

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB019590.001	Mercury	mg/kg	0.05	<0.05
LB019591.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result
LB019471.001	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Alpha BHC	mg/kg	0.1	<0.1
	Lindane	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	<0.2
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.2	<0.2
	Endrin	mg/kg	0.2	<0.2
	Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	Endrin Aldehyde	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Endrin Ketone	mg/kg	0.1	<0.1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	128

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result
LB019471.001	Dichlorvos	mg/kg	0.5	<0.5
	Dimethoate	mg/kg	0.5	<0.5
	Diazinon (Dimpylate)	mg/kg	0.5	<0.5
	Fenitrothion	mg/kg	0.2	<0.2
	Malathion	mg/kg	0.2	<0.2
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
	Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Bromophos Ethyl	mg/kg	0.2	<0.2
	Methidathion	mg/kg	0.5	<0.5
	Ethion	mg/kg	0.2	<0.2
	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	2-fluorobiphenyl (Surrogate)	%	-	104
	d14-p-terphenyl (Surrogate)	%	-	102

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB019471.001	Naphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1
	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	<0.1
	Chrysene	mg/kg	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB019471.001	Benzo(a)pyrene	mg/kg	0.1	<0.1
	Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
	Dibenzo(a&h)anthracene	mg/kg	0.1	<0.1
	Benzo(ghi)perylene	mg/kg	0.1	<0.1
	Surrogates			
	d5-nitrobenzene (Surrogate)	%	-	104
	2-fluorobiphenyl (Surrogate)	%	-	96
	d14-p-terphenyl (Surrogate)	%	-	96

PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB019405.001	Naphthalene	µg/L	0.1	<0.1
	Acenaphthylene	µg/L	0.1	<0.1
	Acenaphthene	µg/L	0.1	<0.1
	Fluorene	µg/L	0.1	<0.1
	Phenanthrene	µg/L	0.1	<0.1
	Anthracene	µg/L	0.1	<0.1
	Fluoranthene	µg/L	0.1	<0.1
	Pyrene	µg/L	0.1	<0.1
	Benzo(a)anthracene	µg/L	0.1	<0.1
	Chrysene	µg/L	0.1	<0.1
	Benzo(a)pyrene	µg/L	0.1	<0.1
	Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1
	Dibenzo(a&h)anthracene	µg/L	0.1	<0.1
	Benzo(ghi)perylene	µg/L	0.1	<0.1
	Surrogates			
	d5-nitrobenzene (Surrogate)	%	-	104
	2-fluorobiphenyl (Surrogate)	%	-	84
	d14-p-terphenyl (Surrogate)	%	-	94

PCBs in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result
LB019471.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2
	Arochlor 1254	mg/kg	0.2	<0.2
	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates			
	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	128

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB019578.001	Arsenic, As	mg/kg	3	<3
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.3	<0.3
	Copper, Cu	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Nickel, Ni	mg/kg	0.5	<0.5
	Zinc, Zn	mg/kg	0.5	<0.5
LB019579.001	Arsenic, As	mg/kg	3	<3
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.3	<0.3
	Copper, Cu	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Nickel, Ni	mg/kg	0.5	<0.5
	Zinc, Zn	mg/kg	0.5	<0.5

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR
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Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Trace Metals (Dissolved) in Water by ICPMS (continued)

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result
LB019487.001	Arsenic, As	µg/L	1	<1
	Cadmium, Cd	µg/L	0.1	<0.1
	Chromium, Cr	µg/L	1	<1
	Copper, Cu	µg/L	1	<1
	Lead, Pb	µg/L	1	<1
	Nickel, Ni	µg/L	1	<1
	Zinc, Zn	µg/L	1	<1

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB019410.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	50	<50
	TRH C29-C36	mg/kg	50	<50
LB019471.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	50	<50
	TRH C29-C36	mg/kg	50	<50

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB019405.001	TRH C10-C14	µg/L	100	<100
	TRH C15-C28	µg/L	200	<200
	TRH C29-C36	µg/L	200	<200

VOC's in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number	Parameter	Units	LOR	Result	
LB019466.001	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1
		1,2-dichloropropane	mg/kg	0.1	<0.1
		cis-1,3-dichloropropene	mg/kg	0.1	<0.1
		trans-1,3-dichloropropene	mg/kg	0.1	<0.1
	Halogenated Aliphatics	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1
		Chloromethane	mg/kg	1	<1
		Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1
		Chloroethane	mg/kg	1	<1
		Trichlorofluoromethane	mg/kg	1	<1
		1,1-dichloroethene	mg/kg	0.1	<0.1
		Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5
		Allyl chloride	mg/kg	0.1	<0.1
		trans-1,2-dichloroethene	mg/kg	0.1	<0.1
		1,1-dichloroethane	mg/kg	0.1	<0.1
		cis-1,2-dichloroethene	mg/kg	0.1	<0.1
		Bromochloromethane	mg/kg	0.1	<0.1
		1,2-dichloroethane	mg/kg	0.1	<0.1
		1,1,1-trichloroethane	mg/kg	0.1	<0.1
		1,1-dichloropropene	mg/kg	0.1	<0.1
		Carbon tetrachloride	mg/kg	0.1	<0.1
		Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1
		1,1,2-trichloroethane	mg/kg	0.1	<0.1
		1,3-dichloropropane	mg/kg	0.1	<0.1
		Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1
		1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1
		cis-1,4-dichloro-2-butene	mg/kg	1	<1
		1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1
		1,2,3-trichloropropane	mg/kg	0.1	<0.1
		trans-1,4-dichloro-2-butene	mg/kg	1	<1
		1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1
		Hexachlorobutadiene	mg/kg	0.1	<0.1
	Halogenated Aromatics	Chlorobenzene	mg/kg	0.1	<0.1
		2-chlorotoluene	mg/kg	0.1	<0.1
		4-chlorotoluene	mg/kg	0.1	<0.1
		1,3-dichlorobenzene	mg/kg	0.1	<0.1
		1,4-dichlorobenzene	mg/kg	0.1	<0.1
		1,2-dichlorobenzene	mg/kg	0.1	<0.1

