Appendix F

Summary of Laboratory Results

Douglas Partners
Geotechnics | Environment | Groundwater

Table F1: Summary of Laboratory Results for Soils

Sample ID	Date Sampled	filling/ natural	Heavy Metals								PAH				TRH						BTEX				MTBE	phenol	CN	PCB[b]	OCP			OPP[b]	NH3	VOC			pH	asbestos
			As	Cd	Cr	Cu	Pb	Hg	Ni	Zn	total[b]	Naphthalene	BaP	BaP TEQ	C_6 - C_{10}	>C_{10}-C_{16}	C6 - C10 less BTEX (F1)	>C10 - C16 less Naphthalene (F2)	>C_{16}-C_{34}	>C_{34}-C_{40}	Benzene	Toluene	Ethylbenzene	Xylenes[c]					HCB	pp-DDT	other OCP[b]			1.3.5-trimethyl benzene	1.2.4-trimethyl benzene	other VOC[b]		
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	pH Units	0.1g/kg
1 / 0.2-0.3	11/12/12	F	<4	<0.5	**4**	**12**	**12**	**0.4**	**4**	**27**	<0.1	<0.1	<0.05	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-
1 / 0.5-1	11/12/12	N	**5**	<0.5	**2**	**4**	**4**	<0.1	**13**	**19**	<0.1	<0.1	<0.05	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	<5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD
1 / 1.6-1.7	11/12/12	N	-	-	-	-	-	-	-	-	-	<1	-	-	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
2 / 0.5-0.7	11/12/12	F	<4	<0.5	**10**	**69**	**40**	**1.7**	**12**	**310**	**1**	**0.3**	<0.05	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	<5	-	<0.1	<0.1	<0.1	<0.1	<0.1	**4.4**	-	-	-	**8.5**	YES[h]
BD1A / 111212[a]	12/12/12	F	<4	<0.5	**9**	**57**	**45**	**1.4**	**11**	**320**	**1.2**	**0.4**	<0.05	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	<5	-	<0.1	<0.1	<0.1	<0.1	<0.1	**4.5**	-	-	-	**8.9**	NAD
BD1B / 111212[a]	11/12/12	F	<3	<0.3	**8.9**	**40**	**42**	**1.2**	**8.1**	**190**	**0.8**	<0.1	<0.1	<0.1	**33**	**25**	<25	**25**	<90	<120	**0.7**	**2.2**	**0.3**	**4.7**	-	**0.1**	-	<1	<0.1	<0.1	<0.5	-	**6.2**	-	-	-	**8.6**	NAD
2 / 1.7-1.8	11/12/12	N	-	-	-	-	-	-	-	-	-	<1	-	-	<25	<50	<25	<50	**370**	**320**	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
2 / 2.2-2.3	11/12/12	N	<4	<0.5	**1**	<1	<1	<0.1	<1	**5**	<0.1	<0.1	<0.05	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	<5	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
3 / 0.1-0.3	13/12/12	F	**11**	<0.5	**12**	**47**	**32**	**0.2**	**32**	**85**	**1.22**	<0.1	**0.12**	<0.5	<25	<50	<25	<50	**190**	**150**	<0.2	<0.5	<1	<3	<0.5	<5	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD
3 / 0.5-0.6	13/12/12	F	**4**	<0.5	**4**	**53**	**35**	**0.2**	**16**	**50**	**0.46**	<0.1	**0.06**	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
3 / 1.7-1.8	13/12/12	N	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	<1	<1	<1	-	-
4 / 0.4-0.5	11/12/12	F	<4	**0.7**	**5**	**490**	**17**	**0.1**	**9**	**96**	**3.63**	<0.1	**0.23**	<0.5	<25	<50	<25	<50	**180**	<100	<0.2	<0.5	<1	<3	<0.5	<5	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD
4 / 1-1.1	11/12/12	N	-	-	-	-	-	-	-	-	-	<1	-	-	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
4 / 2.7-2.8	11/12/12	N	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	<1	<1	<1	-	-
5 / 0-0.3	11/12/12	F	<4	<0.5	**10**	**45**	**14**	<0.1	**9**	**36**	**6.29**	<0.1	**0.59**	**1**	<25	<50	<25	<50	**190**	**130**	<0.2	<0.5	<1	<3	<0.5	<5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD
5 / 2.5-2.6	11/12/12	N	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.5	<25	<50	<25	<50	**160**	**170**	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	<1	<1	<1	-	-
6 / 0.1-0.3	11/12/12	F	<4	<0.5	**8**	**57**	**15**	<0.1	**14**	**36**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6a / 0.6-0.8	12/12/12	F	<4	<0.5	**2**	**3**	**11**	<0.1	**1**	**3**	<0.1	<0.1	<0.05	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	<5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD
7 / 0.9-1.0	13/12/12	F	<4	<0.5	**8**	**10**	**33**	<0.1	**2**	**32**	**29.4**	**0.2**	**2.6**	**4**	<25	<50	<25	<50	**190**	<100	<0.2	<0.5	<1	<3	<0.5	<5	-	<0.1	<0.1	<0.1	<0.1	<0.1	**2.9**	<1	<1	<1	**8.7**	NAD
7 / 2.3-2.4	13/12/12	N	-	-	-	-	-	-	-	-	-	<1	-	-	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	<1	<1	<1	-	-
