Attachment C14(e)

Proponent Phase I and Phase II Environmental Site Assessment (5/8)

Sub-Matrix: SOIL (Matrix: SOIL)				BH10_0.15-0.25	BH09_0.25-0.35	BH12_0.15-0.25	BH01_0.3-0.4	BH01_1.0-1.1
				[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]
				ES1529109-037	ES1529109-038	ES1529109-039	ES1529109-040	ES1529109-041
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
2-Chlorotoluene	95-49-8	0.5	mg/kg	----	----	----	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	----	----	----	----	----
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	----	----	----	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	----	----	----	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	----	----	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	----	----	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	----	----	----	----	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	----	----	----	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg	----	----	----	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg	----	----	----	----	----
Bromoform	75-25-2	0.5	mg/kg	----	----	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	----	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	<0.5	<0.5	----	**0.6**
Acenaphthylene	208-96-8	0.5	mg/kg	----	<0.5	<0.5	----	**2.4**
Acenaphthene	83-32-9	0.5	mg/kg	----	<0.5	<0.5	----	<0.5
Fluorene	86-73-7	0.5	mg/kg	----	<0.5	<0.5	----	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	----	<0.5	**0.7**	----	**9.2**
Anthracene	120-12-7	0.5	mg/kg	----	<0.5	<0.5	----	**4.6**
Fluoranthene	206-44-0	0.5	mg/kg	----	<0.5	**1.8**	----	**40.5**
Pyrene	129-00-0	0.5	mg/kg	----	<0.5	**1.9**	----	**53.1**

Sub-Matrix: SOIL (Matrix: SOIL)				BH10_0.15-0.25	BH09_0.25-0.35	BH12_0.15-0.25	BH01_0.3-0.4	BH01_1.0-1.1
				[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]
				ES1529109-037	ES1529109-038	ES1529109-039	ES1529109-040	ES1529109-041
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	<0.5	**0.9**	----	**29.4**
Chrysene	218-01-9	0.5	mg/kg	----	<0.5	**1.1**	----	**29.2**
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	<0.5	**1.4**	----	**33.6**
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	<0.5	**0.7**	----	**12.8**
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	<0.5	**1.1**	----	**29.1**
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	<0.5	**0.6**	----	**13.4**
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	<0.5	<0.5	----	**3.4**
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	<0.5	**0.9**	----	**16.2**
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	<0.5	**11.1**	----	**278**
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	<0.5	**1.5**	----	**41.9**
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	**0.6**	**1.7**	----	**41.9**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	**1.2**	**2.0**	----	**41.9**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	----	----	<10
C10 - C14 Fraction	----	50	mg/kg	----	----	----	----	<50
C15 - C28 Fraction	----	100	mg/kg	----	----	----	----	**540**
C29 - C36 Fraction	----	100	mg/kg	----	----	----	----	**450**
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	----	----	----	**990**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	----	----	----	----	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	----	----	----	----	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg	----	----	----	----	<50
>C16 - C34 Fraction	----	100	mg/kg	----	----	----	----	**910**
>C34 - C40 Fraction	----	100	mg/kg	----	----	----	----	**240**
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	----	----	----	----	**1150**
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	----	----	----	----	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	----	----	----	----	<0.2
Toluene	108-88-3	0.5	mg/kg	----	----	----	----	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	----	----	----	----	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	----	----	----	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	----	----	----	----	<0.5
^ Sum of BTEX	----	0.2	mg/kg	----	----	----	----	<0.2

Sub-Matrix: SOIL (Matrix: SOIL)				BH10_0.15-0.25	BH09_0.25-0.35	BH12_0.15-0.25	BH01_0.3-0.4	BH01_1.0-1.1
				[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]
				ES1529109-037	ES1529109-038	ES1529109-039	ES1529109-040	ES1529109-041
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
^ **Total Xylenes**	1330-20-7	0.5	mg/kg	----	----	----	----	<0.5
Naphthalene	91-20-3	1	mg/kg	----	----	----	----	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**70.2**	----	----	----	**74.0**
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**114**	----	----	----	**94.7**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**75.1**	----	----	----	**69.1**
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	----	----	----	----
Toluene-D8	2037-26-5	0.5	%	----	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%	----	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	**96.5**	**89.6**	----	**91.4**
2-Chlorophenol-D4	93951-73-6	0.5	%	----	**89.4**	**83.4**	----	**92.7**
2.4.6-Tribromophenol	118-79-6	0.5	%	----	**93.7**	**78.2**	----	**74.2**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	**95.4**	**92.2**	----	**96.3**
Anthracene-d10	1719-06-8	0.5	%	----	**117**	**105**	----	**104**
4-Terphenyl-d14	1718-51-0	0.5	%	----	**94.3**	**94.6**	----	**102**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	----	----	----	**104**
Toluene-D8	2037-26-5	0.2	%	----	----	----	----	**84.0**
4-Bromofluorobenzene	460-00-4	0.2	%	----	----	----	----	**87.2**

Sub-Matrix: SOIL (Matrix: SOIL)				BH01_3.8-3.9	BH16_0.7-0.8	BH17_1.0-1.1	BH21_0.7-0.8	QC202
				[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]
				ES1529109-042	ES1529109-043	ES1529109-044	ES1529109-045	ES1529109-046
				Result	Result	Result	Result	Result
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	----	1	%	28.6	21.3	27.6	21.9	20.3
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	----	Yes	----
Asbestos Type	1332-21-4	-	--	----	----	----	Ch	----
Sample weight (dry)	----	0.01	g	----	----	----	17.3	----
APPROVED IDENTIFIER:	----	-	--	----	----	----	S.SPOONER	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	49	62	31	39
Cadmium	7440-43-9	1	mg/kg	----	15	16	1	1
Chromium	7440-47-3	2	mg/kg	----	429	54	12	10
Copper	7440-50-8	5	mg/kg	----	5480	26400	155	140
Lead	7439-92-1	5	mg/kg	----	2250	6060	234	201
Nickel	7440-02-0	2	mg/kg	----	520	1320	23	33
Zinc	7440-66-6	5	mg/kg	----	11600	21400	367	382
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	0.4	0.1	0.3	0.3
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	<0.1	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	<0.05	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	<0.05	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	----	<0.05	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	----	<0.05	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	----	<0.05	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	----	<0.05	----	----	----
Aldrin	309-00-2	0.05	mg/kg	----	<0.05	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	<0.05	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	----	<0.05	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	<0.05	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	<0.05	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	<0.05	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	<0.05	----	----	----
Endrin	72-20-8	0.05	mg/kg	----	<0.05	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)				BH01_3.8-3.9	BH16_0.7-0.8	BH17_1.0-1.1	BH21_0.7-0.8	QC202
				[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]
				ES1529109-042	ES1529109-043	ES1529109-044	ES1529109-045	ES1529109-046
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	<0.05	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	<0.05	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	<0.05	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	----	<0.2	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	<0.05	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	----	<0.2	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	<0.05	----	----	----
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg	----	<0.05	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	----	----	----
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	----	----	----
Malathion	121-75-5	0.05	mg/kg	----	<0.05	----	----	----
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	----	----	----
Parathion	56-38-2	0.2	mg/kg	----	<0.2	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	----	----	----
Ethion	563-12-2	0.05	mg/kg	----	<0.05	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	----	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	----	----	----	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg	----	----	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	----	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)				BH01_3.8-3.9	BH16_0.7-0.8	BH17_1.0-1.1	BH21_0.7-0.8	QC202
				[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]
				ES1529109-042	ES1529109-043	ES1529109-044	ES1529109-045	ES1529109-046
				Result	Result	Result	Result	Result
EP074D: Fumigants - Continued								
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	----	----	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	----	----	----	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	----	----	----	----	----
Chloromethane	74-87-3	5	mg/kg	----	----	----	----	----
Vinyl chloride	75-01-4	5	mg/kg	----	----	----	----	----
Bromomethane	74-83-9	5	mg/kg	----	----	----	----	----
Chloroethane	75-00-3	5	mg/kg	----	----	----	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg	----	----	----	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg	----	----	----	----	----
Iodomethane	74-88-4	0.5	mg/kg	----	----	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	----	----	----	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	----	----	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	----	----	----	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	----	----	----	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	----	----	----	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	----	----	----	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	----	----	----	----	----
Trichloroethene	79-01-6	0.5	mg/kg	----	----	----	----	----
Dibromomethane	74-95-3	0.5	mg/kg	----	----	----	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	----	----	----	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	----	----	----	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg	----	----	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	----	----	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	----	----	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	----	----	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	----	----	----	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	----	----	----	----	----
Pentachloroethane	76-01-7	0.5	mg/kg	----	----	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	----	----	----	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg	----	----	----	----	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	----	----	----	----	----
Bromobenzene	108-86-1	0.5	mg/kg	----	----	----	----	----

Sub-Matrix: SOIL
(Matrix: SOIL)

				BH01_3.8-3.9	BH16_0.7-0.8	BH17_1.0-1.1	BH21_0.7-0.8	QC202
				[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]
				ES1529109-042	ES1529109-043	ES1529109-044	ES1529109-045	ES1529109-046
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
2-Chlorotoluene	95-49-8	0.5	mg/kg	----	----	----	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	----	----	----	----	----
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	----	----	----	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	----	----	----	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	----	----	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	----	----	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	----	----	----	----	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	----	----	----	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg	----	----	----	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg	----	----	----	----	----
Bromoform	75-25-2	0.5	mg/kg	----	----	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	----	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	<0.5	----	**57.3**	**50.0**
Acenaphthylene	208-96-8	0.5	mg/kg	----	<0.5	----	**174**	**181**
Acenaphthene	83-32-9	0.5	mg/kg	----	<0.5	----	**24.8**	**26.0**
Fluorene	86-73-7	0.5	mg/kg	----	<0.5	----	**132**	**135**
Phenanthrene	85-01-8	0.5	mg/kg	----	<0.5	----	**386**	**433**
Anthracene	120-12-7	0.5	mg/kg	----	<0.5	----	**139**	**163**
Fluoranthene	206-44-0	0.5	mg/kg	----	<0.5	----	**335**	**390**
Pyrene	129-00-0	0.5	mg/kg	----	<0.5	----	**239**	**275**

Sub-Matrix: SOIL (Matrix: SOIL)				BH01_3.8-3.9	BH16_0.7-0.8	BH17_1.0-1.1	BH21_0.7-0.8	QC202
				[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]
				ES1529109-042	ES1529109-043	ES1529109-044	ES1529109-045	ES1529109-046
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	<0.5	----	171	175
Chrysene	218-01-9	0.5	mg/kg	----	<0.5	----	105	115
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	<0.5	----	139	130
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	<0.5	----	49.3	54.2
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	<0.5	----	102	106
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	<0.5	----	45.8	36.8
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	<0.5	----	15.4	11.4
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	<0.5	----	52.3	39.6
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	<0.5	----	2170	2320
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	<0.5	----	159	158
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	0.6	----	159	158
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	1.2	----	159	158
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	3720	1500
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	37000	25100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	17800	11600
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	58500	38200
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	<50	<50	7440	3740
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	47500	31900
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	10100	6230
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	65000	41900
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	7400	3720
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2

Sub-Matrix: SOIL (Matrix: SOIL)				BH01_3.8-3.9	BH16_0.7-0.8	BH17_1.0-1.1	BH21_0.7-0.8	QC202
				[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]
				ES1529109-042	ES1529109-043	ES1529109-044	ES1529109-045	ES1529109-046
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
^ **Total Xylenes**	1330-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	**38**	**24**
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	**70.9**	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	**115**	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	**81.5**	----	----	----
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	----	----	----	----
Toluene-D8	2037-26-5	0.5	%	----	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%	----	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	**100**	----	**93.3**	**88.6**
2-Chlorophenol-D4	93951-73-6	0.5	%	----	**106**	----	**91.0**	**95.7**
2.4.6-Tribromophenol	118-79-6	0.5	%	----	**79.9**	----	**110**	**98.3**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	**101**	----	**89.0**	**81.7**
Anthracene-d10	1719-06-8	0.5	%	----	**105**	----	**109**	**88.2**
4-Terphenyl-d14	1718-51-0	0.5	%	----	**108**	----	**111**	**94.9**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	**114**	**102**	**96.6**	**73.0**	**78.1**
Toluene-D8	2037-26-5	0.2	%	**93.4**	**91.8**	**93.8**	**81.2**	**87.4**
4-Bromofluorobenzene	460-00-4	0.2	%	**95.8**	**86.2**	**86.3**	**81.7**	**92.0**

Sub-Matrix: SOIL (Matrix: SOIL)				QC102	BH21_2.7-2.8	BH21_3.0-3.1	BH19_2.0-2.2	BH17_2.0-2.1
				[21-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]
				ES1529109-047	ES1529109-048	ES1529109-049	ES1529109-050	ES1529109-051
				Result	Result	Result	Result	Result
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	----	1	%	34.1	20.9	20.4	17.8	16.0
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	----	----	----
Asbestos Type	1332-21-4	-	--	----	----	----	----	----
Sample weight (dry)	----	0.01	g	----	----	----	----	----
APPROVED IDENTIFIER:	----	-	--	----	----	----	----	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	28	----	54	62
Cadmium	7440-43-9	1	mg/kg	----	3	----	1	4
Chromium	7440-47-3	2	mg/kg	----	244	----	33	607
Copper	7440-50-8	5	mg/kg	----	337	----	299	12200
Lead	7439-92-1	5	mg/kg	----	4430	----	559	1150
Nickel	7440-02-0	2	mg/kg	----	86	----	21	738
Zinc	7440-66-6	5	mg/kg	----	3170	----	5700	2560
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	3.2	----	0.7	0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	----	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	----	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	----	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	----	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	----	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	----	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	----	----	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	----	----	----	----
Endrin	72-20-8	0.05	mg/kg	----	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)				QC102	BH21_2.7-2.8	BH21_3.0-3.1	BH19_2.0-2.2	BH17_2.0-2.1
				[21-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]
				ES1529109-047	ES1529109-048	ES1529109-049	ES1529109-050	ES1529109-051
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	----	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	----	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	----	----	----	----
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg	----	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	----	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg	----	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	----	----	----	----
Malathion	121-75-5	0.05	mg/kg	----	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg	----	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	----	----	----	----
Parathion	56-38-2	0.2	mg/kg	----	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	----	----	----	----	----
Ethion	563-12-2	0.05	mg/kg	----	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	----	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	----	----	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	----	----	----	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg	----	----	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	----	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)				QC102	BH21_2.7-2.8	BH21_3.0-3.1	BH19_2.0-2.2	BH17_2.0-2.1
				[21-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]
				ES1529109-047	ES1529109-048	ES1529109-049	ES1529109-050	ES1529109-051
				Result	Result	Result	Result	Result
EP074D: Fumigants - Continued								
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	----	----	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	----	----	----	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	----	----	----	----	----
Chloromethane	74-87-3	5	mg/kg	----	----	----	----	----
Vinyl chloride	75-01-4	5	mg/kg	----	----	----	----	----
Bromomethane	74-83-9	5	mg/kg	----	----	----	----	----
Chloroethane	75-00-3	5	mg/kg	----	----	----	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg	----	----	----	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg	----	----	----	----	----
Iodomethane	74-88-4	0.5	mg/kg	----	----	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	----	----	----	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	----	----	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	----	----	----	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	----	----	----	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	----	----	----	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	----	----	----	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	----	----	----	----	----
Trichloroethene	79-01-6	0.5	mg/kg	----	----	----	----	----
Dibromomethane	74-95-3	0.5	mg/kg	----	----	----	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	----	----	----	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	----	----	----	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg	----	----	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	----	----	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	----	----	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	----	----	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	----	----	----	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	----	----	----	----	----
Pentachloroethane	76-01-7	0.5	mg/kg	----	----	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	----	----	----	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg	----	----	----	----	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	----	----	----	----	----
Bromobenzene	108-86-1	0.5	mg/kg	----	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)				QC102	BH21_2.7-2.8	BH21_3.0-3.1	BH19_2.0-2.2	BH17_2.0-2.1
				[21-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]
				ES1529109-047	ES1529109-048	ES1529109-049	ES1529109-050	ES1529109-051
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
2-Chlorotoluene	95-49-8	0.5	mg/kg	----	----	----	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	----	----	----	----	----
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	----	----	----	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	----	----	----	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	----	----	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	----	----	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	----	----	----	----	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	----	----	----	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg	----	----	----	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg	----	----	----	----	----
Bromoform	75-25-2	0.5	mg/kg	----	----	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	----	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	----	----	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	----	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	----	<0.5
Fluorene	86-73-7	0.5	mg/kg	----	----	----	----	**1.9**
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	----	**3.2**
Anthracene	120-12-7	0.5	mg/kg	----	----	----	----	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	----	**1.0**
Pyrene	129-00-0	0.5	mg/kg	----	----	----	----	**0.8**

Sub-Matrix: SOIL (Matrix: SOIL)				QC102	BH21_2.7-2.8	BH21_3.0-3.1	BH19_2.0-2.2	BH17_2.0-2.1
				[21-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]
				ES1529109-047	ES1529109-048	ES1529109-049	ES1529109-050	ES1529109-051
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	----	**0.8**
Chrysene	218-01-9	0.5	mg/kg	----	----	----	----	**1.0**
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	----	----	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	----	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	----	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	----	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	----	----	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	----	----	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	----	----	**8.7**
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	----	----	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	----	----	**0.7**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	----	----	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	**1270**
C15 - C28 Fraction	----	100	mg/kg	<100	**560**	<100	**250**	**17800**
C29 - C36 Fraction	----	100	mg/kg	<100	**620**	**110**	**300**	**6350**
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	**1180**	**110**	**550**	**25400**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	**16**
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	**16**
>C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	**80**	<50	<50	**2610**
>C16 - C34 Fraction	----	100	mg/kg	<100	**960**	**150**	**440**	**22300**
>C34 - C40 Fraction	----	100	mg/kg	<100	**500**	<100	**270**	**1620**
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	**1540**	**150**	**710**	**26500**
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	**80**	<50	<50	**2610**
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	**0.9**	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	**0.9**	<0.2	<0.2	<0.2

Sub-Matrix: SOIL (Matrix: SOIL)				QC102	BH21_2.7-2.8	BH21_3.0-3.1	BH19_2.0-2.2	BH17_2.0-2.1
				[21-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]
				ES1529109-047	ES1529109-048	ES1529109-049	ES1529109-050	ES1529109-051
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
^ **Total Xylenes**	1330-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	----	----	----	----
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	----	----	----	----
Toluene-D8	2037-26-5	0.5	%	----	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%	----	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	----	----	----	**100**
2-Chlorophenol-D4	93951-73-6	0.5	%	----	----	----	----	**100**
2.4.6-Tribromophenol	118-79-6	0.5	%	----	----	----	----	**108**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	----	----	----	**94.6**
Anthracene-d10	1719-06-8	0.5	%	----	----	----	----	**104**
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	----	----	**116**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	**99.0**	**96.4**	**96.4**	**92.2**	**88.4**
Toluene-D8	2037-26-5	0.2	%	**102**	**94.2**	**104**	**101**	**85.6**
4-Bromofluorobenzene	460-00-4	0.2	%	**110**	**101**	**111**	**107**	**96.7**