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Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number	Parameter	Units	LOR	Result
LB019466.001	Halogenated Aromatics	1,2,4-trichlorobenzene	mg/kg	0.1
		1,2,3-trichlorobenzene	mg/kg	0.1
	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1
		Toluene	mg/kg	0.1
		Ethylbenzene	mg/kg	0.1
		m/p-xylene	mg/kg	0.2
		o-xylene	mg/kg	0.1
		Styrene (Vinyl benzene)	mg/kg	0.1
		Isopropylbenzene (Cumene)	mg/kg	0.1
		n-propylbenzene	mg/kg	0.1
		1,3,5-trimethylbenzene	mg/kg	0.1
		tert-butylbenzene	mg/kg	0.1
		1,2,4-trimethylbenzene	mg/kg	0.1
		sec-butylbenzene	mg/kg	0.1
		p-isopropyltoluene	mg/kg	0.1
		n-butylbenzene	mg/kg	0.1
	Nitrogenous Compounds	Acrylonitrile	mg/kg	0.1
		2-nitropropane	mg/kg	10
	Oxygenated Compounds	Acetone (2-propanone)	mg/kg	10
		MtBE (Methyl-tert-butyl ether)	mg/kg	0.5
		Vinyl acetate	mg/kg	10
		MEK (2-butanone)	mg/kg	10
		MIBK (4-methyl-2-pentanone)	mg/kg	1
		2-hexanone (MBK)	mg/kg	5
	Polycyclic VOCs	Naphthalene	mg/kg	0.1
	Sulphonated	Carbon disulfide	mg/kg	0.5
	Surrogates	Dibromofluoromethane (Surrogate)	%	-
		d4-1,2-dichloroethane (Surrogate)	%	-
		d8-toluene (Surrogate)	%	-
		Bromofluorobenzene (Surrogate)	%	-
	Totals	Total BTEX*	mg/kg	-
	Trihalomethanes	Chloroform	mg/kg	0.1
		Bromodichloromethane	mg/kg	0.1
		Chlorodibromomethane	mg/kg	0.1
LB019468.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1
		Toluene	mg/kg	0.1
		Ethylbenzene	mg/kg	0.1
		m/p-xylene	mg/kg	0.2
		o-xylene	mg/kg	0.1
	Surrogates	Dibromofluoromethane (Surrogate)	%	-
		d4-1,2-dichloroethane (Surrogate)	%	-
		d8-toluene (Surrogate)	%	-
		Bromofluorobenzene (Surrogate)	%	-
	Totals	Total BTEX*	mg/kg	-

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number	Parameter	Units	LOR	Result
LB019466.001	TRH C6-C9	mg/kg	20	<20
	Surrogates	Trifluorotoluene (Surrogate)	%	-
LB019468.001	TRH C6-C9	mg/kg	20	<20
	Surrogates	Trifluorotoluene (Surrogate)	%	-

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number	Parameter	Units	LOR	Result
LB019495.001	TRH C6-C9	µg/L	40	<40
	Surrogates	Trifluorotoluene (Surrogate)	%	-

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311/AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE107872.017	LB019477.013	Mercury	µg/L	0.0001	<0.0001	<0.0001	200	0

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE107819.003	LB019590.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE107819.015	LB019590.024	Mercury	mg/kg	0.05	<0.05	<0.05	164	0
SE107819.019	LB019591.008	Mercury	mg/kg	0.05	0.12	0.14	69	13

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE107819.010	LB019471.010	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenzo(a&h)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
Surrogates	Total PAH (Vic EPA)	mg/kg	0.8	<0.8	<0.8	200	0	
	d5-nitrobenzene (Surrogate)	%	-	120.0	120.0	30	0	
	2-fluorobiphenyl (Surrogate)	%	-	119.0	119.0	30	0	
	d14-p-terphenyl (Surrogate)	%	-	100.0	102.0	30	2	

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE107815.002	LB019578.014	Arsenic, As	mg/kg	3	4	5	99	36
		Cadmium, Cd	mg/kg	0.3	0.6	0.6	82	2
		Chromium, Cr	mg/kg	0.3	18	16	32	11
		Copper, Cu	mg/kg	0.5	13	14	34	2
		Lead, Pb	mg/kg	1	9	9	41	4
		Nickel, Ni	mg/kg	0.5	0.7	0.7	99	4
		Zinc, Zn	mg/kg	0.5	17	24	32	35 @
SE107819.004	LB019578.024	Arsenic, As	mg/kg	3	<3	4	117	31
		Cadmium, Cd	mg/kg	0.3	<0.3	0.4	127	20
		Chromium, Cr	mg/kg	0.3	11	13	33	13
		Copper, Cu	mg/kg	0.5	35	46	31	27
		Lead, Pb	mg/kg	1	51	60	32	16
		Nickel, Ni	mg/kg	0.5	31	24	32	23
		Zinc, Zn	mg/kg	0.5	89	110	31	22
SE107819.017	LB019579.014	Arsenic, As	mg/kg	3	<3	<3	200	0
		Cadmium, Cd	mg/kg	0.3	0.5	0.4	97	2
		Chromium, Cr	mg/kg	0.3	25	12	32	68 @
		Copper, Cu	mg/kg	0.5	34	57	31	51 @
		Lead, Pb	mg/kg	1	16	11	37	39 @
		Nickel, Ni	mg/kg	0.5	84	98	31	15
		Zinc, Zn	mg/kg	0.5	68	57	31	18
SE107819.019	LB019579.017	Arsenic, As	mg/kg	3	7	7	73	2
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	140	0
		Chromium, Cr	mg/kg	0.3	12	17	32	39 @
		Copper, Cu	mg/kg	0.5	64	59	31	8
		Lead, Pb	mg/kg	1	82	77	31	5