8 / 0.5-0.6	12/12/12	F	<4	<0.5	**8**	**27**	**70**	**0.1**	**4**	**630**	**21.5**	<0.1	**2.1**	**3**	<25	<50	<25	<50	**170**	<100	<0.2	<0.5	<1	<3	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-	NAD
8 / 2.2-2.4	12/12/12	N	-	-	-	-	-	-	-	-	-	<1	-	-	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	**1.3**	<1	<1	<1	**7.9**	-
9 / 0.1-0.3	12/12/12	F	**10**	<0.5	**11**	**48**	**42**	**0.1**	**7**	**49**	**15.2**	<0.1	**1.7**	**2**	<25	<50	<25	<50	**120**	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	NAD
BD1 / 121212[a]	12/12/12	F	**10**	<0.5	**11**	**72**	**45**	<0.1	**12**	**53**	**21**	<0.1	**2.5**	**4**	<25	<50	<25	<50	**130**	**150**	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	NAD
10 / 0.5-0.6	12/12/12	F	**5**	<0.5	**4**	**22**	**13**	<0.1	**8**	**34**	**0.2**	<0.1	<0.05	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	<5	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD
11 / 0.1-0.3	12/12/12	F	<4	<0.5	**6**	**21**	**19**	<0.1	**7**	**61**	**2.61**	<0.1	**0.31**	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	NAD
11 / 2.2-2.3	12/12/12	N	-	-	-	-	-	-	-	-	-	<1	-	-	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	**0.9**	<1	<1	<1	-	-
12 / 0.1-0.3	12/12/12	F	<4	<0.5	**44**	**45**	**19**	<0.1	**4**	**38**	**0.06**	<0.1	**0.06**	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	NAD
13 / 0.3-0.4	13/12/12	F	**150**	**1.5**	**19**	**300**	**320**	**0.2**	**23**	**280**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BD3 / 131212[a]	13/12/12	F	**170**	**2.2**	**25**	**350**	**460**	**0.16**	**30**	**410**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 / 0.6-0.7	13/12/12	F	**6**	<0.5	**6**	**65**	**85**	**0.2**	**12**	**140**	**19.2**	**0.2**	**2.2**	**3**	<25	<50	<25	<50	**360**	**210**	<0.2	<0.5	<1	<3	<0.5	<5	-	<0.1	<0.1	**0.4**	<0.1	<0.1	**1.9**	-	-	-	**8.7**	NAD
14 / 0.5-0.7	12/12/12	F	**18**	**2.5**	**260**	**130**	**320**	**4**	**22**	**1,100**	**14.1**	**0.1**	**1.2**	**2**	<25	<50	<25	<50	**550**	**320**	<0.2	<0.5	<1	<3	<0.5	<5	-	<1	**0.6**	<0.1	<0.1	<0.1	-	-	-	-	-	NAD
F14 / 0-1.3	12/12/12	fibro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	YES[i]
14 / 2-2.1	12/12/12	N	-	-	-	-	-	-	-	-	-	<1	-	-	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
15 / 0.1-0.3	12/12/12	F	<4	<0.5	**12**	**25**	**51**	**0.9**	**11**	**120**	**0.45**	**0.1**	**0.05**	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
BD5 / 121212[a]	12/12/12	F	**6**	<0.5	**15**	**39**	**100**	**0.7**	**8**	**120**	**0.1**	<0.1	<0.05	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
F15 / 0.1-0.3	12/12/12	fibro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD
15 / 1-1.1	12/12/12	N	<4	<0.5	**1**	**1**	**2**	<0.1	<1	**12**	<0.1	<1	<0.5	<0.5	<25	**2,700**	<25	**2,700**	**3,600**	**130**	<0.2	<0.5	<1	<3	<0.5	<5	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
15 / 2.5-2.6	12/12/12	N	-	-	-	-	-	-	-	-	**5**	**3**	<0.5	<0.5	**110**	**3,300**	**110**	**3,300**	**2,600**	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	**1**	**2**	<1	-	-
16 / 0.3-0.5	13/12/12	F	<4	<0.5	**6**	**19**	**37**	**0.9**	**6**	**120**	**46.4**	**9**	<0.5	**0.16**	**210**	**12,000**	**210**	**12,000**	**18,000**	**410**	<0.2	<0.5	<1	<3	<0.5	<5	-	<0.1	<0.1	<0.1	<0.1	<0.1	**14**	<1	<1	<1	**7.4**	NAD
16 / 1-1.1	13/12/12	N	-	-	-	-	-	-	-	-	**22.9**	**4.8**	<0.5	<0.5	**87**	**3,800**	**87**	**3,800**	**4,400**	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	**2.3**	<1	<1	<1	**7.9**	-
17 / 0.1-0.3	12/12/12	F	<4	**0.8**	**7**	**33**	**170**	**0.2**	**12**	**170**	<0.1	<0.1	<0.05	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	<0.5	-	-	-	-	-	-	<1	<1	<1	-	-
17 / 2.1-2.5	12/12/12	N	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.05	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	<1	<1	<1	-	-
18 / 0.1-0.3	13/12/12	F	<4	<0.5	**11**	**53**	**12**	**0.2**	**29**	**37**	**0.53**	<0.1	**0.13**	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	<5	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD
18 / 1.9-2.0	13/12/12	N	-	-	-	-	-	-	-	-	-	<1	-	-	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
19 / 0.4-0.6	13/12/12	F	<4	<0.5	**3**	**12**	**9**	<0.1	**10**	**19**	<0.1	<0.1	<0.05	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	<5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD
BD4 / 131212[a]	13/12/12	F	<3	<0.3	**3.7**	**11**	**12**	**0.07**	**10**	**30**	<0.1	<0.1	<0.1	<0.1	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	-	<0.1	<0.1	<1	<0.1	<0.1	<0.5	-	-	-	-	-	-	NAD
20 / 0.4-0.5	12/12/12	F	<4	<0.5	**3**	**13**	**13**	<0.1	**13**	**5**	<0.1	<1	<0.5	<0.5	<25	**970**	<25	**970**	**25,000**	**11,000**	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	NAD
20 / 0.7-0.8	12/12/12	N	<4	<0.5	**2**	<1	<1	<0.1	<1	<1	<0.1	<0.1	<0.05	<0.5	<25	<50	<25	<50	**250**	<100	<0.2	<0.5	<1	<3	<0.5	<5	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<1	<1	<1	-	-
20 / 2.5-2.6	12/12/12	N	-	-	-	-	-	-	-	-	-	<1	-	-	<25	<50	<25	<50	**260**	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
21 / 0-0.1	14/12/12	F	<4	**1**	**13**	**75**	**110**	**0.4**	**10**	**310**	**0.4**	**0.1**	<0.05	<0.5	<25	<50	<25	<50	**120**	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	NAD
21A / SS	12/12/12	F	**4**	<0.5	**9**	**16**	**53**	**0.2**	**3**	**70**	**0.29**	<0.1	**0.09**	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	<5	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD
22 / 0.3-0.4	14/12/12	F	<4	**0.5**	**6**	**28**	**47**	<0.1	**8**	**120**	**3.37**	<0.1	**0.27**	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	<5	-	<0.1	<0.1	<0.1	<0.1	<0.1	**1.9**	-	-	-	**8.6**	NAD
23 / 0.1-0.2	12/12/12	F	<4	<0.5	**1**	**3**	**8**	<0.1	<1	**9**	<0.1	<0.1	<0.05	<0.5	<25	<50	<25	<50	**210**	**160**	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	NAD
23 / 1.1-1.2	12/12/12	N	-	-	-	-	-	-	-	-	-	<1	-	-	<25	**82**	<25	**82**	**570**	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	<1	<1	<1	-	-
24 / 0-0.05	14/12/12	F	<4	<0.5	**5**	**13**	**20**	**0.1**	**5**	**46**	**0.2**	**0.2**	<0.05	<0.5	<25	<50	<25	<50	**1,200**	**950**	<0.2	<0.5	<1	<3	<0.5	<5	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD
24 / 0.9-1.0	14/12/12	N	-	-	-	-	-	-	-	-	-	<1	-	-	<25	**1,900**	<25	**1,900**	**3,700**	**160**	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
25 / 0.1-0.3	14/12/12	F	<4	<0.5	**12**	**33**	**48**	**0.5**	**15**	**100**	**1.01**	<0.1	**0.11**	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-	NAD
26 / 0.1-0.2	14/12/12	F	<4	<0.5	**3**	**16**	**22**	<0.1	**8**	**92**	**1.07**	<0.1	**0.07**	<0.5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	<5	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	NAD
27 / 0.1-0.3	12/12/12	F	<4	<0.5	**10**	**25**	**92**	**0.1**	**21**	**180**	**22.5**	**0.1**	**1.9**	**3**	<25	<50	<25	<50	**120**	<100	<0.2	<0.5	<1	<3	<0.5	<5	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	YES[i]
F1 - -	12/11/31	fibro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	YES[i]
Summary Statistics																																						
No. Samples Analysed (excl. replicates)			35	35	35	35	35	35	35	35	39	50	39	39	50	50	50	50	50	50	50	50	50	50	50	22	8	21	21	21	21	21	8	14	14	14	7	29
Minimum (incl. replicates)			<4	<0.5	1	<1	<1	<0.1	<1	<1	<0.1	<0.1	<0.05	<0.5	<25	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<0.5	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.9	<1	<1	<1	7.4	NAD
Maximum (incl. replicates)			170	2.5	260	490	460	4	32	1,100	46.4	9	2.6	4	210	12,000	210	12,000	25,000	11,000	0.7	2.2	0.3	4.7	<0.5	<5	<0.5	<1	0.6	0.4	<0.5	<0.1	14	1	2	<1	8.9	Yes
No. Results >PQL (excl. replicates)			9	6	35	33	33	19	31	34	25	11	18	8	3	7	3	7	23	12	0	0	0	0	0	0	0	0	1	1	0	0	8	1	1	0	7	4
Average (of detectable primary samples)			24	1	15	55	54	1	11	131	9	2	1	2	136	3,536	136	3,536	2,718	1,176	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.6	0.4	N/A	N/A	3.7	1	2	N/A	8	N/A