Sub-Matrix: SOIL (Matrix: SOIL)				BH16_2.0-2.1	----	----	----	----
				[22-Aug-2015]	----	----	----	----
				ES1529109-052	--------	--------	--------	--------
				Result	Result	Result	Result	Result
EA055: Moisture Content								
^ **Moisture Content (dried @ 103°C)**	----	1	%	**24.1**	----	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	----	----	----
Asbestos Type	1332-21-4	-	--	----	----	----	----	----
Sample weight (dry)	----	0.01	g	----	----	----	----	----
APPROVED IDENTIFIER:	----	-	--	----	----	----	----	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**136**	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	**19**	----	----	----	----
Chromium	7440-47-3	2	mg/kg	**109**	----	----	----	----
Copper	7440-50-8	5	mg/kg	**3520**	----	----	----	----
Lead	7439-92-1	5	mg/kg	**3290**	----	----	----	----
Nickel	7440-02-0	2	mg/kg	**167**	----	----	----	----
Zinc	7440-66-6	5	mg/kg	**7710**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**20.4**	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	----	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	----	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	----	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	----	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	----	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	----	----	----
^ **Total Chlordane (sum)**	----	0.05	mg/kg	----	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	----	----	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	----	----	----	----
Endrin	72-20-8	0.05	mg/kg	----	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)				BH16_2.0-2.1	----	----	----	----
				[22-Aug-2015]	----	----	----	----
				ES1529109-052	--------	--------	--------	--------
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	----	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	----	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	----	----	----	----
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg	----	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	----	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg	----	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	----	----	----	----
Malathion	121-75-5	0.05	mg/kg	----	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg	----	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	----	----	----	----
Parathion	56-38-2	0.2	mg/kg	----	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	----	----	----	----	----
Ethion	563-12-2	0.05	mg/kg	----	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	----	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	----	----	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	----	----	----	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg	----	----	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	----	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)				BH16_2.0-2.1	----	----	----	----
				[22-Aug-2015]	----	----	----	----
				ES1529109-052	--------	--------	--------	--------
				Result	Result	Result	Result	Result
EP074D: Fumigants - Continued								
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	----	----	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	----	----	----	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	----	----	----	----	----
Chloromethane	74-87-3	5	mg/kg	----	----	----	----	----
Vinyl chloride	75-01-4	5	mg/kg	----	----	----	----	----
Bromomethane	74-83-9	5	mg/kg	----	----	----	----	----
Chloroethane	75-00-3	5	mg/kg	----	----	----	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg	----	----	----	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg	----	----	----	----	----
Iodomethane	74-88-4	0.5	mg/kg	----	----	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	----	----	----	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	----	----	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	----	----	----	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	----	----	----	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	----	----	----	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	----	----	----	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	----	----	----	----	----
Trichloroethene	79-01-6	0.5	mg/kg	----	----	----	----	----
Dibromomethane	74-95-3	0.5	mg/kg	----	----	----	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	----	----	----	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	----	----	----	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg	----	----	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	----	----	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	----	----	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	----	----	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	----	----	----	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	----	----	----	----	----
Pentachloroethane	76-01-7	0.5	mg/kg	----	----	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	----	----	----	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg	----	----	----	----	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	----	----	----	----	----
Bromobenzene	108-86-1	0.5	mg/kg	----	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)				BH16_2.0-2.1	----	----	----	----
				[22-Aug-2015]	----	----	----	----
				ES1529109-052	--------	--------	--------	--------
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
2-Chlorotoluene	95-49-8	0.5	mg/kg	----	----	----	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	----	----	----	----	----
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	----	----	----	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	----	----	----	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	----	----	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	----	----	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	----	----	----	----	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	----	----	----	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg	----	----	----	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg	----	----	----	----	----
Bromoform	75-25-2	0.5	mg/kg	----	----	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	----	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	----	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	----	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	----	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)				BH16_2.0-2.1	----	----	----	----
				[22-Aug-2015]	----	----	----	----
				ES1529109-052	--------	--------	--------	--------
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	----	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg	**210**	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg	**240**	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	**450**	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	----	----	----
>C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg	**370**	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg	**220**	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	**590**	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	----	----	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	----	----	----
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)				BH16_2.0-2.1	----	----	----	----
				[22-Aug-2015]	----	----	----	----
				ES1529109-052	--------	--------	--------	--------
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
^ **Total Xylenes**	1330-20-7	0.5	mg/kg	<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg	<1	----	----	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	----	----	----	----
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	----	----	----	----
Toluene-D8	2037-26-5	0.5	%	----	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%	----	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%	----	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%	----	----	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%	----	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	**116**	----	----	----	----
Toluene-D8	2037-26-5	0.2	%	**115**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	**121**	----	----	----	----

Sub-Matrix: SOLID (Matrix: SOLID)				BH22_0.45	----	----	----	----
				[21-Aug-2015]	----	----	----	----
				ES1529109-002	--------	--------	--------	--------
				Result	Result	Result	Result	Result
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples								
Asbestos Detected	1332-21-4	0.1	g/kg	**Yes**	----	----	----	----
Asbestos Type	1332-21-4	-	--	**Ch + Am**	----	----	----	----
Sample weight (dry)	----	0.01	g	**54.9**	----	----	----	----
APPROVED IDENTIFIER:	----	-	--	**S.SPOONER**	----	----	----	----

Sub-Matrix: **SOIL**

EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	BH22_0.3-0.4 - [21-Aug-2015]	Mid brown clay soil with two pieces of bonded abestos cement sheeting approximately 45 x 35 x 5mm plus several pieces of friable asbestos cement sheeting approximately 4 x 4 x 1mm.
EA200: Description	BH15_0.4-0.5 - [21-Aug-2015]	Mid grey clay soil with grey rocks.
EA200: Description	BH06_1.0-1.1 - [21-Aug-2015]	Pale grey sandy soil with grey rocks.
EA200: Description	BH07A_0.5-0.6 - [20-Aug-2015]	Dark grey clay soil with grey rocks and slag debris plus one loose bundle of friable asbestos fibres approximately 4 x 1 x 0.5mm.
EA200: Description	BH12_1.8-1.9 - [21-Aug-2015]	Mid brown clay soil with grey rocks.
EA200: Description	BH07B_1.2-1.3 - [21-Aug-2015]	Mid brown clay soil with grey rocks.
EA200: Description	BH01_0.3-0.4 - [21-Aug-2015]	Dark grey-brown clay soil with grey rocks and slag debris plus one loose bundle of friable asbestos fibres approximately 3 x 1 x 0.5mm.
EA200: Description	BH21_0.7-0.8 - [21-Aug-2015]	Several pieces of heavily degraded and friable asbestos fibre board approximately 60 x 30 x 3mm with soil debris containing several loose bundles of friable asbestos fibres approximately 2 x 1 x 0.5mm.

Sub-Matrix: **SOLID**

EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples		
EA200: Description	BH22_0.45 - [21-Aug-2015]	One piece of bonded asbestos cement sheeting approx 90 x 60 x 5 mm.

QUALITY CONTROL REPORT

Work Order	: **ES1529109**	Page	: 1 of 25
Client	: **AECOM Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: MR ALEX LATHAM	Contact	: Barbara Hanna
Address	: LEVEL 21, 420 George Street SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: alex.latham@aecom.com	E-mail	: Barbara.Hanna@alsglobal.com
Telephone	: +61 02 8934 0000	Telephone	: +61 2 8784 8555
Facsimile	: +61 02 8934 0001	Facsimile	: +61-2-8784 8500
Project	: 60438840/1.1 Burrows	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Order number	: 60438840/1.1	Date Samples Received	: 24-Aug-2015
C-O-C number	: ----	Date Analysis Commenced	: 26-Aug-2015
Sampler	: KATE PIGRAM, LAUREN GIBB	Issue Date	: 31-Aug-2015
Site	: ----	No. of samples received	: 124
Quote number	: ----	No. of samples analysed	: 52

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted.

This Quality Control Report contains the following information:

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

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

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

Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Gerrad Morgan	Asbestos Identifier	Newcastle - Asbestos
Pabi Subba	Senior Organic Chemist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Organics
Shaun Spooner	Asbestos Identifier	Newcastle - Asbestos

General Comments

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

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

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

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EA055: Moisture Content (QC Lot: 193748)									
ES1529100-017	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	---	1	%	18.0	18.1	0.624	0% - 50%
ES1529109-011	BH09_4.5-4.6	EA055-103: Moisture Content (dried @ 103°C)	---	1	%	52.2	51.4	1.60	0% - 20%
EA055: Moisture Content (QC Lot: 193749)									
ES1529109-020	BH11_0.2-0.3	EA055-103: Moisture Content (dried @ 103°C)	---	1	%	14.3	14.3	0.00	0% - 50%
ES1529109-031	QC200	EA055-103: Moisture Content (dried @ 103°C)	---	1	%	35.0	36.5	4.20	0% - 20%
EA055: Moisture Content (QC Lot: 193750)									
ES1529109-042	BH01_3.8-3.9	EA055-103: Moisture Content (dried @ 103°C)	---	1	%	28.6	31.9	10.8	0% - 20%
ES1529120-001	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	---	1	%	23.3	21.4	8.31	0% - 20%
EG005T: Total Metals by ICP-AES (QC Lot: 194934)									
ES1529109-003	BH22_0.8-0.9	EG005T: Cadmium	7440-43-9	1	mg/kg	1	1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	19	15	26.8	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	12	11	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	357	321	10.6	0% - 20%
		EG005T: Copper	7440-50-8	5	mg/kg	444	395	11.8	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	554	# 447	21.2	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	862	# 698	21.0	0% - 20%
ES1529109-015	BH04_0.5-0.6	EG005T: Cadmium	7440-43-9	1	mg/kg	2	2	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	28	24	14.3	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	48	# 33	36.4	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	52	34	41.3	0% - 50%
		EG005T: Copper	7440-50-8	5	mg/kg	218	185	16.1	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	1030	# 2190	72.0	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	1590	1390	13.6	0% - 20%
EG005T: Total Metals by ICP-AES (QC Lot: 195095)									
ES1529040-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	14	15	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	10	9	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	22	12	56.4	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	20	11	58.9	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	32	20	46.4	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	73	48	40.4	0% - 50%
ES1529108-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	24	18	27.4	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	8	7	23.7	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	11	11	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG005T: Total Metals by ICP-AES (QC Lot: 195095) - continued									
ES1529108-001	Anonymous	EG005T: Copper	7440-50-8	5	mg/kg	16	15	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	24	19	23.1	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	27	24	14.3	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 195097)									
ES1529109-052	BH16_2.0-2.1	EG005T: Cadmium	7440-43-9	1	mg/kg	19	19	0.00	0% - 50%
		EG005T: Chromium	7440-47-3	2	mg/kg	109	94	14.2	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	167	179	7.11	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	136	148	8.52	0% - 20%
		EG005T: Copper	7440-50-8	5	mg/kg	3520	3000	15.7	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	3290	3740	12.8	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	7710	7300	5.44	0% - 20%
ES1529109-038	BH09_0.25-0.35	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	6	8	14.8	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	7	8	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	6	8	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	30	34	12.6	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 194935)									
ES1529109-003	BH22_0.8-0.9	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.8	# 1.3	50.2	0% - 50%
ES1529109-015	BH04_0.5-0.6	EG035T: Mercury	7439-97-6	0.1	mg/kg	1.0	0.8	19.2	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 195096)									
ES1529040-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES1529108-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 195098)									
ES1529109-052	BH16_2.0-2.1	EG035T: Mercury	7439-97-6	0.1	mg/kg	20.4	21.5	5.48	0% - 20%
ES1529109-038	BH09_0.25-0.35	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 193040)									
ES1529109-043	BH16_0.7-0.8	EP066: Total Polychlorinated biphenyls	---	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES1529109-018	BH05_0.5-0.6	EP066: Total Polychlorinated biphenyls	---	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 193039)									
ES1529109-043	BH16_0.7-0.8	EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 193039) - continued									
ES1529109-043	BH16_0.7-0.8	EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
ES1529109-018	BH05_0.5-0.6	EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 193039)									
ES1529109-043	BH16_0.7-0.8	EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 193039) - continued									
ES1529109-043	BH16_0.7-0.8	EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
ES1529109-018	BH05_0.5-0.6	EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP074D: Fumigants (QC Lot: 193029)									
ES1529109-009	BH14_4.0-4.1	EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 193029)									

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP074E: Halogenated Aliphatic Compounds (QC Lot: 193029) - continued									
ES1529109-009	BH14_4.0-4.1	EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.00	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 193029)									
ES1529109-009	BH14_4.0-4.1	EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074G: Trihalomethanes (QC Lot: 193029)									
ES1529109-009	BH14_4.0-4.1	EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP074G: Trihalomethanes (QC Lot: 193029) - continued									
ES1529109-009	BH14_4.0-4.1	EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 193037)									
ES1529109-043	BH16_0.7-0.8	EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.00	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.00	No Limit
ES1529109-018	BH05_0.5-0.6	EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.00	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.00	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 193042)									
ES1529109-015	BH04_0.5-0.6	EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075(SIM)A: Phenolic Compounds (QC Lot: 193042) - continued									
ES1529109-015	BH04_0.5-0.6	EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.00	No Limit
ES1529109-045	BH21_0.7-0.8	EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<4.0	<4.0	0.00	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<4.0	<4.0	0.00	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<4.0	<4.0	0.00	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	38.0	39.2	3.12	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<4.0	<4.0	0.00	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<4.0	<4.0	0.00	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	11.8	13.0	9.44	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<4.0	<4.0	0.00	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<4.0	<4.0	0.00	No Limit
		EP075(SIM): Phenol	108-95-2	0.5	mg/kg	9.0	10.3	13.4	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	27	28	5.29	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<8	<8	0.00	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 193045)									
ES1529109-046	QC202	EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<4.0	<4.0	0.00	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<4.0	<4.0	0.00	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<4.0	<4.0	0.00	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	41.8	43.5	4.00	0% - 50%
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<4.0	<4.0	0.00	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<4.0	<4.0	0.00	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	14.0	14.6	4.31	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<4.0	<4.0	0.00	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<4.0	<4.0	0.00	No Limit
		EP075(SIM): Phenol	108-95-2	0.5	mg/kg	9.7	10.3	5.63	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	29	31	5.57	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<8	<8	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 193037)									
ES1529109-043	BH16_0.7-0.8	EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	---	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 193037) - continued									
ES1529109-043	BH16_0.7-0.8	EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
ES1529109-018	BH05_0.5-0.6	EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	1.0	1.0	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	1.1	1.2	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	1.5	1.6	8.05	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	1.4	1.4	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	0.7	1.0	31.7	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	0.5	0.6	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	1.0	1.0	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	1.9	1.8	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	0.6	0.7	27.9	No Limit
		EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	1.0	0.8	17.8	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	2.0	1.9	7.29	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	11.2	11.4	1.77	0% - 20%
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 193042)									
ES1529109-015	BH04_0.5-0.6	EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	1.4	1.4	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	1.6	1.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	2.1	2.0	5.36	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	1.9	1.9	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	1.2	1.2	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	0.8	0.8	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	1.4	1.3	8.27	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 193042) - continued									
ES1529109-015	BH04_0.5-0.6	EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	2.7	2.5	9.53	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	0.9	0.8	0.00	No Limit
		EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	0.9	0.8	11.3	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	2.9	2.7	8.17	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	15.7	14.9	5.23	0% - 20%
ES1529109-045	BH21_0.7-0.8	EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	24.8	23.5	5.52	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	174	174	0.297	0% - 20%
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	139	140	0.700	0% - 20%
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	171	161	5.95	0% - 20%
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	102	102	0.131	0% - 20%
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	159	159	0.491	0% - 20%
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	139	139	0.00	0% - 20%
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	52.3	52.2	0.00	0% - 50%
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	49.3	47.7	3.31	0% - 50%
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	105	104	0.952	0% - 20%
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	15.4	15.8	2.50	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	335	337	0.555	0% - 20%
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	132	128	3.46	0% - 20%
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	45.8	45.7	0.262	0% - 50%
		EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	57.3	53.2	7.55	0% - 50%
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	386	387	0.121	0% - 20%
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	239	238	0.446	0% - 20%
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	2170	2150	0.871	0% - 20%
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 193045)									
ES1529109-046	QC202	EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	26.0	26.9	3.40	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	181	187	3.08	0% - 20%
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	163	169	3.43	0% - 20%
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	175	180	2.94	0% - 20%
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	106	103	2.16	0% - 20%
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	158	161	1.49	0% - 20%
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	130	158	20.0	0% - 20%
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	39.6	40.6	2.42	0% - 50%
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	54.2	56.7	4.66	0% - 50%
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	115	120	4.27	0% - 20%

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 193045) - continued									
ES1529109-046	QC202	EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	11.4	12.7	10.2	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	390	399	2.31	0% - 20%
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	135	138	1.84	0% - 20%
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	36.8	41.5	12.1	0% - 50%
		EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	50.0	51.0	2.11	0% - 50%
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	433	450	3.90	0% - 20%
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	275	281	2.04	0% - 20%
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	2320	2410	3.94	0% - 20%
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 193028)									
ES1529109-024	BH05_2.3-2.4	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
ES1529109-009	BH14_4.0-4.1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 193030)									
ES1529109-047	QC102	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
ES1529141-027	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 193038)									
ES1529109-018	BH05_0.5-0.6	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 193041)									
ES1529109-015	BH04_0.5-0.6	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
ES1529109-045	BH21_0.7-0.8	EP071: C15 - C28 Fraction	----	100	mg/kg	37000	32200	13.8	0% - 20%
		EP071: C29 - C36 Fraction	----	100	mg/kg	17800	16900	5.08	0% - 20%
		EP071: C10 - C14 Fraction	----	50	mg/kg	3720	3740	0.634	0% - 20%
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 193044)									
ES1529141-028	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
ES1529109-046	QC202	EP071: C15 - C28 Fraction	----	100	mg/kg	25100	23000	8.82	0% - 20%
		EP071: C29 - C36 Fraction	----	100	mg/kg	11600	11400	1.24	0% - 20%
		EP071: C10 - C14 Fraction	----	50	mg/kg	1500	# 900	50.3	0% - 20%
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 193028)									
ES1529109-024	BH05_2.3-2.4	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
ES1529109-009	BH14_4.0-4.1	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 193030)									
ES1529109-047	QC102	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
ES1529141-027	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 193038)									
ES1529109-018	BH05_0.5-0.6	EP071: >C16 - C34 Fraction	----	100	mg/kg	140	110	22.6	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 193041)									
ES1529109-015	BH04_0.5-0.6	EP071: >C16 - C34 Fraction	----	100	mg/kg	100	160	41.3	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	<50	0.00	No Limit
ES1529109-045	BH21_0.7-0.8	EP071: >C16 - C34 Fraction	----	100	mg/kg	47500	43500	8.74	0% - 20%
		EP071: >C34 - C40 Fraction	----	100	mg/kg	10100	9050	10.8	0% - 20%
		EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	7440	7410	0.480	0% - 20%
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 193044)									
ES1529141-028	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	<50	0.00	No Limit
ES1529109-046	QC202	EP071: >C16 - C34 Fraction	----	100	mg/kg	31900	30600	4.17	0% - 20%
		EP071: >C34 - C40 Fraction	----	100	mg/kg	6230	5740	8.18	0% - 20%
		EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	3740	# 2760	30.2	0% - 20%
EP080: BTEXN (QC Lot: 193028)									
ES1529109-024	BH05_2.3-2.4	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
ES1529109-009	BH14_4.0-4.1	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
EP080: BTEXN (QC Lot: 193030)									
ES1529109-047	QC102	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP080: BTEXN (QC Lot: 193030) - continued									
ES1529141-027	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit

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

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

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 194934)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	107	92	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	99.7	87	121
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	99.0	80	136
EG005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	108	93	127
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	98.4	86	124
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	104	93	131
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	104	81	133
EG005T: Total Metals by ICP-AES (QCLot: 195095)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	108	92	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	101	87	121
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	99.4	80	136
EG005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	104	93	127
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	102	86	124
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	106	93	131
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	103	81	133
EG005T: Total Metals by ICP-AES (QCLot: 195097)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	105	92	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	99.6	87	121
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	98.9	80	136
EG005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	106	93	127
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	99.1	86	124
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	105	93	131
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	100	81	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 194935)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	81.7	70	105
EG035T: Total Recoverable Mercury by FIMS (QCLot: 195096)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	84.7	70	105
EG035T: Total Recoverable Mercury by FIMS (QCLot: 195098)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	86.2	70	105
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 193040)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	94.5	57	117
EP068A: Organochlorine Pesticides (OC) (QCLot: 193039)								
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.9	76	120

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 193039) - continued								
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.0	69	117
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	89.2	67	127
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	89.2	68	118
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	91.6	71	113
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	92.8	69	119
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	93.1	69	119
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	91.9	76	120
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.6	67	121
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	92.1	65	113
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	92.8	66	118
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.2	60	124
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	87.0	67	123
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	92.5	57	115
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	97.8	65	123
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.6	71	115
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	87.4	68	116
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	92.2	68	116
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	90.8	66	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	87.0	65	129
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	91.7	68	120
EP068B: Organophosphorus Pesticides (OP) (QCLot: 193039)								
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	72.5	42	126
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	91.5	68	116
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	94.5	67	123
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	87.8	70	118
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	90.2	68	114
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	90.3	55	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	92.1	64	128
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	92.7	73	117
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	84.1	56	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	83.2	64	124
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	87.9	70	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	80.9	64	120
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	88.8	71	115
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	89.1	70	120
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	67.4	54	122
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	83.6	68	122
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	81.4	69	123
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	94.6	69	115

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 193039) - continued								
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	92.5	68	116
EP074D: Fumigants (QCLot: 193029)								
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	83.0	66	126
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	95.0	69	127
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	88.8	55	133
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	79.2	54	124
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	76.0	51	125
EP074E: Halogenated Aliphatic Compounds (QCLot: 193029)								
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	81.0	62	122
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	88.5	62	126
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	84.2	56	132
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	86.8	70	130
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	93.7	66	132
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	104	54	126
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	90.7	64	128
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	96.6	65	135
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	79.9	53	129
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	99.3	65	123
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	87.8	72	128
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	73.6	47	141
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	84.0	59	125
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	128	49	143
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	79.4	41	141
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	90.3	66	132
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	83.5	55	129
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	92.8	65	127
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	67.6	30	148
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	95.0	48	136
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	46.2	43	129
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	77.0	20	134
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	82.8	67	143
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	87.0	62	130
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	89.9	54	128
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	90.4	64	120
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	105	49	135
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	92.2	43	147
EP074F: Halogenated Aromatic Compounds (QCLot: 193029)								
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	89.9	60	132

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report		
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP074F: Halogenated Aromatic Compounds (QCLot: 193029) - continued								
EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1 mg/kg	90.4	54	134
EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1 mg/kg	92.5	66	128
EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1 mg/kg	88.4	63	129
EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1 mg/kg	86.8	63	129
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	90.7	64	130
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	91.1	62	130
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	86.6	67	127
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	89.5	70	128
EP074G: Trihalomethanes (QCLot: 193029)								
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	89.9	61	121
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	85.4	60	126
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	95.6	62	120
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	79.3	63	121
EP075(SIM)A: Phenolic Compounds (QCLot: 193037)								
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	96.8	69	112
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	99.0	57	111
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	95.2	68	112
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	97.4	69	117
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	99.1	73	117
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	93.2	74	116
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	98.8	72	116
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	90.5	60	117
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	91.4	69	123
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	93.8	76	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	22.4	10	57
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	97.4	74	116
EP075(SIM)A: Phenolic Compounds (QCLot: 193042)								
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	80.6	69	112
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	80.1	57	111
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	85.4	68	112
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	88.6	69	117
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	87.8	73	117
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	99.6	74	116
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	93.8	72	116
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	92.4	60	117
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	94.1	69	123
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	90.6	76	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	30.6	10	57