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE107819.019	LB019579.017	Nickel, Ni	mg/kg	0.5	9.4	16	34	50 @
		Zinc, Zn	mg/kg	0.5	88	95	31	7

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE107811.001	LB019487.014	Arsenic, As	µg/L	1	0.171	0.224	200	0
		Cadmium, Cd	µg/L	0.1	0.056	0.045	200	0
		Chromium, Cr	µg/L	1	-0.107	-0.118	200	0
		Copper, Cu	µg/L	1	15.185	15.634	21	3
		Lead, Pb	µg/L	1	-0.106	-0.109	200	0
		Nickel, Ni	µg/L	1	53.975	55.752	17	3
		Zinc, Zn	µg/L	1	300.211	306.117	15	2
SE107846.001	LB019487.017	Lead, Pb	µg/L	1	0.184	0.198	200	0

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE107819.010	LB019471.010	TRH C10-C14	mg/kg	20	<20	<20	200	0
		TRH C15-C28	mg/kg	50	<50	<50	200	0
		TRH C29-C36	mg/kg	50	<50	<50	200	0

VOC's in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE107819.011	LB019468.015	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0	
			Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0	
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0	
			Surrogates	Dibromofluoromethane (Surrogate)	%	-	98.0	97.0	50	1
				d4-1,2-dichloroethane (Surrogate)	%	-	100.0	101.0	50	1
		d8-toluene (Surrogate)		%	-	100.0	101.0	50	1	
		Totals	Bromofluorobenzene (Surrogate)	%	-	105.0	100.0	50	5	
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0	
Total BTEX*	mg/kg		-	0	0	200	NA			
SE107866.002	LB019466.009	Fumigants	2,2-dichloropropane	mg/kg	0.1	0	0	200	0	
			1,2-dichloropropane	mg/kg	0.1	0	0	200	0	
			cis-1,3-dichloropropene	mg/kg	0.1	0	0	200	0	
			trans-1,3-dichloropropene	mg/kg	0.1	0	0	200	0	
		Halogenated	Dichlorodifluoromethane (CFC-12)	mg/kg	1	0	0	200	0	
			Aliphatics	Chloromethane	mg/kg	1	0	0	200	0
		Vinyl chloride (Chloroethene)		mg/kg	0.1	0	0	200	0	
		Chloroethane		mg/kg	1	0	0	200	0	
		Trichlorofluoromethane		mg/kg	1	0	0	200	0	
		1,1-dichloroethene		mg/kg	0.1	0	0	200	0	
		Dichloromethane (Methylene chloride)		mg/kg	0.5	0	0	200	0	
		Allyl chloride		mg/kg	0.1	0	0	200	0	
		trans-1,2-dichloroethene		mg/kg	0.1	0	0	200	0	
		1,1-dichloroethane		mg/kg	0.1	0	0	200	0	
		cis-1,2-dichloroethene		mg/kg	0.1	0	0	200	0	
		Bromochloromethane		mg/kg	0.1	0	0	200	0	
		1,2-dichloroethane		mg/kg	0.1	0	0	200	0	
		1,1,1-trichloroethane		mg/kg	0.1	0	0	200	0	
		1,1-dichloropropene		mg/kg	0.1	0	0	200	0	
		Carbon tetrachloride		mg/kg	0.1	0	0	200	0	
		Trichloroethene (Trichloroethylene -TCE)		mg/kg	0.1	0	0	200	0	
		1,1,2-trichloroethane	mg/kg	0.1	0	0	200	0		
		1,3-dichloropropane	mg/kg	0.1	0	0	200	0		
		Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	0	0	200	0		
		1,1,1,2-tetrachloroethane	mg/kg	0.1	0	0	200	0		
		cis-1,4-dichloro-2-butene	mg/kg	1	0	0	200	0		
		1,1,2,2-tetrachloroethane	mg/kg	0.1	0	0	200	0		
		1,2,3-trichloropropane	mg/kg	0.1	0	0	200	0		
		trans-1,4-dichloro-2-butene	mg/kg	1	0	0	200	0		