Sample ID	Date Sampled	filling/ natural	Heavy Metals								PAH				TRH								BTEX				MTBE	phenol	CN	PCB [b]	OCP			OPP [b]	NH3	VOC			pH	asbestos
			As	Cd	Cr	Cu	Pb	Hg	Ni	Zn	total [b]	Naphthalene	BaP	BaP TEQ	C_6 - C_{10}	$>C_{10}$-C_{16}	C6 - C10 less BTEX (F1)	>C10 - C16 less Naphthalene (F2)	$>C_{16}$-C_{34}	$>C_{34}$-C_{40}	Benzene	Toluene	Ethylbenzene	Xylenes [c]					HCB	pp-DDT	other OCP [b]			1,3,5-trimethyl benzene	1,2,4-trimethyl benzene	other VOC [b]		
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	pH Units	0.1g/kg
Soil Assessment Criteria (SAC) [d]																																							
All																																							
Management Limits			-	-	-	-	-	-	-	-	-	-	-	-	700	1,000	-	-	3,500	10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reference Concentrations			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	220 [g]	-	-	-	-	-	-	-	-	10,000 [g]	260 [g]	-	-	NAD [d]
Proposed Site Users																																							
HILs Commercial/Industrial	-	-	3,000	900	3,600 [e]	240,000	1,500	730	6,000	400,000	4,000	-	-	40	-	-	-	-	-	-	-	-	-	-	-	240,000	1,500	7	80	3,600 [f]	-	-	-	-	-	-	-	-
HSL D - Direct Contact	-	-	-	-	-	-	-	-	-	-	-	11,000	-	-	-	-	26,000	20,000	27,000	38,000	430	99,000	27,000	81,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Outside of Building Areas																																							
HSL C - Vapour Intrusion	0-<1m	sand	-	-	-	-	-	-	-	-	-	NL	-	-	-	-	NL	NL	-	-	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL C - Vapour Intrusion	1-<2m	sand	-	-	-	-	-	-	-	-	-	NL	-	-	-	-	NL	NL	-	-	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL C - Vapour Intrusion	2-<4m	sand	-	-	-	-	-	-	-	-	-	NL	-	-	-	-	NL	NL	-	-	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL C - Vapour Intrusion	4+m	sand	-	-	-	-	-	-	-	-	-	NL	-	-	-	-	NL	NL	-	-	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
In Building Areas (if any)																																							
HSL D - Vapour Intrusion	0-<1m	sand	-	-	-	-	-	-	-	-	-	NL	-	-	-	-	260	NL	-	-	3	NL	NL	230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL D - Vapour Intrusion	1-<2m	sand	-	-	-	-	-	-	-	-	-	NL	-	-	-	-	NL	NL	-	-	3	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL D - Vapour Intrusion	2-<4m	sand	-	-	-	-	-	-	-	-	-	NL	-	-	-	-	NL	NL	-	-	3	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL D - Vapour Intrusion	4+m	sand	-	-	-	-	-	-	-	-	-	NL	-	-	-	-	NL	NL	-	-	3	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Construction Workers																																							
HILs Commercial/Industrial	-	-	3,000	900	3,600 [e]	240,000	1,500	730	6,000	400,000	4,000	-	-	40	-	-	-	-	-	-	-	-	-	-	-	240,000	1,500	7	80	3,600 [f]	-	-	-	-	-	-	-	-
HSL D - Direct Contact	-	-	-	-	-	-	-	-	-	-	-	11,000	-	-	-	-	26,000	20,000	27,000	38,000	430	99,000	27,000	81,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL C - Vapour Intrusion	0-<1m	sand	-	-	-	-	-	-	-	-	-	NL	-	-	-	-	NL	NL	-	-	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL C - Vapour Intrusion	1-<2m	sand	-	-	-	-	-	-	-	-	-	NL	-	-	-	-	NL	NL	-	-	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL C - Vapour Intrusion	2-<4m	sand	-	-	-	-	-	-	-	-	-	NL	-	-	-	-	NL	NL	-	-	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL C - Vapour Intrusion	4+m	sand	-	-	-	-	-	-	-	-	-	NL	-	-	-	-	NL	NL	-	-	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Intrusive Maintenance Workers																																							
HSL - Direct Contact	0-1m	-	-	-	-	-	-	-	-	-	-	29,000	-	-	-	-	82,000	62,000	85,000	120,000	1,100	120,000	85,000	130,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL Vapour Intrusion	0-<2m	sand	-	-	-	-	-	-	-	-	-	NL	-	-	-	-	NL	NL	-	-	77	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL Vapour Intrusion	2-<4m	sand	-	-	-	-	-	-	-	-	-	NL	-	-	-	-	NL	NL	-	-	160	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL Vapour Intrusion	4+m	sand	-	-	-	-	-	-	-	-	-	NL	-	-	-	-	NL	NL	-	-	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes

a	QA/QC replicate/triplicate of sample listed directly above
b	Where results of one or more component compound are above PQL sum of all results above PQL given, when all results are below PQL results quoted as <PQL of majority of individual analytes
c	Where results of one or more component compound are above PQL sum of all results above PQL given, when all results are below PQL results quoted as less than the sum of PQLs of the individual analytes
d	Refer to report body for details of SAC
e	Guideline concentrations are for Cr (VI). Laboratory results are for total chromium
f	Threshold for DDT+DDD+DDE
g	US EPA Regional Screening Levels (Formerly PRGs): Screening Levels for Industrial Soil (Last updated May 2013)
h	Loose fibre bundles detected at a level below the reporting limit
i	Chrysotile and amosite asbestos detected
-	Not analysed/ not defined/ not applicable
NAD	No asbestos detected above limit of reporting
Bold	Concetration above PQL
Bold	Exceedance of SAC

Acronyms

As	arsenic	Cr	chromium (total)	OCP	organochlorine pesticides
B	boron	Cu	copper	OPP	organophosphorus pesticides
BaP	benzo(a)pyrene	F	filling soil	PAH	polycyclic aromatic hydrocarbons
BaP	benzo(a)pyrene toxicity equivalent	HCB	Hexachlorobenzene	PCB	polychlorinated biphenyls
Be	beryllium	Hg	mercury	Pb	lead
BTEX	benzene, toluene, ethyl benzene, total xylenes	MTBE	methyl tert-butyl ether	pp-DDT	pp-dichlorodiphenyltrichloroethane
Cd	cadmium	Mn	manganese	PQL	practical quantitation limit
Co	cobalt	N	natural soil	TRH	total recoverable hydrocarbons, including total petroleum hydrocarbons (TPH)
CN	cyanide (total)	NH3	ammonia as nitrogen	VOC	volatile organic compounds
		Ni	nickel	Zn	zinc