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)A: Phenolic Compounds (QCLot: 193042) - continued								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	89.9	74	116
EP075(SIM)A: Phenolic Compounds (QCLot: 193045)								
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	91.7	69	112
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	92.5	57	111
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	91.6	68	112
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	90.6	69	117
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	95.3	73	117
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	93.8	74	116
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	95.6	72	116
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	92.5	60	117
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	87.9	69	123
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	95.4	76	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	20.4	10	57
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	90.0	74	116
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 193037)								
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	97.0	79	123
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	93.2	77	123
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	95.1	79	123
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	93.9	73	121
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	91.4	76	122
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	92.5	70	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	95.0	72	114
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	96.8	77	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	100	81	123
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	99.2	72	113
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	98.0	79	123
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	92.9	77	123
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	90.4	71	113
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	100	80	124
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	97.8	79	123
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	97.3	79	125
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 193042)								
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	101	79	123
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	95.3	77	123
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	96.7	79	123
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	89.5	73	121
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	97.5	76	122

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 193042) - continued								
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	99.0	70	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	98.5	72	114
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	97.4	77	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	94.7	81	123
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	90.9	72	113
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	97.4	79	123
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	94.4	77	123
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	87.7	71	113
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	101	80	124
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	100	79	123
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	98.3	79	125
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 193045)								
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	96.2	79	123
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	95.9	77	123
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	95.4	79	123
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	94.7	73	121
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	97.9	76	122
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	90.8	70	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	89.5	72	114
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	98.7	77	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	96.8	81	123
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	90.3	72	113
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	96.8	79	123
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	92.8	77	123
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	87.9	71	113
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	98.4	80	124
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	93.1	79	123
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	93.0	79	125
EP080/071: Total Petroleum Hydrocarbons (QCLot: 193028)								
EP080: C6 - C9 Fraction	---	10	mg/kg	<10	26 mg/kg	108	68	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 193030)								
EP080: C6 - C9 Fraction	---	10	mg/kg	<10	26 mg/kg	95.6	68	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 193038)								
EP071: C10 - C14 Fraction	---	50	mg/kg	<50	200 mg/kg	101	71	131
EP071: C15 - C28 Fraction	---	100	mg/kg	<100	300 mg/kg	116	74	138
EP071: C29 - C36 Fraction	---	100	mg/kg	<100	200 mg/kg	103	64	128

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 193041)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	105	71	131
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	119	74	138
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	103	64	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 193044)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	109	71	131
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	120	74	138
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	104	64	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 193028)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	108	68	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 193030)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	95.4	68	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 193038)								
EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	250 mg/kg	104	70	130
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	116	74	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	150 mg/kg	100	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 193041)								
EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	250 mg/kg	104	70	130
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	113	74	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	150 mg/kg	102	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 193044)								
EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	250 mg/kg	108	70	130
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	117	74	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	150 mg/kg	87.7	63	131
EP080: BTEXN (QCLot: 193028)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	98.7	62	116
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	97.8	58	118
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	94.1	60	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	88.6	62	138
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	94.8	60	120
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	99.5	62	128
EP080: BTEXN (QCLot: 193030)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	92.4	62	116
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	98.8	58	118
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	98.8	60	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	103	62	138
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	105	60	120

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP080: BTEXN (QCLot: 193030) - continued								
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	100	62	128

Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EG005T: Total Metals by ICP-AES (QCLot: 194934)							
ES1529109-003	BH22_0.8-0.9	EG005T: Arsenic	7440-38-2	50 mg/kg	# Not Determined	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	105	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	98.6	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	112	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	101	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	94.6	70	130
EG005T: Total Metals by ICP-AES (QCLot: 195095)							
ES1529040-003	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	108	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	101	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	103	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	107	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	102	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	101	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	99.8	70	130
EG005T: Total Metals by ICP-AES (QCLot: 195097)							
ES1529109-039	BH12_0.15-0.25	EG005T: Arsenic	7440-38-2	50 mg/kg	80.7	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	96.9	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	101	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	# Not Determined	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	# Not Determined	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	82.0	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	# Not Determined	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 194935)							
ES1529109-003	BH22_0.8-0.9	EG035T: Mercury	7439-97-6	5 mg/kg	112	70	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG035T: Total Recoverable Mercury by FIMS (QCLot: 195096)							
ES1529040-003	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	99.0	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 195098)							
ES1529109-039	BH12_0.15-0.25	EG035T: Mercury	7439-97-6	5 mg/kg	88.1	70	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 193040)							
ES1529109-018	BH05_0.5-0.6	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	97.5	70	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 193039)							
ES1529109-018	BH05_0.5-0.6	EP068: 4.4`-DDT	50-29-3	2 mg/kg	80.9	70	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	72.8	70	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	82.9	70	130
		EP068: Endrin	72-20-8	2 mg/kg	95.7	70	130
		EP068: gamma-BHC	58-89-9	0.5 mg/kg	85.6	70	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	118	70	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 193039)							
ES1529109-018	BH05_0.5-0.6	EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	109	70	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	119	70	130
		EP068: Diazinon	333-41-5	0.5 mg/kg	92.0	70	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	95.7	70	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	106	70	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 193029)							
ES1529109-009	BH14_4.0-4.1	EP074: 1.1-Dichloroethene	75-35-4	2.5 mg/kg	82.9	70	130
		EP074: Trichloroethene	79-01-6	2.5 mg/kg	91.7	70	130
EP074F: Halogenated Aromatic Compounds (QCLot: 193029)							
ES1529109-009	BH14_4.0-4.1	EP074: Chlorobenzene	108-90-7	2.5 mg/kg	98.8	70	130
EP075(SIM)A: Phenolic Compounds (QCLot: 193037)							
ES1529109-018	BH05_0.5-0.6	EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	97.8	70	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	89.3	60	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	88.7	70	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	70.1	20	130
		EP075(SIM): Phenol	108-95-2	10 mg/kg	99.5	70	130
EP075(SIM)A: Phenolic Compounds (QCLot: 193042)							
ES1529109-015	BH04_0.5-0.6	EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	89.4	70	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	74.8	60	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	89.7	70	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	92.3	20	130
		EP075(SIM): Phenol	108-95-2	10 mg/kg	80.4	70	130
EP075(SIM)A: Phenolic Compounds (QCLot: 193045)							

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP075(SIM)A: Phenolic Compounds (QCLot: 193045) - continued							
ES1529109-046	QC202	EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	82.1	70	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	97.5	60	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	96.6	70	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	75.7	20	130
		EP075(SIM): Phenol	108-95-2	10 mg/kg	103	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 193037)							
ES1529109-018	BH05_0.5-0.6	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	98.1	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	96.0	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 193042)							
ES1529109-015	BH04_0.5-0.6	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	90.9	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	100	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 193045)							
ES1529109-046	QC202	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	87.5	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	# Not Determined	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 193028)							
ES1529109-009	BH14_4.0-4.1	EP080: C6 - C9 Fraction	----	32.5 mg/kg	123	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 193030)							
ES1529109-047	QC102	EP080: C6 - C9 Fraction	----	32.5 mg/kg	107	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 193038)							
ES1529109-018	BH05_0.5-0.6	EP071: C10 - C14 Fraction	----	523 mg/kg	88.1	73	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	106	53	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	126	52	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 193041)							
ES1529109-015	BH04_0.5-0.6	EP071: C10 - C14 Fraction	----	523 mg/kg	105	73	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	104	53	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	122	52	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 193044)							
ES1529109-046	QC202	EP071: C10 - C14 Fraction	----	523 mg/kg	# 139	73	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	# Not Determined	53	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	# Not Determined	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 193028)							
ES1529109-009	BH14_4.0-4.1	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	123	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 193030)							

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 193030) - continued							
ES1529109-047	QC102	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	103	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 193038)							
ES1529109-018	BH05_0.5-0.6	EP071: >C10 - C16 Fraction	>C10_C16	860 mg/kg	101	73	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	109	53	131
		EP071: >C34 - C40 Fraction	----	1058 mg/kg	114	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 193041)							
ES1529109-015	BH04_0.5-0.6	EP071: >C10 - C16 Fraction	>C10_C16	860 mg/kg	98.9	73	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	113	53	131
		EP071: >C34 - C40 Fraction	----	1058 mg/kg	113	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 193044)							
ES1529109-046	QC202	EP071: >C10 - C16 Fraction	>C10_C16	860 mg/kg	# 158	73	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	# Not Determined	53	131
		EP071: >C34 - C40 Fraction	----	1058 mg/kg	# Not Determined	52	132
EP080: BTEXN (QCLot: 193028)							
ES1529109-009	BH14_4.0-4.1	EP080: Benzene	71-43-2	2.5 mg/kg	86.7	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	91.5	70	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	89.7	70	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	93.8	70	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	94.8	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	86.4	70	130
EP080: BTEXN (QCLot: 193030)							
ES1529109-047	QC102	EP080: Benzene	71-43-2	2.5 mg/kg	85.5	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	104	70	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	102	70	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	99.6	70	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	109	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	94.7	70	130

ALS Environmental

QA/QC Compliance Assessment for DQO Reporting

Work Order	: **ES1529109**	Page	: 1 of 10
Client	: **AECOM Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: MR ALEX LATHAM	Telephone	: +61 2 8784 8555
Project	: 60438840/1.1 Burrows	Date Samples Received	: 24-Aug-2015
Site	: ----	Issue Date	: 31-Aug-2015
Sampler	: KATE PIGRAM, LAUREN GIBB	No. of samples received	: 124
Order number	: 60438840/1.1	No. of samples analysed	: 52

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Laboratory Control outliers occur.**
- **Duplicate outliers exist - please see following pages for full details.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Duplicate (DUP) RPDs							
EG005T: Total Metals by ICP-AES	ES1529109--003	BH22_0.8-0.9	**Lead**	7439-92-1	21.2 %	0% - 20%	**RPD exceeds LOR based limits**
EG005T: Total Metals by ICP-AES	ES1529109--015	BH04_0.5-0.6	**Lead**	7439-92-1	72.0 %	0% - 20%	**RPD exceeds LOR based limits**
EG005T: Total Metals by ICP-AES	ES1529109--015	BH04_0.5-0.6	**Nickel**	7440-02-0	36.4 %	0% - 20%	**RPD exceeds LOR based limits**
EG005T: Total Metals by ICP-AES	ES1529109--003	BH22_0.8-0.9	**Zinc**	7440-66-6	21.0 %	0% - 20%	**RPD exceeds LOR based limits**
EG035T: Total Recoverable Mercury by FIMS	ES1529109--003	BH22_0.8-0.9	**Mercury**	7439-97-6	50.2 %	0% - 50%	**RPD exceeds LOR based limits**
EP080/071: Total Petroleum Hydrocarbons	ES1529109--046	QC202	**C10 - C14 Fraction**	----	50.3 %	0% - 20%	**RPD exceeds LOR based limits**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2	ES1529109--046	QC202	**>C10 - C16 Fraction**	>C10_C16	30.2 %	0% - 20%	**RPD exceeds LOR based limits**
Matrix Spike (MS) Recoveries							
EG005T: Total Metals by ICP-AES	ES1529109--003	BH22_0.8-0.9	**Arsenic**	7440-38-2	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EG005T: Total Metals by ICP-AES	ES1529109--039	BH12_0.15-0.25	**Copper**	7440-50-8	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EG005T: Total Metals by ICP-AES	ES1529109--039	BH12_0.15-0.25	**Lead**	7439-92-1	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EG005T: Total Metals by ICP-AES	ES1529109--039	BH12_0.15-0.25	**Zinc**	7440-66-6	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	ES1529109--046	QC202	**Pyrene**	129-00-0	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP080/071: Total Petroleum Hydrocarbons	ES1529109--046	QC202	**C10 - C14 Fraction**	----	139 %	73-137%	**Recovery greater than upper data quality objective**
EP080/071: Total Petroleum Hydrocarbons	ES1529109--046	QC202	**C15 - C28 Fraction**	----	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP080/071: Total Petroleum Hydrocarbons	ES1529109--046	QC202	**C29 - C36 Fraction**	----	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2	ES1529109--046	QC202	**>C10 - C16 Fraction**	>C10_C16	158 %	73-137%	**Recovery greater than upper data quality objective**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2	ES1529109--046	QC202	**>C16 - C34 Fraction**	----	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2	ES1529109--046	QC202	**>C34 - C40 Fraction**	----	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Analysis Holding Time Compliance

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

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

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

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content								
Soil Glass Jar - Unpreserved (EA055-103)								
BH04_0.5-0.6,	BH04_1.0-1.1,	**20-Aug-2015**	**----**	----	----	**26-Aug-2015**	03-Sep-2015	✓
BH04_2.3-2.4,	BH05_0.5-0.6,							
BH07A_0.5-0.6,	BH11_0.2-0.3,							
BH11_2.3-2.4,	BH11_3.3-3.4,							
BH05_1.0-1.1,	BH05_2.3-2.4,							
BH08_0.17-0.18,	BH08_1.0-1.1,							
BH08_2.5-2.6,	BH08_3.7-3.8,							
BH13_0.4-0.5,	BH13_3.6-3.7,							
QC200								
Soil Glass Jar - Unpreserved (EA055-103)								
BH22_0.8-0.9,	BH22_2.2-2.3,	**21-Aug-2015**	**----**	----	----	**26-Aug-2015**	04-Sep-2015	✓
BH22_4.5-4.7,	BH15_0.4-0.5,							
BH14_0.45-0.55,	BH14_1.8-1.9,							
BH14_4.0-4.1,	BH09_4.0-4.2,							
BH09_4.5-4.6,	BH06_1.0-1.1,							
BH10_4.0-4.1,	QC101,							
BH12_1.0-1.1,	BH12_3.6-3.7,							
BH07B_1.2-1.3,	BH07B_2.3-2.4,							
BH10_0.15-0.25,	BH09_0.25-0.35,							
BH12_0.15-0.25,	BH01_1.0-1.1,							
BH01_3.8-3.9,	BH16_0.7-0.8,							
BH17_1.0-1.1,	BH21_0.7-0.8,							
QC202,	QC102							
Soil Glass Jar - Unpreserved (EA055-103)								
BH21_2.7-2.8,	BH21_3.0-3.1,	**22-Aug-2015**	**----**	----	----	**26-Aug-2015**	05-Sep-2015	✓
BH19_2.0-2.2,	BH17_2.0-2.1,							
BH16_2.0-2.1								

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag - Separate bag received (EA200)							
BH07A_0.5-0.6	**20-Aug-2015**	**----**	----	----	**26-Aug-2015**	16-Feb-2016	✓
Snap Lock Bag - Separate bag received (EA200)							
BH15_0.4-0.5, BH06_1.0-1.1, BH12_1.8-1.9, BH07B_1.2-1.3, BH01_0.3-0.4, BH21_0.7-0.8	**21-Aug-2015**	**----**	----	----	**26-Aug-2015**	17-Feb-2016	✓
Soil Glass Jar - Unpreserved (EA200)							
BH22_0.3-0.4	**21-Aug-2015**	**----**	----	----	**26-Aug-2015**	17-Feb-2016	✓
EG005T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
BH04_0.5-0.6, BH04_1.0-1.1, BH04_2.3-2.4, BH05_0.5-0.6, BH07A_0.5-0.6, BH11_0.2-0.3, BH11_2.3-2.4, BH05_1.0-1.1, BH05_2.3-2.4, BH08_0.17-0.18, BH08_1.0-1.1, BH08_2.5-2.6, BH08_3.7-3.8, BH13_0.4-0.5, QC200	**20-Aug-2015**	**27-Aug-2015**	16-Feb-2016	✓	**28-Aug-2015**	16-Feb-2016	✓
Soil Glass Jar - Unpreserved (EG005T)							
BH22_0.8-0.9, BH22_2.2-2.3, BH22_4.5-4.7, BH15_0.4-0.5, BH14_1.8-1.9, BH09_4.0-4.2, BH09_4.5-4.6, BH06_1.0-1.1, BH10_4.0-4.1, QC101, BH12_1.0-1.1, BH07B_1.2-1.3, BH07B_2.3-2.4, BH09_0.25-0.35, BH12_0.15-0.25, BH01_1.0-1.1, BH16_0.7-0.8, BH17_1.0-1.1, BH21_0.7-0.8, QC202	**21-Aug-2015**	**27-Aug-2015**	17-Feb-2016	✓	**28-Aug-2015**	17-Feb-2016	✓
Soil Glass Jar - Unpreserved (EG005T)							
BH21_2.7-2.8, BH19_2.0-2.2, BH17_2.0-2.1, BH16_2.0-2.1	**22-Aug-2015**	**27-Aug-2015**	18-Feb-2016	✓	**28-Aug-2015**	18-Feb-2016	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
BH04_0.5-0.6, BH04_1.0-1.1, BH04_2.3-2.4, BH05_0.5-0.6, BH07A_0.5-0.6, BH11_0.2-0.3, BH11_2.3-2.4, BH05_1.0-1.1, BH05_2.3-2.4, BH08_0.17-0.18, BH08_1.0-1.1, BH08_2.5-2.6, BH08_3.7-3.8, BH13_0.4-0.5, QC200	**20-Aug-2015**	**27-Aug-2015**	17-Sep-2015	✓	**28-Aug-2015**	17-Sep-2015	✓
Soil Glass Jar - Unpreserved (EG035T)							
BH22_0.8-0.9, BH22_2.2-2.3, BH22_4.5-4.7, BH15_0.4-0.5, BH14_1.8-1.9, BH09_4.0-4.2, BH09_4.5-4.6, BH06_1.0-1.1, BH10_4.0-4.1, QC101, BH12_1.0-1.1, BH07B_1.2-1.3, BH07B_2.3-2.4, BH09_0.25-0.35, BH12_0.15-0.25, BH01_1.0-1.1, BH16_0.7-0.8, BH17_1.0-1.1, BH21_0.7-0.8, QC202	**21-Aug-2015**	**27-Aug-2015**	18-Sep-2015	✓	**28-Aug-2015**	18-Sep-2015	✓
Soil Glass Jar - Unpreserved (EG035T)							
BH21_2.7-2.8, BH19_2.0-2.2, BH17_2.0-2.1, BH16_2.0-2.1	**22-Aug-2015**	**27-Aug-2015**	19-Sep-2015	✓	**28-Aug-2015**	19-Sep-2015	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066)							
BH05_0.5-0.6, BH07A_0.5-0.6, BH08_0.17-0.18, BH13_3.6-3.7	**20-Aug-2015**	**27-Aug-2015**	03-Sep-2015	✓	**28-Aug-2015**	06-Oct-2015	✓
Soil Glass Jar - Unpreserved (EP066)							
BH14_0.45-0.55, BH14_1.8-1.9, BH06_1.0-1.1, BH07B_1.2-1.3, BH10_0.15-0.25, BH01_1.0-1.1, BH16_0.7-0.8	**21-Aug-2015**	**27-Aug-2015**	04-Sep-2015	✓	**28-Aug-2015**	06-Oct-2015	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
BH05_0.5-0.6, BH07A_0.5-0.6, BH08_0.17-0.18, BH13_3.6-3.7	**20-Aug-2015**	**27-Aug-2015**	03-Sep-2015	✓	**28-Aug-2015**	06-Oct-2015	✓
Soil Glass Jar - Unpreserved (EP068)							
BH14_0.45-0.55, BH14_1.8-1.9, BH06_1.0-1.1, BH07B_1.2-1.3, BH10_0.15-0.25, BH01_1.0-1.1, BH16_0.7-0.8	**21-Aug-2015**	**27-Aug-2015**	04-Sep-2015	✓	**28-Aug-2015**	06-Oct-2015	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP071)								
BH04_0.5-0.6,	BH04_2.3-2.4,	**20-Aug-2015**	**27-Aug-2015**	03-Sep-2015	✓	**28-Aug-2015**	06-Oct-2015	✓
BH05_0.5-0.6,	BH11_2.3-2.4,							
BH11_3.3-3.4,	BH05_2.3-2.4,							
BH08_1.0-1.1,	BH08_3.7-3.8							
Soil Glass Jar - Unpreserved (EP071)								
BH22_2.2-2.3,	BH22_4.5-4.7,	**21-Aug-2015**	**27-Aug-2015**	04-Sep-2015	✓	**28-Aug-2015**	06-Oct-2015	✓
BH14_4.0-4.1,	BH09_4.5-4.6,							
BH10_4.0-4.1,	BH12_3.6-3.7,							
BH07B_1.2-1.3,	BH07B_2.3-2.4,							
BH01_1.0-1.1,	BH01_3.8-3.9,							
BH16_0.7-0.8,	BH17_1.0-1.1,							
BH21_0.7-0.8,	QC202,							
QC102								
Soil Glass Jar - Unpreserved (EP071)								
BH21_2.7-2.8,	BH21_3.0-3.1,	**22-Aug-2015**	**27-Aug-2015**	05-Sep-2015	✓	**28-Aug-2015**	06-Oct-2015	✓
BH19_2.0-2.2,	BH17_2.0-2.1,							
BH16_2.0-2.1								
EP074D: Fumigants								
Soil Glass Jar - Unpreserved (EP074)								
BH05_0.5-0.6		**20-Aug-2015**	**27-Aug-2015**	27-Aug-2015	✓	**27-Aug-2015**	27-Aug-2015	✓
Soil Glass Jar - Unpreserved (EP074)								
BH14_4.0-4.1,	BH09_4.5-4.6	**21-Aug-2015**	**27-Aug-2015**	28-Aug-2015	✓	**27-Aug-2015**	28-Aug-2015	✓
EP075(SIM)T: PAH Surrogates								
Soil Glass Jar - Unpreserved (EP075(SIM))								
BH04_0.5-0.6,	BH04_1.0-1.1,	**20-Aug-2015**	**27-Aug-2015**	03-Sep-2015	✓	**27-Aug-2015**	06-Oct-2015	✓
BH05_0.5-0.6,	BH07A_0.5-0.6,							
BH11_0.2-0.3,	BH11_2.3-2.4,							
BH05_1.0-1.1,	BH08_1.0-1.1,							
BH08_2.5-2.6,	BH13_0.4-0.5,							
QC200								
Soil Glass Jar - Unpreserved (EP075(SIM))								
BH22_0.8-0.9,	BH22_2.2-2.3,	**21-Aug-2015**	**27-Aug-2015**	04-Sep-2015	✓	**27-Aug-2015**	06-Oct-2015	✓
BH22_4.5-4.7,	BH15_0.4-0.5,							
BH14_1.8-1.9,	BH14_4.0-4.1,							
BH09_4.0-4.2,	BH09_4.5-4.6,							
QC101,	BH07B_1.2-1.3,							
BH09_0.25-0.35,	BH12_0.15-0.25,							
BH01_1.0-1.1,	BH16_0.7-0.8,							
BH21_0.7-0.8,	QC202							
Soil Glass Jar - Unpreserved (EP075(SIM))								
BH17_2.0-2.1		**22-Aug-2015**	**27-Aug-2015**	05-Sep-2015	✓	**27-Aug-2015**	06-Oct-2015	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080S: TPH(V)/BTEX Surrogates							
Soil Glass Jar - Unpreserved (EP080)							
BH04_0.5-0.6, BH04_2.3-2.4, BH05_0.5-0.6, BH11_2.3-2.4, BH11_3.3-3.4, BH05_2.3-2.4, BH08_1.0-1.1, BH08_3.7-3.8	**20-Aug-2015**	**27-Aug-2015**	03-Sep-2015	✓	**27-Aug-2015**	03-Sep-2015	✓
Soil Glass Jar - Unpreserved (EP080)							
BH22_2.2-2.3, BH22_4.5-4.7, BH14_4.0-4.1, BH09_4.5-4.6, BH10_4.0-4.1, BH12_3.6-3.7, BH07B_1.2-1.3, BH07B_2.3-2.4, BH01_1.0-1.1, BH01_3.8-3.9, BH16_0.7-0.8, BH17_1.0-1.1	**21-Aug-2015**	**27-Aug-2015**	04-Sep-2015	✓	**27-Aug-2015**	04-Sep-2015	✓
Soil Glass Jar - Unpreserved (EP080)							
BH21_0.7-0.8, QC202, QC102	**21-Aug-2015**	**27-Aug-2015**	04-Sep-2015	✓	**28-Aug-2015**	04-Sep-2015	✓
Soil Glass Jar - Unpreserved (EP080)							
BH21_2.7-2.8, BH21_3.0-3.1, BH19_2.0-2.2, BH17_2.0-2.1, BH16_2.0-2.1	**22-Aug-2015**	**27-Aug-2015**	05-Sep-2015	✓	**28-Aug-2015**	05-Sep-2015	✓