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433/AN434

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE107866.002	LB019466.009	Halogenated	1,2-dibromo-3-chloropropane	mg/kg	0.1	0	0	200	0
		Aliphatics	Hexachlorobutadiene	mg/kg	0.1	0	0	200	0
		Halogenated	Chlorobenzene	mg/kg	0.1	0	0	200	0
		Aromatics	2-chlorotoluene	mg/kg	0.1	0	0	200	0
			4-chlorotoluene	mg/kg	0.1	0	0	200	0
			1,3-dichlorobenzene	mg/kg	0.1	0	0	200	0
			1,4-dichlorobenzene	mg/kg	0.1	0	0	200	0
			1,2-dichlorobenzene	mg/kg	0.1	0	0	200	0
			1,2,4-trichlorobenzene	mg/kg	0.1	0	0	200	0
			1,2,3-trichlorobenzene	mg/kg	0.1	0	0	200	0
		Monocyclic	Benzene	mg/kg	0.1	0	0	200	0
		Aromatic	Toluene	mg/kg	0.1	0	0	200	0
			Ethylbenzene	mg/kg	0.1	0	0	200	0
			m/p-xylene	mg/kg	0.2	0	0	200	0
			o-xylene	mg/kg	0.1	0	0	200	0
			Styrene (Vinyl benzene)	mg/kg	0.1	0	0	200	0
			Isopropylbenzene (Cumene)	mg/kg	0.1	0	0	200	0
			n-propylbenzene	mg/kg	0.1	0	0	200	0
			1,3,5-trimethylbenzene	mg/kg	0.1	0	0	200	0
			tert-butylbenzene	mg/kg	0.1	0	0	200	0
			1,2,4-trimethylbenzene	mg/kg	0.1	0	0	200	0
			sec-butylbenzene	mg/kg	0.1	0	0	200	0
			p-isopropyltoluene	mg/kg	0.1	0	0	200	0
			n-butylbenzene	mg/kg	0.1	0	0	200	0
		Nitrogenous	Acrylonitrile	mg/kg	0.1	0	0	200	0
		Compounds	2-nitropropane	mg/kg	10	0	0	200	0
		Oxygenated	Acetone (2-propanone)	mg/kg	10	0	0	200	0
		Compounds	MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	0	0	200	0
			Vinyl acetate	mg/kg	10	0	0	200	0
			MEK (2-butanone)	mg/kg	10	0	0	200	0
			MIBK (4-methyl-2-pentanone)	mg/kg	1	0	0	200	0
			2-hexanone (MBK)	mg/kg	5	0	0	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	0	0	200	0
		Sulphonated	Carbon disulfide	mg/kg	0.5	0	0	200	0
		Surrogates	Dibromofluoromethane (Surrogate)	%	-	89	87	50	2
			d4-1,2-dichloroethane (Surrogate)	%	-	97	96	50	1
			d8-toluene (Surrogate)	%	-	96	95	50	1
			Bromofluorobenzene (Surrogate)	%	-	112	113	50	1
		Totals	Total Xylenes*	mg/kg	0.3	0	0	200	0
			Total BTEX*	mg/kg	-	0	0	200	NA
		Trihalomethanes	Chloroform	mg/kg	0.1	0	0	200	0
			Bromodichloromethane	mg/kg	0.1	0	0	200	0
			Chlorodibromomethane	mg/kg	0.1	0	0	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE107819.011	LB019468.015	TRH C6-C9	mg/kg	20	<20	<20	200	0	
		Surrogates	Trifluorotoluene (Surrogate)	%	-	75	67	30	11
SE107852.001	LB019468.023	Surrogates	Trifluorotoluene (Surrogate)	%	-	66	65	30	2
SE107866.002	LB019466.009	TRH C6-C9	mg/kg	20	0	0	200	0	
		Surrogates	Trifluorotoluene (Surrogate)	%	-	101	100	30	1

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311/AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019477.002	Mercury	mg/L	0.0001	0.0082	0.008	80 - 120	103

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019590.002	Mercury	mg/kg	0.05	0.24	0.2	70 - 130	120
LB019591.002	Mercury	mg/kg	0.05	0.24	0.2	70 - 130	120

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019471.002	Heptachlor	mg/kg	0.1	0.3	0.2	60 - 140	125
	Aldrin	mg/kg	0.1	0.3	0.2	60 - 140	130
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	115
	Dieldrin	mg/kg	0.2	0.2	0.2	60 - 140	115
	Endrin	mg/kg	0.2	0.3	0.2	60 - 140	125
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	95
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	120	100	60 - 140	122

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019471.002	Dichlorvos	mg/kg	0.5	1.2	1.33	60 - 140	89
	Diazinon (Dimpylate)	mg/kg	0.5	1.3	1.33	60 - 140	98
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.5	1.33	60 - 140	113
	Ethion	mg/kg	0.2	1.3	1.33	60 - 140	101
Surrogates	2-fluorobiphenyl (Surrogate)	%	-	90.0	100	60 - 120	90
	d14-p-terphenyl (Surrogate)	%	-	82.0	100	60 - 140	82

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019471.002	Naphthalene	mg/kg	0.1	3.1	4	60 - 140	78
	Acenaphthylene	mg/kg	0.1	4.1	4	60 - 140	104
	Acenaphthene	mg/kg	0.1	4.0	4	60 - 140	100
	Phenanthrene	mg/kg	0.1	4.0	4	60 - 140	101
	Anthracene	mg/kg	0.1	4.1	4	60 - 140	102
	Fluoranthene	mg/kg	0.1	4.3	4	60 - 140	107
	Pyrene	mg/kg	0.1	4.3	4	60 - 140	108
	Benzo(a)pyrene	mg/kg	0.1	4.6	4	60 - 140	116
Surrogates	d5-nitrobenzene (Surrogate)	%	-	100.0	100	60 - 140	100
	2-fluorobiphenyl (Surrogate)	%	-	96.0	100	60 - 140	96
	d14-p-terphenyl (Surrogate)	%	-	86.0	100	60 - 140	86

PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019405.002	Naphthalene	µg/L	0.1	38	40	60 - 140	95
	Acenaphthylene	µg/L	0.1	39	40	60 - 140	97
	Acenaphthene	µg/L	0.1	37	40	60 - 140	94
	Phenanthrene	µg/L	0.1	38	40	60 - 140	95
	Anthracene	µg/L	0.1	34	40	60 - 140	85
	Fluoranthene	µg/L	0.1	42	40	60 - 140	105
	Pyrene	µg/L	0.1	41	40	60 - 140	103
	Benzo(a)pyrene	µg/L	0.1	40	40	60 - 140	100
	d5-nitrobenzene (Surrogate)	%	-	106.0	100	60 - 140	106
	2-fluorobiphenyl (Surrogate)	%	-	92.0	100	60 - 140	92
Surrogates	d14-p-terphenyl (Surrogate)	%	-	89.0	100	60 - 140	89

PCBs in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019471.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	88
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	120	100	60 - 140	123

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019578.002	Arsenic, As	mg/kg	3	46	50	80 - 120	92
	Cadmium, Cd	mg/kg	0.3	47	50	80 - 120	94
	Chromium, Cr	mg/kg	0.3	48	50	80 - 120	95
	Copper, Cu	mg/kg	0.5	47	50	80 - 120	94
	Lead, Pb	mg/kg	1	48	50	80 - 120	95
	Nickel, Ni	mg/kg	0.5	48	50	80 - 120	96
	Zinc, Zn	mg/kg	0.5	47	50	80 - 120	95
LB019579.002	Arsenic, As	mg/kg	3	48	50	80 - 120	96
	Cadmium, Cd	mg/kg	0.3	49	50	80 - 120	98
	Chromium, Cr	mg/kg	0.3	50	50	80 - 120	99
	Copper, Cu	mg/kg	0.5	50	50	80 - 120	100
	Lead, Pb	mg/kg	1	50	50	80 - 120	99
	Nickel, Ni	mg/kg	0.5	50	50	80 - 120	99
	Zinc, Zn	mg/kg	0.5	49	50	80 - 120	98

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019487.002	Arsenic, As	µg/L	1	20	20	80 - 120	99
	Cadmium, Cd	µg/L	0.1	20	20	80 - 120	100
	Chromium, Cr	µg/L	1	22	20	80 - 120	108
	Copper, Cu	µg/L	1	22	20	80 - 120	111
	Lead, Pb	µg/L	1	20	20	80 - 120	98
	Nickel, Ni	µg/L	1	22	20	80 - 120	108
	Zinc, Zn	µg/L	1	23	20	80 - 120	113

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019410.002	TRH C10-C14	mg/kg	20	41	40	60 - 140	103
	TRH C15-C28	mg/kg	50	<50	40	60 - 140	103
	TRH C29-C36	mg/kg	50	<50	40	60 - 140	105
LB019471.002	TRH C10-C14	mg/kg	20	41	40	60 - 140	103
	TRH C15-C28	mg/kg	50	<50	40	60 - 140	103
	TRH C29-C36	mg/kg	50	<50	40	60 - 140	105

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019405.002	TRH C10-C14	µg/L	100	1300	1200	60 - 140	105
	TRH C15-C28	µg/L	200	1200	1200	60 - 140	103
	TRH C29-C36	µg/L	200	1200	1200	60 - 140	103

VOC's in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number	Parameter		Units	LOR	Result	Expected	Criteria %	Recovery %
LB019466.002	Halogenated	1,1-dichloroethene	mg/kg	0.1	2.4	2.9	60 - 140	83
	Aliphatics	1,2-dichloroethane	mg/kg	0.1	2.3	2.9	60 - 140	78
		Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	2.6	2.9	60 - 140	91
	Halogenated	Chlorobenzene	mg/kg	0.1	2.2	2.9	60 - 140	77
	Monocyclic	Benzene	mg/kg	0.1	2.1	3	60 - 140	71
	Aromatic	Toluene	mg/kg	0.1	2.4	3	60 - 140	79
		Ethylbenzene	mg/kg	0.1	1.9	3	60 - 140	64
		m/p-xylene	mg/kg	0.2	5.3	5.9	60 - 140	90
		o-xylene	mg/kg	0.1	2.2	2.9	60 - 140	77
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	93.0	100	60 - 140	93
		d4-1,2-dichloroethane (Surrogate)	%	-	101.0	100	60 - 140	101
		d8-toluene (Surrogate)	%	-	94.0	100	60 - 140	94
		Bromofluorobenzene (Surrogate)	%	-	106.0	100	60 - 140	106
	Trihalomethan	Chloroform	mg/kg	0.1	2.4	2.9	60 - 140	81
LB019468.002	Monocyclic	Benzene	mg/kg	0.1	2.9	3	60 - 140	97
	Aromatic	Toluene	mg/kg	0.1	2.8	3	60 - 140	94
		Ethylbenzene	mg/kg	0.1	2.7	3	60 - 140	90
		m/p-xylene	mg/kg	0.2	5.6	5.9	60 - 140	95
		o-xylene	mg/kg	0.1	2.6	2.9	60 - 140	91
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	97.0	100	60 - 140	97
		d4-1,2-dichloroethane (Surrogate)	%	-	102.0	100	60 - 140	102

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019468.002	Surrogates	d8-toluene (Surrogate)	%	-	100.0	100	60 - 140
		Bromofluorobenzene (Surrogate)	%	-	99.0	100	60 - 140

VOCs in Water

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019495.002	Monocyclic	Benzene	µg/L	0.5	51	45.45	60 - 140
		Toluene	µg/L	0.5	52	45.45	60 - 140
	Aromatic	Ethylbenzene	µg/L	0.5	54	45.45	60 - 140
		m/p-xylene	µg/L	1	110	90.9	60 - 140
		o-xylene	µg/L	0.5	57	45.45	60 - 140

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019466.002	TRH C6-C9	mg/kg	20	31	24.4	60 - 140	127
LB019468.002	TRH C6-C9	mg/kg	20	33	24.4	60 - 140	134

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433/AN434

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB019495.002	TRH C6-C9	µg/L	40	760	827	60 - 140	92

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311/AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE107739.004	LB019477.004	Mercury	mg/L	0.0001	0.0078	<0.0001	0.008	97