Matrix: **SOLID**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples							
Snap Lock Bag - ACM/Asbestos Grab Sample bag (EA200)							
BH22_0.45	**21-Aug-2015**	**----**	----	----	**27-Aug-2015**	17-Feb-2016	✓

Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055-103	2	20	**10.00**	**10.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	2	14	**14.29**	**10.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	2	11	**18.18**	**10.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	2	11	**18.18**	**10.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	20	**10.00**	**10.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	2	20	**10.00**	**10.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH - Semivolatile Fraction	EP071	1	9	**11.11**	**10.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH Volatiles/BTEX	EP080	2	20	**10.00**	**10.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	3	**33.33**	**10.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	14	**7.14**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	11	**9.09**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	11	**9.09**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH - Semivolatile Fraction	EP071	1	9	**11.11**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	3	**33.33**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	14	**7.14**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	11	**9.09**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	11	**9.09**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH - Semivolatile Fraction	EP071	1	9	**11.11**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	3	**33.33**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	14	**7.14**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	11	**9.09**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	11	**9.09**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH - Semivolatile Fraction	EP071	1	9	**11.11**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	3	**33.33**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055-103	SOIL	In-house. A gravimetric procedure based on weight loss over a 12 hour drying period at 103-105 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Asbestos Identification in Soils	EA200	SOIL	AS 4964 - 2004 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 504)
Pesticides by GCMS	EP068	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (2013) Schedule B(3) (Method 504,505)
TRH - Semivolatile Fraction	EP071	SOIL	(USEPA SW 846 - 8015A) Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40.
Volatile Organic Compounds	EP074	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 501)
PAH/Phenols (SIM)	EP075(SIM)	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)
TRH Volatiles/BTEX	EP080	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve.
Asbestos Identification in Bulk Solids	EA200	SOLID	AS 4964 - 2004 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining

Preparation Methods	Method	Matrix	Method Descriptions
Methanolic Extraction of Soils for Purge and Trap	* ORG16	SOIL	(USEPA SW 846 - 5030A) 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.

Preparation Methods	Method	Matrix	Method Descriptions
Tumbler Extraction of Solids	ORG17	SOIL	In-house, Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES1529109**

Client	: **AECOM Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: MR ALEX LATHAM	Contact	: Barbara Hanna
Address	: LEVEL 21, 420 George Street SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: alex.latham@aecom.com	E-mail	: Barbara.Hanna@alsglobal.com
Telephone	: +61 02 8934 0000	Telephone	: +61 2 8784 8555
Facsimile	: +61 02 8934 0001	Facsimile	: +61-2-8784 8500
Project	: 60438840/1.1 Burrows	Page	: 1 of 6
Order number	: 60438840/1.1	Quote number	: EB2015AECOMAU0580 (EN/004/15)
C-O-C number	: ----	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
Sampler	: KATE PIGRAM, LAUREN GIBB		

Dates

Date Samples Received	: 24-Aug-2015 4:00 PM	Issue Date	: 25-Aug-2015
Client Requested Due Date	: 31-Aug-2015	Scheduled Reporting Date	: **31-Aug-2015**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 6	Temperature	: 2.8'c - Ice present
Receipt Detail	:	No. of samples received / analysed	: 124 / 52

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Sample BH06_1.0-1.1 and BH16_0.11-0.15 were not received.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- **Asbestos analysis will be conducted by ALS Newcastle.**
- Sample QC100 and QC201 forwared to ENVIROLAB
- Sample BH10_1.0-1.1, BH11_3.6-3.7 and BH-_0.25-0.30 received extra and place on hold, Please confirm.
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (14 days), Solid (60 days) from date of completion of work order.

Sample Container(s)/Preservation Non-Compliances

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

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

Summary of Sample(s) and Requested Analysis

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

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	SOIL - EA055-103 Moisture Content	SOIL - EA200 Asbestos Identification in Soils -	SOIL - EP075 SIM PAH only SIM - PAH only	SOIL - S-02 8 Metals (incl. Digestion)	SOIL - S-13 OC/OP/PCB	SOIL - S-26 8 metals/TRH/BTEXN/PAH
ES1529109-001	[21-Aug-2015]	BH22_0.3-0.4		☐				
ES1529109-003	[21-Aug-2015]	BH22_0.8-0.9	☐		☐	☐		
ES1529109-004	[21-Aug-2015]	BH22_2.2-2.3	☐					☐
ES1529109-005	[21-Aug-2015]	BH22_4.5-4.7	☐					☐
ES1529109-006	[21-Aug-2015]	BH15_0.4-0.5	☐	☐	☐	☐		
ES1529109-007	[21-Aug-2015]	BH14_0.45-0.55	☐				☐	
ES1529109-008	[21-Aug-2015]	BH14_1.8-1.9	☐		☐	☐	☐	
ES1529109-009	[21-Aug-2015]	BH14_4.0-4.1	☐					
ES1529109-010	[21-Aug-2015]	BH09_4.0-4.2	☐		☐	☐		
ES1529109-011	[21-Aug-2015]	BH09_4.5-4.6	☐					
ES1529109-012	[21-Aug-2015]	BH06_1.0-1.1	☐	☐		☐	☐	
ES1529109-013	[21-Aug-2015]	BH10_4.0-4.1	☐					
ES1529109-014	[21-Aug-2015]	QC101	☐		☐	☐		
ES1529109-015	[20-Aug-2015]	BH04_0.5-0.6	☐					☐
ES1529109-016	[20-Aug-2015]	BH04_1.0-1.1	☐		☐	☐		
ES1529109-017	[20-Aug-2015]	BH04_2.3-2.4	☐					
ES1529109-018	[20-Aug-2015]	BH05_0.5-0.6	☐					
ES1529109-019	[20-Aug-2015]	BH07A_0.5-0.6	☐	☐	☐	☐	☐	
ES1529109-020	[20-Aug-2015]	BH11_0.2-0.3	☐		☐	☐		
ES1529109-021	[20-Aug-2015]	BH11_2.3-2.4	☐					☐
ES1529109-022	[20-Aug-2015]	BH11_3.3-3.4	☐					
ES1529109-023	[20-Aug-2015]	BH05_1.0-1.1	☐		☐	☐		
ES1529109-024	[20-Aug-2015]	BH05_2.3-2.4	☐					
ES1529109-025	[20-Aug-2015]	BH08_0.17-0.18	☐			☐	☐	
ES1529109-026	[20-Aug-2015]	BH08_1.0-1.1	☐					☐
ES1529109-027	[20-Aug-2015]	BH08_2.5-2.6	☐		☐	☐		
ES1529109-028	[20-Aug-2015]	BH08_3.7-3.8	☐					
ES1529109-029	[20-Aug-2015]	BH13_0.4-0.5	☐		☐	☐		
ES1529109-030	[20-Aug-2015]	BH13_3.6-3.7	☐				☐	
ES1529109-031	[20-Aug-2015]	QC200	☐		☐	☐		
ES1529109-032	[21-Aug-2015]	BH12_1.0-1.1	☐			☐		
ES1529109-033	[21-Aug-2015]	BH12_1.8-1.9		☐				
ES1529109-034	[21-Aug-2015]	BH12_3.6-3.7	☐					
ES1529109-035	[21-Aug-2015]	BH07B_1.2-1.3	☐	☐			☐	☐
ES1529109-036	[21-Aug-2015]	BH07B_2.3-2.4	☐					

			SOIL - EA055-103 Moisture Content	SOIL - EA200 Asbestos Identification in Soils -	SOIL - EP075 SIM PAH only SIM - PAH only	SOIL - S-02 8 Metals (incl. Digestion)	SOIL - S-13 OC/OP/PCB	SOIL - S-26 8 metals/TRH/BTEXN/PAH
ES1529109-037	[21-Aug-2015]	BH10_0.15-0.25	☐				☐	
ES1529109-038	[21-Aug-2015]	BH09_0.25-0.35	☐		☐	☐		
ES1529109-039	[21-Aug-2015]	BH12_0.15-0.25	☐		☐	☐		
ES1529109-040	[21-Aug-2015]	BH01_0.3-0.4		☐				
ES1529109-041	[21-Aug-2015]	BH01_1.0-1.1	☐				☐	☐
ES1529109-042	[21-Aug-2015]	BH01_3.8-3.9	☐					
ES1529109-043	[21-Aug-2015]	BH16_0.7-0.8	☐				☐	☐
ES1529109-044	[21-Aug-2015]	BH17_1.0-1.1	☐					
ES1529109-045	[21-Aug-2015]	BH21_0.7-0.8	☐	☐				☐
ES1529109-046	[21-Aug-2015]	QC202	☐					☐
ES1529109-047	[21-Aug-2015]	QC102	☐					
ES1529109-048	[22-Aug-2015]	BH21_2.7-2.8	☐					
ES1529109-049	[22-Aug-2015]	BH21_3.0-3.1	☐					
ES1529109-050	[22-Aug-2015]	BH19_2.0-2.2	☐					
ES1529109-051	[22-Aug-2015]	BH17_2.0-2.1	☐					☐
ES1529109-052	[22-Aug-2015]	BH16_2.0-2.1	☐					

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	(On Hold) SOIL No analysis requested	SOIL - EP074DEFG (solids) VOC - Fumigants, Hal Aliphatics, Hal Aromatics,	SOIL - EP075 SIM Phenols only SIM - Phenols only	SOIL - S-04 TRH/BTEXN	SOIL - S-05 TRH/BTEXN/8 Metals	SOIL - S-19 TRH/BTEXN/P/Ph/OC/OP/PCB/8 metals	SOIL - S-27 TRH/BTEXN/PAH/Phenols/8Metals
ES1529109-009	[21-Aug-2015]	BH14_4.0-4.1		☐	☐	☐			
ES1529109-011	[21-Aug-2015]	BH09_4.5-4.6		☐					☐
ES1529109-013	[21-Aug-2015]	BH10_4.0-4.1					☐		
ES1529109-017	[20-Aug-2015]	BH04_2.3-2.4					☐		
ES1529109-018	[20-Aug-2015]	BH05_0.5-0.6		☐				☐	
ES1529109-022	[20-Aug-2015]	BH11_3.3-3.4				☐			
ES1529109-024	[20-Aug-2015]	BH05_2.3-2.4					☐		
ES1529109-028	[20-Aug-2015]	BH08_3.7-3.8					☐		
ES1529109-034	[21-Aug-2015]	BH12_3.6-3.7				☐			
ES1529109-036	[21-Aug-2015]	BH07B_2.3-2.4					☐		
ES1529109-042	[21-Aug-2015]	BH01_3.8-3.9				☐			
ES1529109-044	[21-Aug-2015]	BH17_1.0-1.1					☐		
ES1529109-047	[21-Aug-2015]	QC102				☐			
ES1529109-048	[22-Aug-2015]	BH21_2.7-2.8					☐		

			(On Hold) SOIL No analysis requested	SOIL - EP074DEFG (solids) VOC - Fumigants, Hal Aliphatics, Hal Aromatics,	SOIL - EP075 SIM Phenols only SIM - Phenols only	SOIL - S-04 TRH/BTEXN	SOIL - S-05 TRH/BTEXN/8 Metals	SOIL - S-19 TRH/BTEXN/P/Ph/OC/OP/PCB/8 metals	SOIL - S-27 TRH/BTEXN/PAH/Phenols/8Metals
ES1529109-049	[22-Aug-2015]	BH21_3.0-3.1				☐			
ES1529109-050	[22-Aug-2015]	BH19_2.0-2.2					☐		
ES1529109-052	[22-Aug-2015]	BH16_2.0-2.1					☐		
ES1529109-053	[21-Aug-2015]	BH22_1.3-1.4	☐						
ES1529109-054	[21-Aug-2015]	BH22_1.7-1.8	☐						
ES1529109-055	[21-Aug-2015]	BH22_3.9-4.0	☐						
ES1529109-056	[21-Aug-2015]	BH14_1.0-1.1	☐						
ES1529109-057	[21-Aug-2015]	BH14_3.0-3.1	☐						
ES1529109-058	[21-Aug-2015]	BH09_1.5-1.6	☐						
ES1529109-059	[21-Aug-2015]	BH09_2.2-2.3	☐						
ES1529109-060	[21-Aug-2015]	BH09_3.0-3.1	☐						
ES1529109-062	[21-Aug-2015]	BH10_2.1-2.2	☐						
ES1529109-063	[21-Aug-2015]	BH10_3.0-3.1	☐						
ES1529109-064	[20-Aug-2015]	BH04_0.15-0.25	☐						
ES1529109-065	[20-Aug-2015]	BH04_1.5-1.6	☐						
ES1529109-066	[20-Aug-2015]	BH04_2.7-2.8	☐						
ES1529109-067	[20-Aug-2015]	BH04_3.5-3.6	☐						
ES1529109-068	[20-Aug-2015]	BH05_0.25-0.35	☐						
ES1529109-069	[20-Aug-2015]	BH08_4.4-4.5	☐						
ES1529109-070	[20-Aug-2015]	BH07A_0.15-0.25	☐						
ES1529109-071	[20-Aug-2015]	BH07_0.4-0.5	☐						
ES1529109-072	[20-Aug-2015]	BH11_0.5-0.6	☐						
ES1529109-073	[20-Aug-2015]	BH11_1.0-1.1	☐						
ES1529109-074	[20-Aug-2015]	BH11_2.0-2.1	☐						
ES1529109-075	[20-Aug-2015]	BH11_3.0-3.1	☐						
ES1529109-076	[20-Aug-2015]	BH13_0.2-0.3	☐						
ES1529109-077	[20-Aug-2015]	BH05_1.5-1.6	☐						
ES1529109-078	[20-Aug-2015]	BH05_2.7-2.8	☐						
ES1529109-079	[20-Aug-2015]	BH05_3.0-3.1	☐						
ES1529109-080	[20-Aug-2015]	BH05_37-3.8	☐						
ES1529109-081	[20-Aug-2015]	BH08_0.5-0.6	☐						
ES1529109-082	[20-Aug-2015]	BH08_4.0-4.2	☐						
ES1529109-083	[20-Aug-2015]	BH13_0.6-0.7	☐						
ES1529109-084	[20-Aug-2015]	BH13_1.0-1.1	☐						
ES1529109-085	[20-Aug-2015]	BH13_1.5-1.6	☐						
ES1529109-086	[20-Aug-2015]	BH13_2.7-2.8	☐						
ES1529109-087	[20-Aug-2015]	BH13_3.0-3.1	☐						
ES1529109-088	[21-Aug-2015]	BH07B_0.2-0.3	☐						
ES1529109-089	[21-Aug-2015]	BH07B_0.5-0.6	☐						
ES1529109-090	[21-Aug-2015]	BH07B_0.8-0.9	☐						
ES1529109-091	[21-Aug-2015]	BH07B_1.0-1.1	☐						

			(On Hold) SOIL No analysis requested	SOIL - EP074DEFG (solids) VOC - Fumigants, Hal Aliphatics, Hal Aromatics,	SOIL - EP075 SIM Phenols only SIM - Phenols only	SOIL - S-04 TRH/BTEXN	SOIL - S-05 TRH/BTEXN/8 Metals	SOIL - S-19 TRH/BTEXN/P/Ph/OC/OP/PCB/8 metals	SOIL - S-27 TRH/BTEXN/PAH/Phenols/8Metals
ES1529109-092	[21-Aug-2015]	BH12_1.5-1.6	☐						
ES1529109-093	[21-Aug-2015]	BH12_3.7-3.8	☐						
ES1529109-094	[21-Aug-2015]	BH07B_1.6-1.7	☐						
ES1529109-095	[21-Aug-2015]	BH07B_2.8-2.9	☐						
ES1529109-096	[21-Aug-2015]	BH10_0.4-0.5	☐						
ES1529109-097	[21-Aug-2015]	BH09_0.15-0.25	☐						
ES1529109-098	[21-Aug-2015]	BH09_0.4-0.5	☐						
ES1529109-099	[21-Aug-2015]	BH12_0.5-0.6	☐						
ES1529109-100	[21-Aug-2015]	BH12_0.6-0.7	☐						
ES1529109-101	[21-Aug-2015]	BH01_2.0-2.1	☐						
ES1529109-102	[21-Aug-2015]	BH01_2.8-3.0	☐						
ES1529109-104	[21-Aug-2015]	BH16_1.0-1.1	☐						
ES1529109-105	[21-Aug-2015]	BH16_0.5-0.6	☐						
ES1529109-106	[21-Aug-2015]	BH17_0.7-0.8	☐						
ES1529109-107	[21-Aug-2015]	BH17_0.2-0.3	☐						
ES1529109-108	[21-Aug-2015]	BH19_0.11-0.15	☐						
ES1529109-109	[21-Aug-2015]	BH21_0.25-0.35	☐						
ES1529109-110	[21-Aug-2015]	BH21_0.20-0.25	☐						
ES1529109-111	[21-Aug-2015]	BH21_1.0-1.1	☐						
ES1529109-112	[22-Aug-2015]	BH21_3.8-3.9	☐						
ES1529109-113	[22-Aug-2015]	BH19_0.6-0.7	☐						
ES1529109-114	[22-Aug-2015]	BH19_1.0-1.1	☐						
ES1529109-115	[22-Aug-2015]	BH19_1.4-1.5	☐						
ES1529109-116	[22-Aug-2015]	BH19_3.0-3.1	☐						
ES1529109-117	[22-Aug-2015]	BH19_3.8-3.9	☐						
ES1529109-118	[22-Aug-2015]	BH16_3.0-3.1	☐						
ES1529109-119	[22-Aug-2015]	BH16_4.0-4.1	☐						
ES1529109-120	[22-Aug-2015]	BH16_5.0-5.1	☐						
ES1529109-121	[22-Aug-2015]	QC103	☐						
ES1529109-122	[21-Aug-2015]	BH09_4.2-4.3	☐						
ES1529109-123	[21-Aug-2015]	BH12_3.2-3.3	☐						
ES1529109-124	[21-Aug-2015]	BH10_1.0-1.1	☐						
ES1529109-125	[20-Aug-2015]	BH11_3.6-3.7	☐						
ES1529109-126	[21-Aug-2015]	BH19_0.25-0.30	☐						

Matrix: **SOLID**

Laboratory sample ID	Client sampling date / time	Client sample ID	SOLID - EA200B Asbestos Identification in Bulk Solids (Excluding
ES1529109-002	[21-Aug-2015]	BH22_0.45	☐

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ALEX LATHAM

- *AU Certificate of Analysis - NATA (COA)	Email	alex.latham@aecom.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	alex.latham@aecom.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	alex.latham@aecom.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	alex.latham@aecom.com
- A4 - AU Tax Invoice (INV)	Email	alex.latham@aecom.com
- Chain of Custody (CoC) (COC)	Email	alex.latham@aecom.com
- EDI Format - ENMRG (ENMRG)	Email	alex.latham@aecom.com
- EDI Format - ESDAT (ESDAT)	Email	alex.latham@aecom.com
- EDI Format - HLAPro (HLAPro)	Email	alex.latham@aecom.com
- EDI Format - XTab (XTAB)	Email	alex.latham@aecom.com

AP_CUSTOMER SERVICE ANZ

- A4 - AU Tax Invoice (INV)	Email	AP_CustomerService.ANZ@aecom.com

KATE PIGRAM

- *AU Certificate of Analysis - NATA (COA)	Email	kate.pigram@aecom.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	kate.pigram@aecom.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	kate.pigram@aecom.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	kate.pigram@aecom.com
- A4 - AU Tax Invoice (INV)	Email	kate.pigram@aecom.com
- Chain of Custody (CoC) (COC)	Email	kate.pigram@aecom.com
- EDI Format - ENMRG (ENMRG)	Email	kate.pigram@aecom.com
- EDI Format - ESDAT (ESDAT)	Email	kate.pigram@aecom.com
- EDI Format - HLAPro (HLAPro)	Email	kate.pigram@aecom.com
- EDI Format - XTab (XTAB)	Email	kate.pigram@aecom.com

LAUREN GIBB

- *AU Certificate of Analysis - NATA (COA)	Email	Lauren.Gibb@aecom.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	Lauren.Gibb@aecom.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	Lauren.Gibb@aecom.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	Lauren.Gibb@aecom.com
- A4 - AU Tax Invoice (INV)	Email	Lauren.Gibb@aecom.com
- Chain of Custody (CoC) (COC)	Email	Lauren.Gibb@aecom.com
- EDI Format - ENMRG (ENMRG)	Email	Lauren.Gibb@aecom.com
- EDI Format - ESDAT (ESDAT)	Email	Lauren.Gibb@aecom.com
- EDI Format - HLAPro (HLAPro)	Email	Lauren.Gibb@aecom.com
- EDI Format - XTab (XTAB)	Email	Lauren.Gibb@aecom.com

14BE (1) OF (11)

Chain of Custody

AECOM

AECOM - Sydney
Level 21, 420 George Street,
Sydney, NSW 2000
Tel: (02) 8934 0000
Fax: (02) 8934 0001
E-mail: Alex.Latham@aecom.com; Kate.Pigram@aecom.com; Lauren.Gibb@aecom.com

Laboratory Details
Lab. Name: ALS Sydney
Lab. Address:
Contact Name:
Lab. Ref:
Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: EN/004/15

Sampled By: Kate Pigram & Lauren Gibb
AECOM Project No: 60438840/1.1
Project Name: Burrows
PO No.

Subcon / Forward Lab / Split WO
Lab / Analysis: NEWCASTLE: ASBESTOS ENVIRONS: QCLOD, QCCD
Organised By / Date: Kate
Relinquished By / Date: Kate
Courier:
WO No: ES1529109
Attach By PO / Internal Sheet:

Specifications:

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr _____days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. % extraneous material removed from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details: _____)	
6. Shell Quality Partnership:	
7. Report Format: Fax Hardcopy Email : _____	

Analysis Request

Lab. ID	Sample ID	Sampling Date	Matrix: soil	water	other	Preservation: fil'ed	acid	ice	other	Container (No. & type)	TRH C6-C40, BTEXN	PAHs	8 Metals	OCP, OPP, PCB	Asbestos in Soil(Absence/Presence	ACM Fragment	Phenols	VHCs	HOLD
(1)	BH22_0.3-0.4	21/08/2015	X					X		1 x 250mL soil jar					X				
(2)	BH22_0.45	21/08/2015	X					X		1 x bag						X			
(3)	BH22_0.8-0.9	21/08/2015	X					X		1 x 250mL soil jar		X	X						
53	BH22_1.3-1.4	21/08/2015	X					X		1 x 250mL soil jar									
57	BH22_1.7-1.8	21/08/2015	X					X		1 x 250mL soil jar									X
(4)	BH22_2.2-2.3	21/08/2015	X					X		1 x 250mL soil jar									X
55	BH22_3.9-4.0	21/08/2015	X					X		1 x 250mL soil jar	X	X	X						
(5)	BH22_4.5-4.7	21/08/2015	X					X		1 x 250mL soil jar									X
(6)	BH15_0.4-0.5	21/08/2015	X					X		1 x 250mL soil jar	X	X	X						
(7)	BH14_0.45-0.55	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag		X	X		X				
56	BH14_1.0-1.1	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag				X					
(8)	BH14_1.8-1.9	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag									X
								X		1 x 250ml soil jar & 1 x bag		X	X	X					

Other: ES1529109

Environmental Division
Sydney
Work Order Reference
ES1529109

Telephone : +61-2-8784 8555

* Metals Required (Delete elements not required): As Cd Cr Cu Ni Pb Zn Hg

Comments: Metals - Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Mercury Zinc

Relinquished by:	Kate Pigram	Signed:		Date: 24/08/2015	Relinquished by:	Signed:	Date:
Recieved by:		Signed:		Date:	Recieved by:	Signed:	Date: 24/8/15

Lab Report No. | Esky ID

Printed copies of this document are uncontrolled

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Chain of Custody

AECOM

AECOM - Sydney
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Sydney, NSW 2000
Tel: (02) 8934 0000
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E-mail: Alex.Latham@aecom.com; Kate.Pigram@aecom.com; Lauren.Gibb@aecom.com

Laboratory Details
Lab. Name: ALS Sydney
Lab. Address:
Contact Name:
Lab. Ref:
Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: EN/004/15

Sampled By. Kate Pigram & Lauren Gibb
AECOM Project No: 60438840/1.1
Project Name: Burrows
PO No.

Specifications:

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr _____days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. % extraneous material removed from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details: _____)	
6. Shell Quality Partnership:	
7. Report Format: Fax Hardcopy Email :	

Lab. ID	Sample ID	Sampling Date	Matrix: soil	Matrix: water	Matrix: other	Preservation: filt'ed	Preservation: acid	Preservation: ice	Preservation: other	Container (No. & type)	Analysis Request: TRH C6-C40, BTEXN	PAHs	8 Metals	OCP, OPP, PCB	Asbestos in Soil(Absence/Presen	ACM Fragment	Phenols	VHCs	HOLD	Other
57	BH14_3.0-3.1	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag									X	
(9)	BH14_4.0-4.1	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag	X						X	X		
58	BH09_1.5-1.6	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag									X	
59	BH09_2.2-2.3	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag									X	
60	BH09_3.0-3.1	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag									X	
(10)	BH09_4.0-4.2	21/08/2015	X					X		1 x 250 ml soil jar		X	X							
(11) 122	BH09_4.2-4.3	21/08/2015	X					X		1 x 250 ml soil jar									X	
(12)	BH09_4.5-4.6	21/08/2015	X					X		1 x 250 ml soil jar	X	X	X				X	X		
(12)	BH06_0.7-0.8	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag			X	X	X					
N-R 61	BH06_1.0-1.1	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag									X	
62	BH10_2.1-2.2	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag									X	
63	BH10_3.0-3.1	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag									X	

* Metals Required (Delete elements not required) As Cd Cr Cu Ni Pb Zn Hg

Comments: Metals - Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Mercury Zinc

Lab Report No.

Esky ID

Relinquished by:	Kate Pigram	Signed:	Date: 24/08/2015	Relinquished by:	Signed:	Date:
Recieved by:		Signed:	Date:	Recieved by: Fax	Signed:	Date: 24/8/15

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Chain of Custody

AECOM

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Laboratory Details
Lab. Name: ALS Sydney
Lab. Address:
Contact Name:
Lab. Ref:
Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: EN/004/15

Sampled By: Kate Pigram & Lauren Gibb
AECOM Project No: 60438840/1.1
Project Name: Burrows
PO No.

Specifications:

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr _____days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. % extraneous material removed from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details: _____)	
6. Shell Quality Partnership:	
7. Report Format: Fax Hardcopy Email: _____	

Lab. ID	Sample ID	Sampling Date	Matrix: soil	water	other	Preservation: filt'ed	acid	ice	other	Container (No. & type)	TRH C6-C40, BTEXN	PAHs	8 Metals	OCP, OPP, PCB	Asbestos in Soil(Absence/Presen	ACM Fragment	Phenols	VHCs	HOLD
(13)	BH10_4.0-4.1	21/08/2015	X					X		1 x 250ml soil jar	X		X						
*	QC100	21/08/2015	X					X		1 x 250ml soil jar	X	X	X						
(14)	QC101	21/08/2015	X					X		1 x 250ml soil jar		X	X						
64	BH04_0.15-0.25	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag									X
(15)	BH04_0.5-0.6	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag	X	X	X						
(16)	BH04_1.0-1.1	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag		X	X						
65	BH04_1.5-1.6	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag									X
(17)	BH04_2.3-2.4	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag	X		X						
66	BH04_2.7-2.8	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag									X
67	BH04_3.5-3.6	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag									X
68	BH05_0.25-0.35	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag									X
(18)	BH05_0.5-0.6	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag	X	X	X	X		X	X		

Other: Please forward sample QC100 to Envirolab with copy of COC

* Metals Required (Delete elements not required): As Cd Cr Cu Ni Pb Zn Hg

Comments: . Metals - Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Mercury Zinc

Lab Report No

Esky ID

Relinquished by: Kate Pigram Signed: Date: 24/08/2015

Recieved by: Signed: Date:

Relinquished by: Signed: Date:

Recieved by: Signed: Date: 24/8/15

913

Chain of Custody

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Final Report by:
Lab Quote No: EN/004/15

Sampled By: Kate Pigram & Lauren Gibb
AECOM Project No: 60438840/1.1
Project Name: Burrows
PO No.

Specifications:

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr _____days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. % extraneous material removed from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details: _____)	
6. Shell Quality Partnership:	
7. Report Format: Fax Hardcopy Email : _____	

Lab. ID	Sample ID	Sampling Date	Matrix			Preservation				Container	Analysis Request															Other					
			soil	water	other	filt'ed	acid	ice	other	(No. & type)	TRH C6-C40, BTEXN	PAHs	8 Metals	OCP, OPP, PCB	Asbestos in Soil(Absence/Present	ACM Fragment	Phenols	VHCs								HOLD						
69	BH08_4.4-4.5	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					
70	BH07A_0.15-0.25	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					
(19)	BH07A_0.5-0.6	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag		X	X	X	X															
71	BH07_0.4-0.5	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					
(20)	BH11_0.2-0.3	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag		X	X																	
72	BH11_0.5-0.6	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					
73	BH11_1.0-1.1	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					
74	BH11_2.0-2.1	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					
(21)	BH11_2.3-2.4	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag	X	X	X																	
75	BH11_3.0-3.1	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					
(22)	BH11_3.3-3.4	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag	X																			
76	BH13_0.2-0.3	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					

* Metals Required (Delete elements not required): As Cd Cr Cu Ni Pb Zn Hg

Comments: * Metals - Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Mercury Zinc

Lab Report No.

Esky ID

Relinquished by: Kate Pigram Signed: Date: 24/08/2015

Recieved by: Signed: Date:

Relinquished by: Signed: Date:

Recieved by: Signed: Date: 24/8/15

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Chain of Custody

AECOM

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Final Report by:
Lab Quote No: EN/004/15

Sampled By: Kate Pigram & Lauren Gibb
AECOM Project No: 60438840/1.1
Project Name: Burrows
PO No.

Specifications:

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr _____days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. % extraneous material removed from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details: _____)	
6. Shell Quality Partnership:	
7. Report Format: Fax Hardcopy Email : _____	

Lab. ID	Sample ID	Sampling Date	Matrix			Preservation				Container	Analysis Request															Other				
			soil	water	other	filt'ed	acid	ice	other	(No. & type)	TRH C6-C40, BTEXN	PAHs	8 Metals	OCP, OPP, PCB	Asbestos in Soil(Absence/Present	ACM Fragment	Phenols	VHCs							HOLD						
(23)	BH05_1.0-1.1	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag		X	X																	
77	BH05_1.5-1.6	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					
(24)	BH05_2.3-2.4	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag	X		X																	
78	BH05_2.7-2.8	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					
79	BH05_3.0-3.1	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					
80	BH05_3.7-3.8	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					
(25)	BH08_0.17-0.18	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag			X	X																
81	BH08_0.5-0.6	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					
(26)	BH08_1.0-1.1	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag	X	X	X																	
(27)	BH08_2.5-2.6	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag		X	X																	
(28)	BH08_3.7-3.8	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag	X		X																	
82	BH08_4.0-4.2	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					

* Metals Required (Delete elements not required): As Cd Cr Cu Ni Pb Zn Hg

Comments: Metals - Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Mercury Zinc

Lab Report No.

Esky ID

Relinquished by: Kate Pigram Signed: Date: 24/08/2015

Recieved by: Signed: Date:

Relinquished by: Signed: Date:

Recieved by: Signed: Date: 24/8/15

915

Chain of Custody

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Final Report by:
Lab Quote No: EN/004/15

Sampled By: Kate Pigram & Lauren Gibb
AECOM Project No: 60438840/1.1
Project Name: Burrows
PO No.

Specifications:

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr _____days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. % extraneous material removed from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details: _____)	
6. Shell Quality Partnership:	
7. Report Format: Fax Hardcopy Email : _____	

Lab. ID	Sample ID	Sampling Date	Matrix			Preservation				Container	Analysis Request															Other					
			soil	water	other	filt'ed	acid	ice	other	(No. & type)	TRH C6-C40, BTEXN	PAHs	8 Metals	OCP, OPP, PCB	Asbestos in Soil(Absence/Presenc	ACM Fragment	Phenols	VHCs							HOLD							
(29)	BH13_0.4-0.5	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag		X	X																		
83	BH13_0.6-0.7	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag														X						
84	BH13_1.0-1.1	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag														X						
85	BH13_1.5-1.6	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag														X						
86	BH13_2.7-2.8	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag														X						
87	BH13_3.0-3.1	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag														X						
(30)	BH13_3.6-3.7	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag				X																
(31)	QC200	20/08/2015	X					X		1 x 250 mL soil jar		X	X																	
88	BH07B_0.2-0.3	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag														X						
89	BH07B_0.5-0.6	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag														X						
90	BH07B_0.8-0.9	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag														X						
91	BH07B_1.0-1.1	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag														X						

* Metals Required (Delete elements not required): As Cd Cr Cu Ni Pb Zn Hg

Comments: Metals - Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Mercury Zinc

Lab Report No.

Esky ID

Relinquished by: Kate Pigram Signed: Date: 24/08/2015

Recieved by: Signed: Date:

Relinquished by: Signed: Date:

Recieved by: Signed: Date: 24/8/15

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Chain of Custody

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Kate.Pigram@aecom.com; Lauren.Gibb@aecom.com

Laboratory Details
Lab. Name: ALS Sydney
Lab. Address:
Contact Name:
Lab. Ref:
Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: EN/004/15

Sampled By: Kate Pigram & Lauren Gibb
AECOM Project No: 60438840/1.1
Project Name: Burrows
PO No.

Specifications:

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr _____days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. % extraneous material removed from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details: _____)	
6. Shell Quality Partnership:	
7. Report Format: Fax Hardcopy Email : _____	

Lab. ID	Sample ID	Sampling Date	Matrix: soil	water	other	Preservation: filt'ed	acid	ice	other	Container (No. & type)	Analysis Request: TRH C6-C40, BTEXN	PAHs	8 Metals	OCP, OPP, PCB	Asbestos in Soil(Absence/Presence	ACM Fragment	Phenols	VHCs	HOLD	Other
(32)	BH12_1.0-1.1	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag			X							
92	BH12_1.5-1.6	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag									X	
(33)	BH12_1.8-1.9	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag					X					
(123)	BH12_3.2-3.3	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag									X	
(34)	BH12_3.6-3.7	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag	X									
93	BH12_3.7-3.8	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag									X	
✔	QC201	21/08/2015	X					X		1 x 250 mL soil jar	X	X	X	X			X	X	Please forward sample QC201 to Envirolab with COC	

* Metals Required (Delete elements not required): As Cd Cr Cu Ni Pb Zn Hg

Comments: Metals - Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Mercury Zinc

Lab Report No.

Esky ID

Relinquished by: Kate Pigram Signed: Date: 24/08/2015

Recieved by: Signed: Date:

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Recieved by: TNT Signed: Date: 24/8/15

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Specifications:

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1. Urgent TAT required? (please circle: 24hr 48hr _____days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. % extraneous material removed from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details: _____)	
6. Shell Quality Partnership:	
7. Report Format: Fax Hardcopy Email : _____	

Lab. ID	Sample ID	Sampling Date	Matrix			Preservation				Container	Analysis Request															Other					
			soil	water	other	filt'ed	acid	ice	other	(No. & type)	TRH C6-C40, BTEXN	PAHs	8 Metals	OCP, OPP, PCB	Asbestos in Soil(Absence/Presence	ACM Fragment	Phenols	VHCs							HOLD						
(35)	BH07B_1.2-1.3	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag	X	X	X	X	X															
94	BH07B_1.6-1.7	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					
(36)	BH07B_2.3-2.4	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag	X		X																	
95	BH07B_2.8-2.9	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					
(37)	BH10_0.15-0.25	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag				X																
96	BH10_0.4-0.5	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					
97	BH09_0.15-0.25	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					
(38)	BH09_0.25-0.35	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag		X	X																	
98	BH09_0.4-0.5	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					
(39)	BH12_0.15-0.25	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag		X	X																	
99	BH12_0.5-0.6	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					
100	BH12_0.6-0.7	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag															X					

* Metals Required (Delete elements not required): As Cd Cr Cu Ni Pb Zn Hg

Comments: Metals - Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Mercury Zinc

Lab Report No.

Esky ID

Relinquished by:	Kate Pigram	Signed:		Date: 24/08/2015	Relinquished by:	Signed:	Date:
Recieved by:		Signed:		Date:	Recieved by: FAD	Signed:	Date: 24/8/15

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1. Urgent TAT required? (please circle: 24hr 48hr _____days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. % extraneous material removed from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details: _____)	
6. Shell Quality Partnership:	
7. Report Format: Fax Hardcopy Email :	

Lab. ID	Sample ID	Sampling Date	Matrix: soil	water	other	Preservation: filt'ed	acid	ice	other	Container (No. & type)	TRH C6-C40, BTEXN	PAHs	8 Metals	OCP, OPP, PCB	Asbestos in Soil(Absence/Presence	ACM Fragment	Phenols	VHCs	HOLD	Other
(40)	BH01_0.3-0.4	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag					X					
(41)	BH01_1.0-1.1	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag	X	X	X	X						
101	BH01_2.0-2.1	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag									X	
102	BH01_2.8-3.0	21/08/2015	X					X		1 x 250mL soil jar									X	
(42)	BH01_3.8-3.9	21/08/2015	X					X		1 x 250mL soil jar	X									
N.R 103	BH16_0.11-0.15	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag									X	
(43)	BH16_0.7-0.8	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag	X	X	X	X						
104	BH16_1.0-1.1	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag									X	
105	BH16_0.5-0.6	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag									X	
106	BH17_0.7-0.8	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag									X	
(44)	BH17_1.0-1.1	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag	X		X							
107	BH17_0.2-0.3	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag									X	

* Metals Required (Delete elements not required): As Cd Cr Cu Ni Pb Zn Hg

Comments: Metals - Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Mercury Zinc

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Relinquished by: Kate Pigram Signed: Date: 24/08/2015

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	Yes (tick)
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2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. % extraneous material removed from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details: _____)	
6. Shell Quality Partnership:	
7. Report Format: Fax Hardcopy Email : _____	

Lab. ID	Sample ID	Sampling Date	Matrix			Preservation				Container	Analysis Request															Other					
			soil	water	other	filt'ed	acid	ice	other	(No. & type)	TRH C6-C40, BTEXN	PAHs	8 Metals	OCP, OPP, PCB	Asbestos in Soil(Absence/Presence)	ACM Fragment	Phenols	VHCs							HOLD						
108	BH19_0.11-0.15	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag														X					
109	BH21_0.25-0.35	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag														X					
110	BH21_0.20-0.25	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag														X					
(95)	BH21_0.7-0.8	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag	X	X	X		X														
111	BH21_1.0-1.1	21/08/2015	X					X		1 x 250ml soil jar & 1 x bag														X					
(96)	QC202	21/08/2015	X					X		1 x 250ml soil jar	X	X	X																
(97)	QC102	21/08/2015	X					X		1 x 250ml soil jar	X																		
(98)	BH21_2.7-2.8	22/08/2015	X					X		1 x 250ml soil jar & 1 x bag	X		X																
(99)	BH21_3.0-3.1	22/08/2015	X					X		1 x 250ml soil jar	X																		
112	BH21_3.8-3.9	22/08/2015	X					X		1 x 250ml soil jar														X					
113	BH19_0.6-0.7	22/08/2015	X					X		1 x 250ml soil jar & 1 x bag														X					
114	BH19_1.0-1.1	22/08/2015	X					X		1 x 250ml soil jar & 1 x bag														X					

* Metals Required (Delete elements not required): As Cd Cr Cu Ni Pb Zn Hg

Comments: Metals - Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Mercury Zinc

Lab Report No.