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE107815.001	LB019590.004	Mercury	mg/kg	0.05	0.24	<0.05	0.2	108
SE107819.016	LB019591.004	Mercury	mg/kg	0.05	0.25	<0.05	0.2	125

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE107804.010	LB019578.004	Arsenic, As	mg/kg	3	120	82	50	83
		Cadmium, Cd	mg/kg	0.3	44	0.5	50	87
		Chromium, Cr	mg/kg	0.3	57	14	50	85
		Copper, Cu	mg/kg	0.5	170	130	50	73
		Lead, Pb	mg/kg	1	190	170	50	52 ☹
		Nickel, Ni	mg/kg	0.5	58	15	50	86
SE107819.008	LB019579.004	Zinc, Zn	mg/kg	0.5	190	230	50	-70 ☹
		Arsenic, As	mg/kg	3	53	4	50	98
		Cadmium, Cd	mg/kg	0.3	45	<0.3	50	90
		Chromium, Cr	mg/kg	0.3	54	11	50	84
		Copper, Cu	mg/kg	0.5	58	8.7	50	98
		Lead, Pb	mg/kg	1	77	18	50	118
		Nickel, Ni	mg/kg	0.5	49	3.2	50	92
		Zinc, Zn	mg/kg	0.5	86	23	50	127

VOC's in Soil

Method: ME-(AU)-[ENV]AN433/AN434

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE107815.006	LB019466.004	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	-	-
			1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	-	-
			cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	-	-
			trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	-	-
		Halogenated	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	-	-
			Aliphatics	Chloromethane	mg/kg	1	<1	<1	-
		Vinyl chloride (Chloroethene)		mg/kg	0.1	<0.1	<0.1	-	-
		Chloroethane		mg/kg	1	<1	<1	-	-
		Trichlorofluoromethane		mg/kg	1	<1	<1	-	-
		1,1-dichloroethene		mg/kg	0.1	3.2	<0.1	2.9	110
		Dichloromethane (Methylene chloride)		mg/kg	0.5	<0.5	<0.5	-	-
		Allyl chloride		mg/kg	0.1	<0.1	<0.1	-	-
		trans-1,2-dichloroethene		mg/kg	0.1	<0.1	<0.1	-	-
		1,1-dichloroethane		mg/kg	0.1	<0.1	<0.1	-	-
		cis-1,2-dichloroethene		mg/kg	0.1	<0.1	<0.1	-	-
		Bromochloromethane		mg/kg	0.1	<0.1	<0.1	-	-
		1,2-dichloroethane		mg/kg	0.1	3.0	<0.1	2.9	103
		1,1,1-trichloroethane		mg/kg	0.1	<0.1	<0.1	-	-
		1,1-dichloropropene		mg/kg	0.1	<0.1	<0.1	-	-
		Carbon tetrachloride		mg/kg	0.1	<0.1	<0.1	-	-
		Trichloroethene (Trichloroethylene -TCE)		mg/kg	0.1	2.6	<0.1	2.9	88
		1,1,2-trichloroethane		mg/kg	0.1	<0.1	<0.1	-	-
		1,3-dichloropropane		mg/kg	0.1	<0.1	<0.1	-	-
		Tetrachloroethene (Perchloroethylene,PCE)		mg/kg	0.1	<0.1	<0.1	-	-
		1,1,1,2-tetrachloroethane		mg/kg	0.1	<0.1	<0.1	-	-
		cis-1,4-dichloro-2-butene		mg/kg	1	<1	<1	-	-
		1,1,2,2-tetrachloroethane		mg/kg	0.1	<0.1	<0.1	-	-
		1,2,3-trichloropropane		mg/kg	0.1	<0.1	<0.1	-	-
		trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	-	-	
		1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	-	-	
		Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	-	-	
		Halogenated	Chlorobenzene	mg/kg	0.1	3.0	<0.1	2.9	104
			Aromatics	2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	-

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433/AN434

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE107815.006	LB019466.004	Halogenated	4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	-	-
			Aromatics	1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-
		1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-	-	
		1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-	-	
		1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	-	-	
		1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	-	-	
		Monocyclic	Benzene	mg/kg	0.1	2.8	<0.1	3	94
			Aromatic	Toluene	mg/kg	0.1	3.3	<0.1	3
		Ethylbenzene	mg/kg	0.1	2.4	<0.1	3	78	
		m/p-xylene	mg/kg	0.2	5.1	<0.2	5.9	86	
		o-xylene	mg/kg	0.1	2.6	<0.1	2.9	91	
		Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	-	-	
		Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	-	-	
		n-propylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	
		1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	
		tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	
		1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	
		sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	
		p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	-	-	
		n-butylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	
		Nitrogenous	Acrylonitrile	mg/kg	0.1	<0.1	<0.1	-	-
			Compounds	2-nitropropane	mg/kg	10	<10	<10	-
		Oxygenated	Acetone (2-propanone)	mg/kg	10	<10	<10	-	-
			Compounds	MtBE (Methyl-tert-butyl ether)	mg/kg	0.5	<0.5	<0.5	-
		Vinyl acetate		mg/kg	10	<10	<10	-	-
		MEK (2-butanone)		mg/kg	10	<10	<10	-	-
		MIBK (4-methyl-2-pentanone)		mg/kg	1	<1	<1	-	-
		2-hexanone (MBK)	mg/kg	5	<5	<5	-	-	
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5	<0.5	-	-
		Surrogates	Dibromofluoromethane (Surrogate)	%	-	93.0	91.0	100	93
			d4-1,2-dichloroethane (Surrogate)	%	-	101.0	101.0	100	101
			d8-toluene (Surrogate)	%	-	97.0	97.0	100	97
			Bromofluorobenzene (Surrogate)	%	-	106.0	111.0	100	106
		Totals	Total Xylenes*	mg/kg	0.3	7.7	<0.3	-	-
			Total BTEX*	mg/kg	-	16	0	-	-
			Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3	<3	-	-
		Trihalomethanes	Chloroform	mg/kg	0.1	3.0	<0.1	2.9	104
			Bromodichloromethane	mg/kg	0.1	<0.1	<0.1	-	-
			Chlorodibromomethane	mg/kg	0.1	<0.1	<0.1	-	-
SE107819.001	LB019468.004	Monocyclic	Benzene	mg/kg	0.1	2.5	<0.1	3	82
			Aromatic	Toluene	mg/kg	0.1	2.4	<0.1	3
		Ethylbenzene	mg/kg	0.1	2.3	<0.1	3	78	
		m/p-xylene	mg/kg	0.2	4.9	<0.2	5.9	83	
		o-xylene	mg/kg	0.1	2.3	<0.1	2.9	78	
		Surrogates	Dibromofluoromethane (Surrogate)	%	-	98.0	97.0	100	98
			d4-1,2-dichloroethane (Surrogate)	%	-	102.0	101.0	100	102
			d8-toluene (Surrogate)	%	-	101.0	100.0	100	101
			Bromofluorobenzene (Surrogate)	%	-	106.0	98.0	100	106
		Totals	Total Xylenes*	mg/kg	0.3	7.1	<0.3	-	-
Total BTEX*	mg/kg		-	14	0	-	-		