Esky ID

Relinquished by:	Kate Pigram	Signed:		Date: 24/08/2015	Relinquished by:	Signed:	Date:
Recieved by:		Signed:		Date:	Recieved by: TAS!	Signed:	Date: 24/8/15

920

Chain of Custody

AECOM

AECOM - Sydney
Level 21, 420 George Street,
Sydney, NSW 2000
Tel: (02) 8934 0000
Fax: (02) 8934 0001
E-mail: Alex.Latham@aecom.com; Kate.Pigram@aecom.com; Lauren.Gibb@aecom.com

Laboratory Details
Lab. Name: ALS Sydney
Lab. Address:
Contact Name:
Lab. Ref:
Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: EN/004/15

Sampled By: Kate Pigram & Lauren Gibb
AECOM Project No: 60438840/1.1
Project Name: Burrows
PO No.

Specifications:

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr _____days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. % extraneous material removed from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details: _____)	
6. Shell Quality Partnership:	
7. Report Format: Fax Hardcopy Email : _____	

Lab. ID	Sample ID	Sampling Date	Matrix: soil	water	other	Preservation: filt'ed	acid	ice	other	Container (No. & type)	Analysis Request: TRH C6-C40, BTEXN	PAHs	8 Metals	OCP, OPP, PCB	Asbestos in Soil(Absence/Presence	ACM Fragment	Phenols	VHCs	HOLD	Other
115	BH19_1.4-1.5	22/08/2015	X					X		1 x 250ml soil jar & 1 x bag									X	
(50)	BH19_2.0-2.2	22/08/2015	X					X		1 x 250ml soil jar & 1 x bag	X		X							
116	BH19_3.0-3.1	22/08/2015	X					X		1 x 250ml soil jar & 1 x bag									X	
117	BH19_3.8-3.9	22/08/2015	X					X		1 x 250ml soil jar									X	
(51)	BH17_2.0-2.1	22/08/2015	X					X		1 x 250ml soil jar & 1 x bag	X	X	X							
(52)	BH16_2.0-2.1	22/08/2015	X					X		1 x 250ml soil jar & 1 x bag	X		X							
118	BH16_3.0-3.1	22/08/2015	X					X		1 x 250ml soil jar & 1 x bag									X	
119	BH16_4.0-4.1	22/08/2015	X					X		1 x 250ml soil jar & 1 x bag									X	
120	BH16_5.0-5.1	22/08/2015	X					X		1 x 250ml soil jar & 1 x bag									X	
121	QC103	22/08/2015	X					X		1 x 250ml soil jar									X	

* Metals Required (Delete elements not required): As Cd Cr Cu Ni Pb Zn Hg

Comments: Metals - Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Mercury Zinc

Lab Report No.

Esky ID

Relinquished by: Kate Pigram	Signed:	Date: 24/08/2015	Relinquished by: Signed: Date:
Recieved by:	Signed:	Date:	Recieved by: Signed: Date: 24/8/15

Received Extra Sample

(124) BH10_1.0 1-1 21-8-15
(125) BH11_3-6-3-7 20-8-15
(126) BH9_0.25-0.30 21-8-15

Fadi Soro

From: Barbara Hanna
Sent: Monday, 24 August 2015 3:56 PM
To: Fadi Soro; Wael Saleh
Subject: FW: Burrows COCs 60438840
Attachments: 60438840_Signed COCs_20150804.pdf

COC's for AECOM samples on hold

Kind Regards

Barbara Hanna

Client Services Manager
ALS | Environmental Division

277-289 Woodpark Road
Smithfield NSW 2164 Australia

T +61 2 8784 8555
F +61 2 8784 8500

www.alsglobal.com

From: Pigram, Kate [mailto:Kate.Pigram@aecom.com]
Sent: Monday, 24 August 2015 3:30 PM

To: Barbara Hanna
Cc: Latham, Alex
Subject: Burrows COCs 60438840

Hi Barbara,

Can you please forward the attached populated COCs to sample receipt for processing?

6 x eskies were picked up from Site (1-3 Burrows Road, Alexandria) on Friday afternoon (21 August), and 3 x eskies were picked up from AECOM Sydney Office today (24 August).

Kind Regards,

Kate Pigram
Senior Environmental Scientist
D +61 2 8934 0649 M +61 400 849 797
Kate.Pigram@aecom.com

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PO Box Q410, QVB PO, Sydney, NSW, 1230
T +61 2 8934 0000 F +61 2 8934 0001
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12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

CERTIFICATE OF ANALYSIS 133208

Client:
AECOM Australia Pty Ltd (Sydney)
PO Box Q410
QVB Post Office
Sydney
NSW 1230

Attention: Alex Latham, Kate Pigram, Lauren Gibb

Sample log in details:

Your Reference:	**60438840/1.1, Burrows**		
No. of samples:	2 Soils		
Date samples received / completed instructions received	25/08/15	/	25/08/15

Analysis Details:
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date:	1/09/15	/	1/09/15
Date of Preliminary Report:	Not Issued		

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Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:

Jacinta Hurst
Laboratory Manager

VHC's in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	133208-2 QC201 21/08/2015 Soil
Date extracted	-	26/08/2015
Date analysed	-	27/08/2015
Dichlorodifluoromethane	mg/kg	<1
Chloromethane	mg/kg	<1
Vinyl Chloride	mg/kg	<1
Bromomethane	mg/kg	<1
Chloroethane	mg/kg	<1
Trichlorofluoromethane	mg/kg	<1
1,1-Dichloroethene	mg/kg	<1
trans-1,2-dichloroethene	mg/kg	<1
1,1-dichloroethane	mg/kg	<1
cis-1,2-dichloroethene	mg/kg	<1
bromochloromethane	mg/kg	<1
chloroform	mg/kg	<1
2,2-dichloropropane	mg/kg	<1
1,2-dichloroethane	mg/kg	<1
1,1,1-trichloroethane	mg/kg	<1
1,1-dichloropropene	mg/kg	<1
carbon tetrachloride	mg/kg	<1
dibromomethane	mg/kg	<1
1,2-dichloropropane	mg/kg	<1
trichloroethene	mg/kg	<1
bromodichloromethane	mg/kg	<1
trans-1,3-dichloropropene	mg/kg	<1
cis-1,3-dichloropropene	mg/kg	<1
1,1,2-trichloroethane	mg/kg	<1
1,3-dichloropropane	mg/kg	<1
dibromochloromethane	mg/kg	<1
1,2-dibromoethane	mg/kg	<1
tetrachloroethene	mg/kg	<1
1,1,1,2-tetrachloroethane	mg/kg	<1
chlorobenzene	mg/kg	<1
bromoform	mg/kg	<1
1,1,2,2-tetrachloroethane	mg/kg	<1
1,2,3-trichloropropane	mg/kg	<1
bromobenzene	mg/kg	<1
2-chlorotoluene	mg/kg	<1
4-chlorotoluene	mg/kg	<1
1,3-dichlorobenzene	mg/kg	<1
1,4-dichlorobenzene	mg/kg	<1
1,2-dichlorobenzene	mg/kg	<1
1,2-dibromo-3-chloropropane	mg/kg	<1

VHC's in soil		
Our Reference:	UNITS	133208-2
Your Reference	----------	QC201
Date Sampled	----------	21/08/2015
Type of sample		Soil
1,2,4-trichlorobenzene	mg/kg	<1
hexachlorobutadiene	mg/kg	<1
1,2,3-trichlorobenzene	mg/kg	<1
Surrogate Dibromofluorometha	%	96
Surrogate aaa-Trifluorotoluene	%	77
Surrogate Toluene-d_8	%	98
Surrogate 4-Bromofluorobenzene	%	94

vTRH(C6-C10)/BTEXN in Soil			
Our Reference:	UNITS	133208-1	133208-2
Your Reference	----------	QC100	QC201
Date Sampled	----------	21/08/2015	21/08/2015
Type of sample		Soil	Soil
Date extracted	-	26/08/2015	26/08/2015
Date analysed	-	27/08/2015	27/08/2015
TRH C_6 - C_9	mg/kg	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25
Benzene	mg/kg	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1
m+p-xylene	mg/kg	<2	<2
o-Xylene	mg/kg	<1	<1
naphthalene	mg/kg	<1	<1
Surrogate aaa-Trifluorotoluene	%	87	77

svTRH (C10-C40) in Soil			
Our Reference:	UNITS	133208-1	133208-2
Your Reference	----------	QC100	QC201
Date Sampled	----------	21/08/2015	21/08/2015
Type of sample		Soil	Soil
Date extracted	-	26/08/2015	26/08/2015
Date analysed	-	26/08/2015	26/08/2015
TRH C_{10} - C_{14}	mg/kg	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	380
TRH C_{29} - C_{36}	mg/kg	<100	420
TRH >C_{10}-C_{16}	mg/kg	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50
TRH >C_{16}-C_{34}	mg/kg	<100	730
TRH >C_{34}-C_{40}	mg/kg	<100	170
Surrogate o-Terphenyl	%	95	113

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	133208-1 QC100 21/08/2015 Soil	133208-2 QC201 21/08/2015 Soil
Date extracted	-	26/08/2015	26/08/2015
Date analysed	-	26/08/2015	26/08/2015
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	0.2
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.5
Anthracene	mg/kg	<0.1	0.2
Fluoranthene	mg/kg	<0.1	1.2
Pyrene	mg/kg	<0.1	1.4
Benzo(a)anthracene	mg/kg	<0.1	1
Chrysene	mg/kg	<0.1	1.0
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	2.6
Benzo(a)pyrene	mg/kg	<0.05	1.6
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	1.2
Dibenzo(a,h)anthracene	mg/kg	<0.1	0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	1.2
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	2.2
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	2.2
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	2.2
Total Positive PAHs	mg/kg	NIL (+)VE	12
Surrogate p-Terphenyl-d14	%	107	113

Organochlorine Pesticides in soil		
Our Reference:	UNITS	133208-2
Your Reference	----------	QC201
Date Sampled	----------	21/08/2015
Type of sample		Soil
Date extracted	-	26/08/2015
Date analysed	-	28/08/2015
HCB	mg/kg	<0.1
alpha-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Surrogate TCMX	%	104

Organophosphorus Pesticides Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ---------- 	133208-2 QC201 21/08/2015 Soil
Date extracted	-	26/08/2015
Date analysed	-	28/08/2015
Azinphos-methyl (Guthion)	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Chlorpyriphos	mg/kg	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Dichlorvos	mg/kg	<0.30
Dimethoate	mg/kg	<0.1
Ethion	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Parathion	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Surrogate TCMX	%	104

PCBs in Soil		
Our Reference:	UNITS	133208-2
Your Reference	----------	QC201
Date Sampled	----------	21/08/2015
Type of sample		Soil
Date extracted	-	26/08/2015
Date analysed	-	28/08/2015
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Surrogate TCLMX	%	104

Acid Extractable metals in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	133208-1 QC100 21/08/2015 Soil	133208-2 QC201 21/08/2015 Soil
Date prepared	-	26/08/2015	26/08/2015
Date analysed	-	26/08/2015	26/08/2015
Arsenic	mg/kg	9	25
Cadmium	mg/kg	<0.4	3
Chromium	mg/kg	11	180
Copper	mg/kg	8	430
Lead	mg/kg	29	14,000
Mercury	mg/kg	<0.1	15
Nickel	mg/kg	6	30
Zinc	mg/kg	64	2,600

Misc Soil - Inorg		
Our Reference:	UNITS	133208-2
Your Reference	----------	QC201
Date Sampled	----------	21/08/2015
Type of sample		Soil
Date prepared	-	26/08/2015
Date analysed	-	26/08/2015
Total Phenolics (as Phenol)	mg/kg	<5

Moisture Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	133208-1 QC100 21/08/2015 Soil	133208-2 QC201 21/08/2015 Soil
Date prepared	-	26/08/2015	26/08/2015
Date analysed	-	27/08/2015	27/08/2015
Moisture	%	39	43

Method ID	Methodology Summary
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-012 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'TEQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'TEQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'TEQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Inorg-008	Moisture content determined by heating at 105+/-5 deg C for a minimum of 12 hours.

QUALITY CONTROL VHC's in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			26/08/2015	[NT]	[NT]	LCS-1	26/08/2015
Date analysed	-			27/08/2015	[NT]	[NT]	LCS-1	27/08/2015
Dichlorodifluoromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Chloromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Vinyl Chloride	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Bromomethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Chloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Trichlorofluoromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,1-Dichloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
trans-1,2-dichloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,1-dichloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-1	97%
cis-1,2-dichloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
bromochloromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
chloroform	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-1	91%
2,2-dichloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2-dichloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-1	86%
1,1,1-trichloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-1	95%
1,1-dichloropropene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
carbon tetrachloride	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
dibromomethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2-dichloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
trichloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-1	82%
bromodichloromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-1	88%
trans-1,3-dichloropropene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
cis-1,3-dichloropropene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,1,2-trichloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,3-dichloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
dibromochloromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-1	92%
1,2-dibromoethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
tetrachloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-1	89%
1,1,1,2-tetrachloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
chlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
bromoform	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2,3-trichloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
bromobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
2-chlorotoluene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
4-chlorotoluene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,3-dichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,4-dichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2-dichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL VHC's in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
1,2,4-trichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
hexachlorobutadiene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2,3-trichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Surrogate Dibromofluorometha	%		Org-014	97	[NT]	[NT]	LCS-1	97%
Surrogate aaa-Trifluorotoluene	%		Org-014	88	[NT]	[NT]	LCS-1	80%
Surrogate Toluene-d_8	%		Org-014	98	[NT]	[NT]	LCS-1	99%
Surrogate 4-Bromofluorobenzene	%		Org-014	94	[NT]	[NT]	LCS-1	98%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			26/08/2015	[NT]	[NT]	LCS-1	26/08/2015
Date analysed	-			27/08/2015	[NT]	[NT]	LCS-1	27/08/2015
TRH C_6 - C_9	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-1	89%
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-1	89%
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	LCS-1	91%
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	LCS-1	88%
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-1	89%
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	LCS-1	88%
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-1	87%
naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	88	[NT]	[NT]	LCS-1	80%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			26/08/2015	[NT]	[NT]	LCS-1	26/08/2015
Date analysed	-			26/08/2015	[NT]	[NT]	LCS-1	26/08/2015
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-1	112%
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	105%
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	91%
TRH >C_{10}-C_{16}	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-1	112%
TRH >C_{16}-C_{34}	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	105%
TRH >C_{34}-C_{40}	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	91%
Surrogate o-Terphenyl	%		Org-003	92	[NT]	[NT]	LCS-1	80%

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			26/08/2015	[NT]	[NT]	LCS-1	26/08/2015
Date analysed	-			26/08/2015	[NT]	[NT]	LCS-1	26/08/2015
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-1	89%
Acenaphthylene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-1	93%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-1	97%
Anthracene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-1	91%
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-1	95%
Benzo(a)anthracene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-1	89%
Benzo(b,j+k) fluoranthene	mg/kg	0.2	Org-012 subset	<0.2	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012 subset	<0.05	[NT]	[NT]	LCS-1	106%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012 subset	110	[NT]	[NT]	LCS-1	106%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			26/08/2015	[NT]	[NT]	LCS-1	26/08/2015
Date analysed	-			28/08/2015	[NT]	[NT]	LCS-1	28/08/2015
HCB	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	73%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	87%
Heptachlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	83%
delta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	89%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	91%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	89%
Dieldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	96%
Endrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	88%
pp-DDD	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	80%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-1	87%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%		Org-005	99	[NT]	[NT]	LCS-1	93%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			26/08/2015	[NT]	[NT]	LCS-1	26/08/2015
Date analysed	-			28/08/2015	[NT]	[NT]	LCS-1	28/08/2015
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-1	72%
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Chlorpyriphos	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-1	91%
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Diazinon	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Dichlorvos	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-1	105%
Dimethoate	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-1	104%
Fenitrothion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-1	118%
Malathion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-1	92%
Parathion	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	LCS-1	100%
Ronnel	mg/kg	0.1	Org-008	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%		Org-008	99	[NT]	[NT]	LCS-1	101%

QUALITY CONTROL PCBs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			26/08/2015	[NT]	[NT]	LCS-1	26/08/2015
Date analysed	-			28/08/2015	[NT]	[NT]	LCS-1	28/08/2015
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	LCS-1	103%
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%		Org-006	99	[NT]	[NT]	LCS-1	94%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			26/08/2015	[NT]	[NT]	LCS-3	26/08/2015
Date analysed	-			26/08/2015	[NT]	[NT]	LCS-3	26/08/2015
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	LCS-3	102%
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	LCS-3	93%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-3	96%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-3	96%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-3	92%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	LCS-3	98%
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-3	95%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-3	91%
QUALITY CONTROL Misc Soil - Inorg	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			26/08/2015	[NT]	[NT]	LCS-1	26/08/2015
Date analysed	-			26/08/2015	[NT]	[NT]	LCS-1	26/08/2015
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	[NT]	[NT]	LCS-1	101%

Report Comments:

OP in soil: PQL has been raised due to interference from analytes(other than those being tested) in the sample/s.

Asbestos ID was analysed by Approved Identifier:	Not applicable for this job
Asbestos ID was authorised by Approved Signatory:	Not applicable for this job

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NA: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike : A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample) : This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.
Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.
Spikes for Physical and Aggregate Tests are not applicable.
For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

SAMPLE RECEIPT ADVICE

Client Details	
Client	AECOM Australia Pty Ltd (Sydney)
Attention	Alex Latham, Kate Pigram, Lauren Gibb

Sample Login Details	
Your Reference	60438840/1.1, Burrows
Envirolab Reference	133208
Date Sample Received	25/08/2015
Date Instructions Received	25/08/2015
Date Results Expected to be Reported	01/09/2015

Sample Condition	
Samples received in appropriate condition for analysis	YES
No. of Samples Provided	2 Soils
Turnaround Time Requested	Standard
Temperature on receipt (°C)	-1.5
Cooling Method	Ice
Sampling Date Provided	YES

Comments
Samples will be held for 1 month for water samples and 2 months for soil samples from date of receipt of samples

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email: ahie@envirolabservices.com.au	Email: jhurst@envirolabservices.com.au

Sample and Testing Details on following page

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

Sample Id	*VHC's in soil*	*vTRH(C6-C10)/BTEXN in Soil*	*svTRH (C10-C40) in Soil*	*PAHs in Soil*	*Organochlorine Pesticides in soil*	*Organophosphorus Pesticides*	*PCBs in Soil*	*Acid Extractable metals in soil*	*Misc Soil - Inorg*
QC100		✓	✓	✓				✓	
QC201	✓	✓	✓	✓	✓	✓	✓	✓	✓

ENVIROLAB

Chain of Custody

AECOM

AECOM - Sydney
Level 21, 420 George Street,
Sydney, NSW 2000
Tel: (02) 8934 0000
Fax: (02) 8934 0001
E-mail: Alex.Latham@aecom.com;
Kate.Pigram@aecom.com; Lauren.Gibb@aecom.com

Laboratory Details
Lab. Name: ALS Sydney
Lab. Address:
Contact Name:
Lab. Ref:
Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: EN/004/15

Sampled By: Kate Pigram & Lauren Gibb
AECOM Project No: 60438840/1.1
Project Name: Burrows
PO No.