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE107815.006	LB019466.005	TRH C6-C9	mg/kg	20	28	<20	24.4	114
		Surrogates	%	-	101	102	-	101
SE107819.001	LB019466.005	TRH C6-C9	mg/kg	20	28	<20	24.4	113
		Surrogates	%	-	90	86	-	90

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here:
<http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf>

- * Non-accredited analysis.
- Sample not analysed for this analyte.
- ^ Analysis performed by external laboratory.

- IS Insufficient sample for analysis.
- LNR Sample listed, but not received.
- LOR Limit of reporting.
- QFH QC result is above the upper tolerance.
- QFL QC result is below the lower tolerance.

- ① At least 2 of 3 surrogates are within acceptance criteria.
- ② RPD failed acceptance criteria due to sample heterogeneity.
- ③ Results less than 5 times LOR preclude acceptance criteria for RPD.
- ④ Recovery failed acceptance criteria due to matrix interference.
- ⑤ Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
- ⑥ LOR was raised due to sample matrix interference.
- ⑦ LOR was raised due to dilution of significantly high concentration of analyte in sample.
- ⑧ Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
- ⑨ Recovery failed acceptance criteria due to sample heterogeneity.
- † Refer to Analytical Report comments for further information.

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

89234



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Project No: GEOTECHN24303AC Task No: _____
Project Name: SICEEP Laboratory: SCS
Samplers Name: Jocelyn W Project Manager: Matthew Locke
Special Instructions: Please keep all remaining soil after analyses. Soil requires to be stored for 36 months by Coffey. Please advise Coffey when receiving soil samples are ready for

Lab. No.	Sample ID	Sample Location	Sample Depth	Sample Date	Time	Matrix (Soil, etc)	Container Type & Preservative*	T-A-T (Specify)
1	NBH10-04-05	NBH10	04-05	30-09-12	-	Soil	1g in 1 bag	5 days
2	NBH10-14-16		14-16					
3	NBH10-28-3		28-3					
	NBH10-43-45		43-45					
	NBH10-58-60		58-60					
	DUP Y							

Analysis Request Section

☒ BTEX / TPH
☒ METALS
☒ PAHs
☒ OCs / OPs
☒ Asbestos
☒ VHC
☒ VOC
☒ SVOC
☒ ASS Screen - Field pH / Temp

NOTES

SCS
02/10/12
11:10 a
3.5%
5868-70, ASS, WAC
SE 107862

RELINQUISHED BY: _____ RECEIVED BY: _____
Signature: _____ Date: 02/10/12
Company: _____ Signature: SCS
Signature: _____ Date: 11.10 a
Company: _____ Signature: _____
Time: _____

* Container Type & Preservation Codes: P - Plastic, G - Solvent Washed Acid Rinsed Glass Bottle, V - Vial, N - Nitric Acid Preserved
C - Hydrochloric Acid Preserved, S - Sulphuric Acid Preserved, I - Ice
CHAIN OF CUSTODY AND ANALYSIS REQUEST

Sample Receipt Advice: (Lab Use Only)
All Samples Received in Good Condition ☒
All Documentation is in Proper Order ☒
Samples Received Properly Chilled ☒
Lab. Ref/Batch No. SE 107862

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

89236



Philippines: ☐ 3rd Floor, JMT Bldg, ADB Ave, Ortigas Ctr, Pasig City, Metro Manila; Philippines
 ACT: ☐ 254 Northbourne Ave, Canberra ACT 2601
 NSW: ☒ Level 1, 3 Rider Blvd, Rhodes NSW 2138
☐ Lot 101, 19 Warabrook Blvd, Warabrook NSW 2304
☐ 1/222 Berkeley Rd, Unanderra NSW 2526

QLD: ☐ 47 Doggett St, Newstead QLD 4006
 SA: ☐ Level 1, 2-3 Greenhill Rd, Mawville SA 5034
 TAS: ☐ Coffey Business Centre, 2 Melville St, Hobart TAS 7000
 VIC: ☐ 126 Trenery Cres, Abbotsford VIC 3067
☐ Level 1, 23 West Fyans St, Newtown VIC 3220
 WA: ☐ 61 Duke St, Albany WA 6330
☐ Suite 2, 53 Burwood Rd, Burwood WA 6100
☐ Suite 3 & 4, 236 Muraliste Tce, Dunsborough WA 6281

Project No: GEOTLUV 24303AC

Task No:

Project Name: SICEEP

Laboratory: SAS

Sample Name: Adriana Correa Mathe

Project Manager: Matthew Lecke

Special Instructions: Please keep all remaining soil after completion of analyses.

Remaining soil needs to be stored for 36 months. Adriana Coffey when remaining soil is available for pick-up.

Lab. No.	Sample ID	Sample Location	Sample Depth	Sample Date	Time	Matrix (Soil, etc)	Container Type & Preservative*	T-A-T (Specify)	ANALYSIS REQUEST SECTION	NOTES
4	BH6-sub	BH6	0.1-0.2	30-04-12	8:19	soil	1g + 1 bag + ice	Solids	BTEX / TPH	
	BH6-0.3-0.6		0.3-0.6		8:52				METALS REPORT	
	BH6-1.5-1.7				9:05				PAHs REMEDIATION	
5	BH6-3.0-3.4				9:13				OCs / OPS	
	BH6-4.5-4.9				9:23				Asbestos	
	BH7a-0.1-0.2	BH7a			10:35				VHC	
	TB8								VOC	
	TS8								SVOC	
	DUP16								ASS SCREEN	
	DUP16A								Field pH	
6	DUP17									
	DUP17A									
7	BH4-sub	BH4	0.1-0.2	16-04-12			1g + 1 bag + ice			
	BH4-0.3-0.6			17-06-12						
8	BH4-1.5-1.9			17-06-12						

RELINQUISHED BY:

RECEIVED BY:

Signature: _____ Date: _____
 Company: _____ Time: _____
 Signature: _____ Date: _____
 Company: _____ Time: _____

Sample Receipt Advice: (Lab Use Only)
 All Samples Received in Good Condition. ☒
 All Documentation is in Proper Order. ☒
 Samples Received Properly Chilled. ☒
 Lab. Ref/Batch No. SE 107862

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

89237



Philippines: ☐ 3rd Floor, JMT Bldg, ADB Ave, Ortigas Ctr, Pasig City, Metro Manila, Philippines Tel (+63) (2) 638 9666 Fax (+63) (2) 687 3518
 ACT: ☐ 25/4 Northbourne Ave, Canberra ACT 2601 Tel (02) 6248 7366 Fax (02) 6248 7157
 NSW: ☒ Level 1, 3 Rider Blvd, Rhodes NSW 2138 Tel (02) 8083 1600 Fax (02) 8765 0762
☐ Lot 101, 19 Warabrook Blvd, Warabrook NSW 2304 Tel (02) 4016 2300 Fax (02) 4016 2280
☐ 1/222 Berkeley Rd, Unanderra NSW 2526 Tel (02) 4272 6071 Fax (02) 4272 6075

QLD: ☐ 47 Doggett St, Newstead QLD 4006 Tel (07) 3608 2500 Fax (07) 3852 2805
 SA: ☐ Level 1, 2-3 Greenhill Rd, Wayville SA 5034 Tel (08) 7221 3500 Fax (08) 8172 1968
 TAS: ☐ Coffey Business Centre, 2 Melville St, Hobart TAS 7000 Tel (03) 6108 0100 Fax (03) 6108 0199
 VIC: ☐ 126 Trenerry Cres, Abbotsford VIC 3067 Tel (03) 9473 1400 Fax (03) 9473 1450
☐ Level 1, 23 West Plains St, Newmarket VIC 3220 Tel (03) 9216 4600 Fax (03) 9224 1368
 WA: ☐ 61 Duke St, Albany WA 6330 Tel (08) 9992 6400 Fax (08) 9992 6444
☐ Suite 2, 53 Burswood Rd, Burswood WA 6100 Tel (08) 9355 7100 Fax (08) 9355 7111
☐ Suite 3 & 4, 236 Naturaliste Ter, Dunsborough WA 6281 Tel (08) 9756 7869 Fax (08) 9756 8876

Project No: GEOTLCON 24 303AC

Task No:

Project Name: SICEEP

Laboratory: SCS

Sample Name: Adriana Lorena Mothe

Project Manager: Matthew Locke

Special Instructions: Please keep all remaining soil after analyses. Remaining soil requires to be stored for 36 months by Coffey. Please advise when remaining soil sum.
 plus are ready for pick up

Lab. No.	Sample ID	Sample Location	Sample Depth	Sample Date	Time	Matrix (Soil, etc)	Container Type & Preservative*	T-A-T (Specify)	Analysis Request Section	NOTES
9	BH4-30-24	BH4	30-34	30-03-12	13:28	Soil	1 yr x 1 bag + 1 kg	5 days	BTEX/TPH METALS (Asbestos) PAHs/Melanoidin OCs/OPs Asbestos VOC SVOC As Screen - Field pH/Temp	
	BH4-35-24		45-49		17:41					
	BH4-60-24		60-64		18:00					
	BH4-75-24		75-79		18:10					

RELINQUISHED BY:

RECEIVED BY:

Signature: _____ Date: _____
 Company: _____ Time: _____
 Signature: _____ Date: 02/05/12
 Company: _____ Time: 11:10

Sample Receipt Advice: (Lab Use Only)

All Samples Received in Good Condition. ☒All Documentation is in Proper Order. ☒Samples Received Properly Chilled. ☒

Lab. Ref/Batch No.

* Container Type & Preservation Codes: P - Plastic, G - Solvent Washed Acid Rinsed Glass Bottle, V - Vial, N - Nitric Acid Preserved
 C - Hydrochloric Acid Preserved, S - Sulphuric Acid Preserved, I - Ice

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