Specifications:

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr _____ days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. % extraneous material removed from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details: _____)	
6. Shell Quality Partnership:	
7. Report Format: Fax Hardcopy Email : _____	

Lab. ID	Sample ID	Sampling Date	Matrix: soil	water	other	Preservation: filtred	acid	ice	other	Container (No. & type)	TRH C6-C40, BTEXN	PAHs	8 Metals	OCP, OPP, PCB	Asbestos in Soil(Absence/Presence)	ACM Fragment	Phenols	VHCs	HOLD	Other
(13)	BH10_4.0-4.1	21/08/2015	X					X		1 x 250ml soil jar	X		X							
1	QC100	21/08/2015	X					X		1 x 250ml soil jar	X	X	X							
(14)	QC101	21/08/2015	X					X		1 x 250ml soil jar		X	X							
64	BH04_0.15-0.25	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag										
(15)	BH04_0.5-0.6	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag	X	X	X							
(16)	BH04_1.0-1.1	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag		X	X							
65	BH04_1.5-1.6	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag										
(17)	BH04_2.3-2.4	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag	X		X							
66	BH04_2.7-2.8	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag									X	
67	BH04_3.5-3.6	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag									X	
68	BH05_0.25-0.35	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag									X	
(18)	BH05_0.5-0.6	20/08/2015	X					X		1 x 250 mL soil jar & 1 x bag	X	X	X	X		X	X			

Please forward sample QC100 to Envirolab with copy of COC

ENVIROLAB
Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200
Job No: 133208
Date Received: 25/8/15
Time Received: 1230
Received by: CB
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

* Metals Required (Delete elements not required): As Cd Cr Cu Ni Pb Zn Hg

Comments: . Metals - Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Mercury Zinc

Relinquished by:	Kate Pigram	Signed:		Date: 24/08/2015	Relinquished by:	Signed:	Date:
Recieved by:		Signed: CB		Date: 25/8/15	Recieved by:	Signed:	Date: 24/8/15

Lab Report No | Esky ID

4pm

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Chain of Custody

AECOM

AECOM - Sydney
Level 21, 420 George Street,
Sydney, NSW 2000
Tel: (02) 8934 0000
Fax: (02) 8934 0001
E-mail: Alex.Latham@aecom.com;
Kate.Pigram@aecom.com; Lauren.Gibb@aecom.com

Laboratory Details
Lab. Name: ALS Sydney
Lab. Address:
Contact Name:
Lab. Ref:
Tel:
Fax:
Preliminary Report by:
Final Report by:
Lab Quote No: EN/004/15

Sampled By: Kate Pigram & Lauren Gibb
AECOM Project No: 60438840/1.1
Project Name: Burrows
PO No.

Specifications:

	Yes (tick)
1. Urgent TAT required? (please circle: 24hr 48hr _____days)	
2. Fast TAT Guarantee Required?	
3. Is any sediment layer present in waters to be excluded from extractions?	
4. % extraneous material removed from samples to be reported as per NEPM 5.1.1?	
5. Special storage requirements? (details: _____)	
6. Shell Quality Partnership:	
7. Report Format: Fax Hardcopy Email :	

Lab. ID	Sample ID	Sampling Date	Matrix: soil	Matrix: water	Matrix: other	Preservation: filt'ed	Preservation: acid	Preservation: ice	Preservation: other	Container (No. & type)	TRH C6-C40, BTEXN	PAHs	8 Metals	OCP, OPP, PCB	Asbestos in Soil(Absence/Presence	ACM Fragment	Phenols	VHCs	HOLD	Other
(32)	BH12_1.0-1.1	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag			X							
92	BH12_1.5-1.6	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag									X	
(33)	BH12_1.8-1.9	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag					X					
(123)	BH12_3.2-3.3	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag									X	
(34)	BH12_3.6-3.7	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag	X									
93	BH12_3.7-3.8	21/08/2015	X					X		1 x 250 mL soil jar & 1 x bag									X	
2	QC201	21/08/2015	X					X		1 x 250 mL soil jar	X	X	X	X			X	X		Please forward sample QC201 to Envirolab with COC

* Metals Required (Delete elements not required): As Cd Cr Cu Ni Pb Zn Hg

Comments: Metals - Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Mercury Zinc

Lab Report No.
Esky ID

Relinquished by:	Kate Pigram	Signed:	Date: 24/08/2015	Relinquished by:	Signed: Date:
Recieved by:		Signed:	Date:	Recieved by:	Signed: Date: 24/8/15

Printed copies of this document are uncontrolled

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ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES1529984**	Page	: 1 of 7
Client	: **AECOM Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: MR ALEX LATHAM	Contact	: Barbara Hanna
Address	: LEVEL 21, 420 George Street SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: alex.latham@aecom.com	E-mail	: Barbara.Hanna@alsglobal.com
Telephone	: +61 02 8934 0000	Telephone	: +61 2 8784 8555
Facsimile	: +61 02 8934 0001	Facsimile	: +61-2-8784 8500
Project	: 60438840/1.1 Burrows	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Order number	: 60438840/1.1	Date Samples Received	: 01-Sep-2015 10:50
C-O-C number	: ----	Date Analysis Commenced	: 03-Sep-2015
Sampler	: ----	Issue Date	: 08-Sep-2015 16:47
Site	: ----		
		No. of samples received	: 10
Quote number	: ----	No. of samples analysed	: 10

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

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

Signatories	*Position*	*Accreditation Category*
Ashesh Patel	Inorganic Chemist	Sydney Inorganics
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Organics
Raymond Commodore	Instrument Chemist	Sydney Inorganics

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

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

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

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

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

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.

- EG035T: Poor precision was obtained for Mercury on sample ES1529984 # 4 due to sample heterogeneity. Results have been confirmed by re-extraction and reanalysis.
- EG050G-C: LOR raised for Hexavalent Chromium due to sample matrix.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH01_3.8-3.9	BH11_3.3-3.4	BH12_3.6-3.7	BH16_3.0-3.1	BH21_3.0-3.1
				Client sampling date / time	[21-Aug-2015]	[20-Aug-2015]	[21-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]
Compound	CAS Number	LOR	Unit		ES1529984-001	ES1529984-002	ES1529984-003	ES1529984-004	ES1529984-005
					Result	Result	Result	Result	Result
EA055: Moisture Content									
^ Moisture Content (dried @ 103°C)	----	1	%		32.0	42.7	50.0	35.0	21.6
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		----	22	385	71	<5
Cadmium	7440-43-9	1	mg/kg		----	<1	9	10	<1
Chromium	7440-47-3	2	mg/kg		----	23	36	182	7
Copper	7440-50-8	5	mg/kg		----	78	576	7430	11
Lead	7439-92-1	5	mg/kg		----	142	2770	4370	42
Nickel	7440-02-0	2	mg/kg		----	15	37	254	6
Zinc	7440-66-6	5	mg/kg		----	550	5750	14000	90
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		----	0.3	0.9	1.7	<0.1
EN33: TCLP Leach									
Initial pH	----	0.1	pH Unit		----	----	----	----	----
After HCl pH	----	0.1	pH Unit		----	----	----	----	----
Extraction Fluid Number	----	1	-		----	----	----	----	----
Final pH	----	0.1	pH Unit		----	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	----	----	----	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	----	----	----	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	----	----	----	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	----	----	----	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	----	----	----	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	----	----	----	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	----	----	----	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	----	----	----	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	----	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	----	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	----	----	----	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	----	----	----	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	----	----	----	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	----	----	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	----	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	----	----	----	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	----	----	----	<0.5

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH01_3.8-3.9	BH11_3.3-3.4	BH12_3.6-3.7	BH16_3.0-3.1	BH21_3.0-3.1
				Client sampling date / time	[21-Aug-2015]	[20-Aug-2015]	[21-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]
Compound	CAS Number	LOR	Unit		ES1529984-001	ES1529984-002	ES1529984-003	ES1529984-004	ES1529984-005
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		<0.5	----	----	----	<0.5
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**0.6**	----	----	----	**0.6**
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**1.2**	----	----	----	**1.2**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**96.5**	----	----	----	**91.4**
2-Chlorophenol-D4	93951-73-6	0.5	%		**108**	----	----	----	**101**
2.4.6-Tribromophenol	118-79-6	0.5	%		**73.3**	----	----	----	**72.2**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**101**	----	----	----	**96.5**
Anthracene-d10	1719-06-8	0.5	%		**106**	----	----	----	**121**
4-Terphenyl-d14	1718-51-0	0.5	%		**104**	----	----	----	**99.5**

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH4_1.0-1.1	BH16_2.0-2.1	BH17_2.0-2.1	BH21_0.7-0.8	BH22_2.2-2.3
				Client sampling date / time	[20-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]
Compound	CAS Number	LOR	Unit		ES1529984-006	ES1529984-007	ES1529984-008	ES1529984-009	ES1529984-010
					Result	Result	Result	Result	Result
EA055: Moisture Content									
^ Moisture Content (dried @ 103°C)	----	1	%		----	----	----	----	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		----	----	----	----	----
Cadmium	7440-43-9	1	mg/kg		----	----	----	----	----
Chromium	7440-47-3	2	mg/kg		----	----	----	----	----
Copper	7440-50-8	5	mg/kg		----	----	----	----	----
Lead	7439-92-1	5	mg/kg		----	----	----	----	----
Nickel	7440-02-0	2	mg/kg		----	----	----	----	----
Zinc	7440-66-6	5	mg/kg		----	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		----	----	----	----	----
EN33: TCLP Leach									
Initial pH	----	0.1	pH Unit		8.6	8.3	7.1	7.6	9.4
After HCl pH	----	0.1	pH Unit		1.9	2.2	1.8	1.5	1.6
Extraction Fluid Number	----	1	-		1	1	1	1	1
Final pH	----	0.1	pH Unit		5.9	5.4	6.2	4.9	5.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		----	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		----	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		----	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg		----	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		----	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg		----	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		----	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg		----	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		----	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		----	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		----	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		----	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		----	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		----	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		----	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		----	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH4_1.0-1.1	BH16_2.0-2.1	BH17_2.0-2.1	BH21_0.7-0.8	BH22_2.2-2.3
				Client sampling date / time	[20-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]
Compound	CAS Number	LOR	Unit		ES1529984-006	ES1529984-007	ES1529984-008	ES1529984-009	ES1529984-010
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		----	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		----	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		----	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		----	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		----	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		----	----	----	----	----

Sub-Matrix: **TCLP LEACHATE** (Matrix: **WATER**)

Compound	CAS Number	LOR	Unit	Client sample ID	BH4_1.0-1.1	BH16_2.0-2.1	BH17_2.0-2.1	BH21_0.7-0.8	BH22_2.2-2.3
				Client sampling date / time	[20-Aug-2015]	[22-Aug-2015]	[22-Aug-2015]	[21-Aug-2015]	[21-Aug-2015]
					ES1529984-006	ES1529984-007	ES1529984-008	ES1529984-009	ES1529984-010
					Result	Result	Result	Result	Result
EG005C: Leachable Metals by ICPAES									
Arsenic	7440-38-2	0.1	mg/L		**0.4**	----	----	----	<0.1
Lead	7439-92-1	0.1	mg/L		**15.9**	----	----	----	**47.1**
Nickel	7440-02-0	0.1	mg/L		----	----	----	----	**0.6**
EG035C: Leachable Mercury by FIMS									
Mercury	7439-97-6	0.001	mg/L		----	<0.0010	----	----	----
EG050G: Hexavalent Chromium by Discrete Analyser									
Hexavalent Chromium	18540-29-9	0.01	mg/L		----	----	<0.05	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Benzo(a)pyrene	50-32-8	0.5	µg/L		<0.5	----	----	<0.5	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1	%		**22.2**	----	----	**20.0**	----
2-Chlorophenol-D4	93951-73-6	1	%		**47.3**	----	----	**38.9**	----
2.4.6-Tribromophenol	118-79-6	1	%		**39.5**	----	----	**40.7**	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1	%		**72.8**	----	----	**67.6**	----
Anthracene-d10	1719-06-8	1	%		**87.0**	----	----	**61.5**	----
4-Terphenyl-d14	1718-51-0	1	%		**76.8**	----	----	**72.7**	----

QUALITY CONTROL REPORT

Work Order	: **ES1529984**	Page	: 1 of 7
Client	: **AECOM Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: MR ALEX LATHAM	Contact	: Barbara Hanna
Address	: LEVEL 21, 420 George Street SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: alex.latham@aecom.com	E-mail	: Barbara.Hanna@alsglobal.com
Telephone	: +61 02 8934 0000	Telephone	: +61 2 8784 8555
Facsimile	: +61 02 8934 0001	Facsimile	: +61-2-8784 8500
Project	: 60438840/1.1 Burrows	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Order number	: 60438840/1.1	Date Samples Received	: 01-Sep-2015
C-O-C number	: ----	Date Analysis Commenced	: 03-Sep-2015
Sampler	: ----	Issue Date	: 08-Sep-2015
Site	: ----	No. of samples received	: 10
Quote number	: ----	No. of samples analysed	: 10

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted.

This Quality Control Report contains the following information:

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

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

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

Ashesh Patel	Inorganic Chemist	Sydney Inorganics
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Organics
Raymond Commodore	Instrument Chemist	Sydney Inorganics

General Comments

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

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

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

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EA055: Moisture Content (QC Lot: 201817)									
ES1529984-001	BH01_3.8-3.9	EA055-103: Moisture Content (dried @ 103°C)	----	1	%	32.0	32.4	1.28	0% - 20%
ES1529986-007	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1	%	18.3	19.2	5.27	0% - 50%
EG005T: Total Metals by ICP-AES (QC Lot: 204711)									
ES1529478-002	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	14	9	37.1	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	8	7	20.4	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	30	32	6.29	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	174	192	10.1	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	169	171	1.22	0% - 20%
ES1529984-003	BH12_3.6-3.7	EG005T: Cadmium	7440-43-9	1	mg/kg	9	5	57.3	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	36	32	11.6	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	37	30	19.0	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	385	326	16.6	0% - 20%
		EG005T: Copper	7440-50-8	5	mg/kg	576	674	15.8	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	2770	2280	19.2	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	5750	6570	13.3	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 204712)									
ES1529478-002	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.1	0.2	0.00	No Limit
ES1529984-003	BH12_3.6-3.7	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.9	0.7	19.2	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 201900)									
ES1529968-018	Anonymous	EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	0.7	0.7	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	0.7	0.8	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	0.6	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	0.7	0.7	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	3.0	2.5	15.7	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 201900) - continued									
ES1529968-018	Anonymous	EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	0.6	0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	2.5	2.2	14.1	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	8.2	8.0	2.47	0% - 50%
ES1529968-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	0.9	1.0	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	0.8	0.9	15.7	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	1.2	1.3	11.4	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	1.2	1.5	22.7	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	1.0	0.9	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	0.6	0.6	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	1.0	1.0	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	3.3	3.4	3.14	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	0.6	0.6	0.00	No Limit
		EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	0.6	0.5	17.6	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	3.1	3.1	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	13.1	13.5	3.01	0% - 20%

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG005C: Leachable Metals by ICPAES (QC Lot: 204954)									
ES1529750-001	Anonymous	EG005C: Arsenic	7440-38-2	0.1	mg/L	<0.1	<0.1	0.00	No Limit
		EG005C: Lead	7439-92-1	0.1	mg/L	<0.1	<0.1	0.00	No Limit
		EG005C: Nickel	7440-02-0	0.1	mg/L	<0.1	<0.1	0.00	No Limit
ES1529750-010	Anonymous	EG005C: Arsenic	7440-38-2	0.1	mg/L	<0.1	<0.1	0.00	No Limit
		EG005C: Lead	7439-92-1	0.1	mg/L	<0.1	<0.1	0.00	No Limit
		EG005C: Nickel	7440-02-0	0.1	mg/L	0.1	0.1	0.00	No Limit
EG035C: Leachable Mercury by FIMS (QC Lot: 204825)									
ES1529750-001	Anonymous	EG035C: Mercury	7439-97-6	0.0001	mg/L	<0.0010	<0.0010	0.00	No Limit
ES1529750-011	Anonymous	EG035C: Mercury	7439-97-6	0.0001	mg/L	<0.0010	<0.0010	0.00	No Limit
EG050G: Hexavalent Chromium by Discrete Analyser (QC Lot: 205903)									
ES1529844-001	Anonymous	EG050G-C: Hexavalent Chromium	18540-29-9	0.01	mg/L	0.29	0.29	0.00	0% - 20%

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

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

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 204711)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	102	92	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	98.0	87	121
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	95.0	80	136
EG005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	98.2	93	127
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	98.7	86	124
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	102	93	131
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	100	81	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 204712)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	77.7	70	105
EN33: TCLP Leach (QCLot: 203133)								
EN33a: After HCl pH	----	0.1	pH Unit	1.0	----	----	----	----
EN33a: Final pH	----	0.1	pH Unit	1.0	----	----	----	----
EN33a: Initial pH	----	0.1	pH Unit	1.0	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 201900)								
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	92.6	79	123
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	93.2	77	123
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	99.4	79	123
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	89.5	73	121
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	98.1	76	122
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	90.7	70	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	96.5	72	114
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	96.7	77	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	90.6	81	123
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	95.5	72	113
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	96.9	79	123
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	91.0	77	123
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	87.6	71	113
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	96.6	80	124
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	96.7	79	123
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	95.8	79	125

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EG005C: Leachable Metals by ICPAES (QCLot: 204954)								
EG005C: Arsenic	7440-38-2	0.1	mg/L	<0.1	0.1 mg/L	118	80	124
EG005C: Lead	7439-92-1	0.1	mg/L	<0.1	0.1 mg/L	105	83	117
EG005C: Nickel	7440-02-0	0.1	mg/L	<0.1	0.1 mg/L	109	81	119
EG035C: Leachable Mercury by FIMS (QCLot: 204825)								
EG035C: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	95.8	79	119
EG050G: Hexavalent Chromium by Discrete Analyser (QCLot: 205903)								
EG050G-C: Hexavalent Chromium	18540-29-9	0.01	mg/L	<0.01	0.5 mg/L	100	82	124
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 205072)								
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	92.0	63	117

Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EG005T: Total Metals by ICP-AES (QCLot: 204711)							
ES1529478-002	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	108	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	96.0	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	90.6	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	102	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	89.6	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	90.1	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	79.7	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 204712)							
ES1529478-002	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	97.5	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 201900)							
ES1529968-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	94.3	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	104	70	130

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EG005C: Leachable Metals by ICPAES (QCLot: 204954)							
ES1529750-002	Anonymous	EG005C: Arsenic	7440-38-2	1 mg/L	120	70	130
		EG005C: Lead	7439-92-1	1 mg/L	107	70	130
		EG005C: Nickel	7440-02-0	1 mg/L	107	70	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EG035C: Leachable Mercury by FIMS (QCLot: 204825)							
ES1529750-002	Anonymous	EG035C: Mercury	7439-97-6	0.01 mg/L	82.0	70	130
EG050G: Hexavalent Chromium by Discrete Analyser (QCLot: 205903)							
ES1529844-001	Anonymous	EG050G-C: Hexavalent Chromium	18540-29-9	0.5 mg/L	109	70	130

QA/QC Compliance Assessment for DQO Reporting

Work Order	: **ES1529984**	Page	: 1 of 6
Client	: **AECOM Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: MR ALEX LATHAM	Telephone	: +61 2 8784 8555
Project	: 60438840/1.1 Burrows	Date Samples Received	: 01-Sep-2015
Site	: ----	Issue Date	: 08-Sep-2015
Sampler	: ----	No. of samples received	: 10
Order number	: 60438840/1.1	No. of samples analysed	: 10

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

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Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

Matrix: **SOIL**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Method Blanks (MB)					
TCLP for Non & Semivolatile Analytes	0	10	0.00	9.09	NEPM 2013 Schedule B(3) and ALS QCS3 requirement

Matrix: **WATER**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
PAH/Phenols (GC/MS - SIM)	0	13	0.00	10.00	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)					
PAH/Phenols (GC/MS - SIM)	0	13	0.00	5.00	NEPM 2013 Schedule B(3) and ALS QCS3 requirement

Analysis Holding Time Compliance

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

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

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

Matrix: **SOIL**

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

Method / *Container* / Client Sample ID(s)	*Sample Date*	*Extraction / Preparation*			*Analysis*		
		Date extracted	*Due for extraction*	*Evaluation*	*Date analysed*	*Due for analysis*	*Evaluation*
EA055: Moisture Content							
Soil Glass Jar - Unpreserved (EA055-103) BH11_3.3-3.4	**20-Aug-2015**	**----**	----	----	**03-Sep-2015**	03-Sep-2015	✓
Soil Glass Jar - Unpreserved (EA055-103) BH01_3.8-3.9, BH12_3.6-3.7	**21-Aug-2015**	**----**	----	----	**03-Sep-2015**	04-Sep-2015	✓
Soil Glass Jar - Unpreserved (EA055-103) BH16_3.0-3.1, BH21_3.0-3.1	**22-Aug-2015**	**----**	----	----	**03-Sep-2015**	05-Sep-2015	✓
EG005T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) BH11_3.3-3.4	**20-Aug-2015**	**07-Sep-2015**	16-Feb-2016	✓	**07-Sep-2015**	16-Feb-2016	✓
Soil Glass Jar - Unpreserved (EG005T) BH12_3.6-3.7	**21-Aug-2015**	**07-Sep-2015**	17-Feb-2016	✓	**07-Sep-2015**	17-Feb-2016	✓
Soil Glass Jar - Unpreserved (EG005T) BH16_3.0-3.1, BH21_3.0-3.1	**22-Aug-2015**	**07-Sep-2015**	18-Feb-2016	✓	**07-Sep-2015**	18-Feb-2016	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) BH11_3.3-3.4	**20-Aug-2015**	**07-Sep-2015**	17-Sep-2015	✓	**08-Sep-2015**	17-Sep-2015	✓
Soil Glass Jar - Unpreserved (EG035T) BH12_3.6-3.7	**21-Aug-2015**	**07-Sep-2015**	18-Sep-2015	✓	**08-Sep-2015**	18-Sep-2015	✓
Soil Glass Jar - Unpreserved (EG035T) BH16_3.0-3.1, BH21_3.0-3.1	**22-Aug-2015**	**07-Sep-2015**	19-Sep-2015	✓	**08-Sep-2015**	19-Sep-2015	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) BH01_3.8-3.9	**21-Aug-2015**	**03-Sep-2015**	04-Sep-2015	✓	**03-Sep-2015**	13-Oct-2015	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) BH21_3.0-3.1	**22-Aug-2015**	**03-Sep-2015**	05-Sep-2015	✓	**03-Sep-2015**	13-Oct-2015	✓

Matrix: **WATER**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG005C: Leachable Metals by ICPAES							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG005C) BH4_1.0-1.1, BH22_2.2-2.3	**04-Sep-2015**	**07-Sep-2015**	02-Mar-2016	✓	**07-Sep-2015**	02-Mar-2016	✓
EG035C: Leachable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035C) BH16_2.0-2.1	**04-Sep-2015**	**----**	----	----	**07-Sep-2015**	02-Oct-2015	✓
EG050G: Hexavalent Chromium by Discrete Analyser							
Clear Plastic Bottle - NaOH (EG050G-C) BH17_2.0-2.1	**04-Sep-2015**	**----**	----	----	**07-Sep-2015**	02-Oct-2015	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM)) BH4_1.0-1.1, BH21_0.7-0.8	**04-Sep-2015**	**07-Sep-2015**	11-Sep-2015	✓	**08-Sep-2015**	17-Oct-2015	✓

Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055-103	2	20	**10.00**	**10.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	2	17	**11.76**	**10.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	20	**10.00**	**10.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	2	20	**10.00**	**10.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	17	**5.88**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	17	**5.88**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TCLP for Non & Semivolatile Analytes	EN33a	0	10	**0.00**	**9.09**	×	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	17	**5.88**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement

Matrix: **WATER**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Hexavalent Chromium by Discrete Analyser - Leachable	EG050G-C	1	2	**50.00**	**10.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Leachable Mercury by FIMS	EG035C	2	13	**15.38**	**10.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Leachable Metals by ICPAES	EG005C	2	15	**13.33**	**10.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	13	**0.00**	**10.00**	×	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Hexavalent Chromium by Discrete Analyser - Leachable	EG050G-C	1	2	**50.00**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Leachable Mercury by FIMS	EG035C	1	13	**7.69**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Leachable Metals by ICPAES	EG005C	1	15	**6.67**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	13	**7.69**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Hexavalent Chromium by Discrete Analyser - Leachable	EG050G-C	1	2	**50.00**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Leachable Mercury by FIMS	EG035C	1	13	**7.69**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Leachable Metals by ICPAES	EG005C	1	15	**6.67**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	13	**7.69**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement

Matrix: **WATER**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Matrix Spikes (MS)							
Hexavalent Chromium by Discrete Analyser - Leachable	EG050G-C	1	2	**50.00**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Leachable Mercury by FIMS	EG035C	1	13	**7.69**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Leachable Metals by ICPAES	EG005C	1	15	**6.67**	**5.00**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	13	**0.00**	**5.00**	×	NEPM 2013 Schedule B(3) and ALS QCS3 requirement

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055-103	SOIL	In-house. A gravimetric procedure based on weight loss over a 12 hour drying period at 103-105 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Leachable Metals by ICPAES	EG005C	SOIL	In house: referenced to APHA 3120; USEPA SW 846 - 6010: The ICPAES technique ionises leachate sample atoms emitting a characteristic spectrum. This spectrum is then compared against matrix matched standards for quantification. This method is compliant with NEPM (2013) Schedule B(3)
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Leachable Mercury by FIMS	EG035C	SOIL	In house: referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the TCLP solution. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Hexavalent Chromium by Discrete Analyser - Leachable	EG050G-C	SOIL	In house: Referenced to APHA 3500 Cr-A & B. Hexavalent chromium is determined directly on leachate samples by Descrete Analyser as received by pH adjustment and colour development using dephenylcarbazide. Each run of samples is measured against a five-point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
PAH/Phenols (SIM)	EP075(SIM)	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)

Preparation Methods	Method	Matrix	Method Descriptions
TCLP for Non & Semivolatile Analytes	EN33a	SOIL	In house QWI-EN/33 referenced to USEPA SW846-1311: The TCLP procedure is designed to determine the mobility of both organic and inorganic analytes present in wastes. The standard TCLP leach is for non-volatile and Semivolatile test parameters.
Tumbler Extraction of Solids	ORG17	SOIL	In-house, Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES1529984**

Client	: **AECOM Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: MR ALEX LATHAM	Contact	: Barbara Hanna
Address	: LEVEL 21, 420 George Street SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: alex.latham@aecom.com	E-mail	: Barbara.Hanna@alsglobal.com
Telephone	: +61 02 8934 0000	Telephone	: +61 2 8784 8555
Facsimile	: +61 02 8934 0001	Facsimile	: +61-2-8784 8500
Project	: 60438840/1.1 Burrows	Page	: 1 of 3
Order number	: 60438840/1.1	Quote number	: EB2015AECOMAU0580 (EN/004/15)
C-O-C number	: ----	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
Sampler	:		

Dates

Date Samples Received	: 01-Sep-2015 10:50 AM	Issue Date	: 02-Sep-2015
Client Requested Due Date	: 08-Sep-2015	Scheduled Reporting Date	: **08-Sep-2015**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Not Available
No. of coolers/boxes	: ----	Temperature	: 4.1' C
Receipt Detail	: REBATCH OF ES1529109	No. of samples received / analysed	: 10 / 10

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **This is a rebatch of ES1529109.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (14 days), Solid (60 days) from date of completion of work order.

Sample Container(s)/Preservation Non-Compliances

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

No sample container / preservation non-compliance exist.

Summary of Sample(s) and Requested Analysis

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

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	SOIL - EA055-103 Moisture Content	SOIL - EG005C Leachable Metals by ICPAES	SOIL - EG035C Leachable Mercury by FIMS	SOIL - EG050G-C Hexavalent Chromium by Discrete Analyser -	SOIL - EP075 SIM PAH only SIM - PAH only	SOIL - S-02 8 Metals (incl. Digestion)
ES1529984-001	[21-Aug-2015]	BH01_3.8-3.9	✓				✓	
ES1529984-002	[20-Aug-2015]	BH11_3.3-3.4	✓					✓
ES1529984-003	[21-Aug-2015]	BH12_3.6-3.7	✓					✓
ES1529984-004	[22-Aug-2015]	BH16_3.0-3.1	✓					✓
ES1529984-005	[22-Aug-2015]	BH21_3.0-3.1	✓				✓	✓
ES1529984-006	[20-Aug-2015]	BH4_1.0-1.1		✓			✓	
ES1529984-007	[22-Aug-2015]	BH16_2.0-2.1			✓			
ES1529984-008	[22-Aug-2015]	BH17_2.0-2.1				✓		
ES1529984-009	[21-Aug-2015]	BH21_0.7-0.8					✓	
ES1529984-010	[21-Aug-2015]	BH22_2.2-2.3		✓				

Proactive Holding Time Report

The following table summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory.

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

Method / Client Sample ID(s)	Container	Due for extraction	Due for analysis	Samples Received		Instructions Received	
				Date	Evaluation	Date	Evaluation
EP075(SIM): PAH/Phenols (GC/MS - SIM)							
BH21_0.7-0.8	Amber Glass Bottle - Unpreserve	28-Aug-2015	07-Oct-2015	01-Sep-2015		----	----
BH4_1.0-1.1	Amber Glass Bottle - Unpreserve	27-Aug-2015	06-Oct-2015	01-Sep-2015		----	----

Requested Deliverables

ALEX LATHAM

- *AU Certificate of Analysis - NATA (COA)	Email	alex.latham@aecom.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	alex.latham@aecom.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	alex.latham@aecom.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	alex.latham@aecom.com
- A4 - AU Tax Invoice (INV)	Email	alex.latham@aecom.com
- Chain of Custody (CoC) (COC)	Email	alex.latham@aecom.com
- EDI Format - ENMRG (ENMRG)	Email	alex.latham@aecom.com
- EDI Format - ESDAT (ESDAT)	Email	alex.latham@aecom.com
- EDI Format - HLAPro (HLAPro)	Email	alex.latham@aecom.com
- EDI Format - XTab (XTAB)	Email	alex.latham@aecom.com

AP_CUSTOMER SERVICE ANZ

- A4 - AU Tax Invoice (INV)	Email	AP_CustomerService.ANZ@aecom.com

KATE PIGRAM

- *AU Certificate of Analysis - NATA (COA)	Email	kate.pigram@aecom.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	kate.pigram@aecom.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	kate.pigram@aecom.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	kate.pigram@aecom.com
- A4 - AU Tax Invoice (INV)	Email	kate.pigram@aecom.com
- Chain of Custody (CoC) (COC)	Email	kate.pigram@aecom.com
- EDI Format - ENMRG (ENMRG)	Email	kate.pigram@aecom.com
- EDI Format - ESDAT (ESDAT)	Email	kate.pigram@aecom.com
- EDI Format - HLAPro (HLAPro)	Email	kate.pigram@aecom.com
- EDI Format - XTab (XTAB)	Email	kate.pigram@aecom.com

LAUREN GIBB

- *AU Certificate of Analysis - NATA (COA)	Email	Lauren.Gibb@aecom.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	Lauren.Gibb@aecom.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	Lauren.Gibb@aecom.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	Lauren.Gibb@aecom.com
- A4 - AU Tax Invoice (INV)	Email	Lauren.Gibb@aecom.com
- Chain of Custody (CoC) (COC)	Email	Lauren.Gibb@aecom.com
- EDI Format - ENMRG (ENMRG)	Email	Lauren.Gibb@aecom.com
- EDI Format - ESDAT (ESDAT)	Email	Lauren.Gibb@aecom.com
- EDI Format - HLAPro (HLAPro)	Email	Lauren.Gibb@aecom.com
- EDI Format - XTab (XTAB)	Email	Lauren.Gibb@aecom.com

Dand 1/9 1050

Fadi Soro

From: Barbara Hanna
Sent: Tuesday, 1 September 2015 10:40 AM
To: Fadi Soro
Subject: FW: 60438840 / 1.1 Burrows - Additional Analysis request ES1529109

Hi Guys,

Could you please arrange this rebatch.

Thanks!

Kind Regards

Barbara Hanna

Client Services Manager
ALS | Environmental Division

277-289 Woodpark Road
Smithfield NSW 2164 Australia

T +61 2 8784 8555
F +61 2 8784 8500

www.alsglobal.com

Environmental Division
Sydney
Work Order Reference
ES1529984

Telephone : + 61-2-8784 8555

From: Latham, Alex [mailto:Alex.Latham@aecom.com]
Sent: Tuesday, 1 September 2015 10:29 AM
To: Barbara Hanna
Subject: 60438840 / 1.1 Burrows - Additional Analysis request ES1529109

Hi Barbara,
Could you please arrange the following additional tests on batch ES1529109:

1 BH01_3.8-3.9 PAH
2 BH11_3.3-3.4 suite 8 metals (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn)
3 BH12_3.6-3.7 suite 8 metals
4 BH16_3.0-3.1 suite 8 metals
5 BH21_3.0-3.1 suite 8 metals, PAH

TCLP tests for waste classification

6 BH04_1.0-1.1 B(a)P, As, Pb
7 BH16_2.0-2.1 Hg
8 BH17_2.0-2.1 hexavalent Cr
9 BH21_0.7-0.8 B(a)P

\OBH22_2.2-2.3 As, Ni, Pb

Regards,

Alex Latham
Associate Director
D +61 2 8934 0451 M +61 400 973 821
Alex.Latham@aecom.com

AECOM
Level 21, 420 George Street, Sydney, NSW 2000
PO Box Q410, QVB PO, Sydney, NSW, 1230
T +61 2 8934 0000 F +61 2 8934 0001
www.aecom.com

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES1529729**	Page	: 1 of 11
Client	: **AECOM Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: MR ALEX LATHAM	Contact	: Barbara Hanna
Address	: LEVEL 21, 420 George Street SYDNEY NSW 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: alex.latham@aecom.com	E-mail	: Barbara.Hanna@alsglobal.com
Telephone	: +61 02 8934 0000	Telephone	: +61 2 8784 8555
Facsimile	: +61 02 8934 0001	Facsimile	: +61-2-8784 8500
Project	: 60438840 BURROWS INDUSTRIAL	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Order number	: 60438840	Date Samples Received	: 31-Aug-2015 15:45
C-O-C number	: ----	Date Analysis Commenced	: 03-Sep-2015
Sampler	: KATE PIGRAM	Issue Date	: 08-Sep-2015 15:04
Site	: ----		
		No. of samples received	: 24
Quote number	: ----	No. of samples analysed	: 12

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

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

Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Christopher Owler	Team Leader - Asbestos	Newcastle - Asbestos
Pabi Subba	Senior Organic Chemist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Organics

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

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

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

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

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

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.

- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: Negative results for vinyl tiles should be confirmed by an independent analytical technique.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2

Sub-Matrix: SOIL (Matrix: SOIL)				BH18_0.7-0.8	BH18_2.0-2.1	BH20_0.5-0.6	BH20_1.0-1.1	BH20_2.0-2.1
				[29-Aug-2015]	[29-Aug-2015]	[29-Aug-2015]	[29-Aug-2015]	[29-Aug-2015]
				ES1529729-002	ES1529729-004	ES1529729-007	ES1529729-008	ES1529729-009
				Result	Result	Result	Result	Result
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	----	1	%	17.8	28.4	8.0	6.9	23.3
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	No	No	----
Asbestos Type	1332-21-4	-	--	-	----	-	-	----
Sample weight (dry)	----	0.01	g	200	----	750	368	----
APPROVED IDENTIFIER:	----	-	--	C.OWLER	----	C.OWLER	C.OWLER	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	20	48	<5	116	----
Cadmium	7440-43-9	1	mg/kg	2	<1	<1	4	----
Chromium	7440-47-3	2	mg/kg	28	63	8	9	----
Copper	7440-50-8	5	mg/kg	476	294	10	208	----
Lead	7439-92-1	5	mg/kg	469	1610	29	2030	----
Nickel	7440-02-0	2	mg/kg	68	45	6	41	----
Zinc	7440-66-6	5	mg/kg	704	2240	53	4290	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.1	<0.1	<0.1	<0.1	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----

Sub-Matrix: SOIL (Matrix: SOIL)				BH18_0.7-0.8	BH18_2.0-2.1	BH20_0.5-0.6	BH20_1.0-1.1	BH20_2.0-2.1
				[29-Aug-2015]	[29-Aug-2015]	[29-Aug-2015]	[29-Aug-2015]	[29-Aug-2015]
				ES1529729-002	ES1529729-004	ES1529729-007	ES1529729-008	ES1529729-009
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	**0.6**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	----	----	----	<10
C10 - C14 Fraction	----	50	mg/kg	<50	----	----	----	**70**
C15 - C28 Fraction	----	100	mg/kg	<100	----	----	----	**2350**
C29 - C36 Fraction	----	100	mg/kg	<100	----	----	----	**2060**
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	----	**4480**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	----	----	<10
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	----	----	<10
>C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	----	----	----	**140**
>C16 - C34 Fraction	----	100	mg/kg	<100	----	----	----	**3940**
>C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	**780**
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	----	----	**4860**
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	----	----	**140**
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	----	----	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	----	----	----	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	----	----	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	----	----	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	----	----	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	----	----	<0.2
^ Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	----	----	----	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	----	----	----	<1
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**89.6**	**101**	**97.7**	**97.4**	----
2-Chlorophenol-D4	93951-73-6	0.5	%	**95.2**	**112**	**109**	**114**	----
2.4.6-Tribromophenol	118-79-6	0.5	%	**88.1**	**72.8**	**77.0**	**75.3**	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	**96.4**	**103**	**101**	**93.6**	----

Sub-Matrix: SOIL (Matrix: SOIL)				BH18_0.7-0.8	BH18_2.0-2.1	BH20_0.5-0.6	BH20_1.0-1.1	BH20_2.0-2.1
				[29-Aug-2015]	[29-Aug-2015]	[29-Aug-2015]	[29-Aug-2015]	[29-Aug-2015]
				ES1529729-002	ES1529729-004	ES1529729-007	ES1529729-008	ES1529729-009
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	**116**	**110**	**121**	**116**	**----**
4-Terphenyl-d14	1718-51-0	0.5	%	**110**	**105**	**106**	**110**	**----**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	**98.2**	**----**	**----**	**----**	**95.2**
Toluene-D8	2037-26-5	0.2	%	**90.8**	**----**	**----**	**----**	**87.9**
4-Bromofluorobenzene	460-00-4	0.2	%	**104**	**----**	**----**	**----**	**96.5**

Sub-Matrix: SOIL (Matrix: SOIL)				BH03_0.2-0.3	BH03_1.0-1.2	BH03_3.0-3.1	BH02_0.4-0.5	BH02_2.0-2.1
				[29-Aug-2015]	[29-Aug-2015]	[29-Aug-2015]	[29-Aug-2015]	[29-Aug-2015]
				ES1529729-011	ES1529729-013	ES1529729-016	ES1529729-018	ES1529729-020
				Result	Result	Result	Result	Result
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	----	1	%	13.4	16.6	49.0	8.3	36.2
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	Yes	----	No	----
Asbestos Type	1332-21-4	-	--	-	Ch	----	-	----
Sample weight (dry)	----	0.01	g	384	144	----	350	----
APPROVED IDENTIFIER:	----	-	--	C.OWLER	C.OWLER	----	C.OWLER	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	6	17	<5	59
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	8	12	23	7	33
Copper	7440-50-8	5	mg/kg	228	114	14	140	783
Lead	7439-92-1	5	mg/kg	338	731	31	79	1410
Nickel	7440-02-0	2	mg/kg	6	9	12	3	28
Zinc	7440-66-6	5	mg/kg	279	268	85	106	815
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	1.0	0.6	<0.1	0.2	0.6
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.6	----	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	1.4	----	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	----	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	0.8	----	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	1.4	12.3	----	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	3.1	----	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	2.3	16.8	----	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	2.2	17.0	----	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	0.9	7.6	----	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	1.1	7.4	----	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	1.2	8.6	----	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	2.9	----	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	0.9	6.9	----	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	3.2	----	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	0.9	----	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	0.7	4.5	----	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	10.7	94.0	----	<0.5	----

Sub-Matrix: SOIL (Matrix: SOIL)				BH03_0.2-0.3	BH03_1.0-1.2	BH03_3.0-3.1	BH02_0.4-0.5	BH02_2.0-2.1
				[29-Aug-2015]	[29-Aug-2015]	[29-Aug-2015]	[29-Aug-2015]	[29-Aug-2015]
				ES1529729-011	ES1529729-013	ES1529729-016	ES1529729-018	ES1529729-020
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	**1.1**	**10.1**	----	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**1.4**	**10.1**	----	**0.6**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.7**	**10.1**	----	**1.2**	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	<10	<10	<10	----
C10 - C14 Fraction	----	50	mg/kg	----	<50	<50	<50	----
C15 - C28 Fraction	----	100	mg/kg	----	**280**	<100	<100	----
C29 - C36 Fraction	----	100	mg/kg	----	**160**	<100	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	**440**	<50	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	----	<10	<10	<10	----
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	----	<10	<10	<10	----
>C10 - C16 Fraction	>C10_C16	50	mg/kg	----	<50	<50	<50	----
>C16 - C34 Fraction	----	100	mg/kg	----	**380**	<100	<100	----
>C34 - C40 Fraction	----	100	mg/kg	----	**110**	<100	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	----	**490**	<50	<50	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	----	<50	<50	<50	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	----	<0.2	<0.2	<0.2	----
Toluene	108-88-3	0.5	mg/kg	----	<0.5	<0.5	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg	----	<0.5	<0.5	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	<0.5	<0.5	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg	----	<0.5	<0.5	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg	----	<0.2	<0.2	<0.2	----
^ Total Xylenes	1330-20-7	0.5	mg/kg	----	<0.5	<0.5	<0.5	----
Naphthalene	91-20-3	1	mg/kg	----	<1	<1	<1	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**92.4**	**97.0**	----	**98.0**	----
2-Chlorophenol-D4	93951-73-6	0.5	%	**106**	**112**	----	**109**	----
2.4.6-Tribromophenol	118-79-6	0.5	%	**78.1**	**94.7**	----	**66.8**	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	**96.8**	**96.0**	----	**101**	----

Sub-Matrix: SOIL (Matrix: SOIL)				BH03_0.2-0.3	BH03_1.0-1.2	BH03_3.0-3.1	BH02_0.4-0.5	BH02_2.0-2.1
				[29-Aug-2015]	[29-Aug-2015]	[29-Aug-2015]	[29-Aug-2015]	[29-Aug-2015]
				ES1529729-011	ES1529729-013	ES1529729-016	ES1529729-018	ES1529729-020
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	**112**	**122**	**----**	**122**	**----**
4-Terphenyl-d14	1718-51-0	0.5	%	**102**	**102**	**----**	**102**	**----**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	**----**	**99.9**	**88.0**	**107**	**----**
Toluene-D8	2037-26-5	0.2	%	**----**	**88.1**	**76.9**	**90.5**	**----**
4-Bromofluorobenzene	460-00-4	0.2	%	**----**	**104**	**88.0**	**106**	**----**