Table F2: Summary of Laboratory Results for Soils - Aliphatic/ Aromatic TPH Analysis

Sample ID	Date Sampled	filling/ natural	TPH		
			C16-C35 Aliphatic	>C35 Aliphatic	C16-C35 Aromatic
			mg/kg	mg/kg	mg/kg
16 / 0.3-0.5	13/12/12	F	14,000	<200	5,800
20 / 0.4-0.5	12/12/12	F	7,700	2,600	8,800

Acronyms

TPH total petroleum hydrocarbons

Table F3: Summary of Laboratory Results for Groundwater

Sample ID	Date	Hardness	Heavy Metals (total dissolved)								NH3	PAH				TRH						BTEX				VOC [b]						phenol	PCB [b]	OCP		OPP [b]
			arsenic	cadmium	chromium	copper	lead	mercury	nickel	zinc		naphthalene	acenaphthene	fluorene	other [b]	C_6 - C_{10}	>C_{10} - C_{16}	C_6 - C_{10} less BTEX (F1)	>C10 - C16 less Naphthalene (F2)	>C_{16} - C_{34}	>C_{34} - C_{40}	benzene	toluene	ethylbenzene	xylene [c]	vinyl chloride	1,1-dichloroethane	cis-1,2-dichloroethene (cis-DCE)	trichloroethene (TCE)	tetrachloroethene (PCE)	other [b]			HCB	other [b]	
		mgCaCO3/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L
DP (2013)																																				
GW3	17/01/13	87	**5**	<0.1	**3**	<1	<1	<0.05	<1	**7**	**2.5**	<0.1	<0.1	<0.1	<0.1	**30**	<50	**30**	<50	**130**	<100	<1	<1	<1	<3	**14**	**2**	**19**	**8**	**4**	<1/<10	<0.05	<0.01	**0.02**	<0.001	<0.010
GW-CPT4	17/01/13	180	**2**	<0.1	**1**	<1	<1	<0.05	**1**	**17**	**0.52**	<0.1	**0.1**	**0.2**	<0.1	**14**	**75**	**14**	**75**	**230**	<100	<1	<1	<1	<3	<10	<1	**2**	**4**	**6**	<1/<10	<0.05	<0.01	**0.007**	<0.001	<0.010
BD1A/170113 [a]	17/01/13	170	**2**	<0.1	<1	<1	<1	<0.05	**1**	**86**	**0.53**	<0.1	**0.1**	**0.2**	<0.1	**14**	**62**	**14**	**62**	**160**	<100	<1	<1	<1	<3	<10	<1	**2**	**3**	**6**	<1/<10	<0.05	<0.01	**0.006**	<0.001	<0.010
GWBD1B/170113 [a]	17/01/13	200	**2**	<0.1	**1**	<1	<1	<0.0001	**2**	**32**	**0.87**	<0.1	**0.1**	**0.3**	<0.1	<50	<60	<50	<60	<500	<500	<0.5	<0.5	<0.5	<1.5	**0.4**	**0.7**	**2.4**	**4.4**	**6**	<0.5/<5	**0.02**	<0.004	<0.01	<0.01	<0.05
GW-EU101	17/01/13	71	**6**	<0.1	**5**	<1	<1	**0.1**	**1**	**6**	**2.1**	<0.1	<0.1	<0.1	<0.1	<10	<50	<10	<50	<100	<100	<1	<1	<1	<3	<10	<1	<1	<1	<1	<1/<10	<0.05	<0.01	**0.018**	<0.001	<0.010
Additional Investigation by Veolia Environmental Services																																				
BTT-MW3	17/07/13	-	**2**	**0.2**	<1	<1	<0.1	<1	<1	**50**	**-**	<1.0	<1.0	<1.0	<0.5	<20	<100	<20	<100	<100	<100	<1	<2	<2	<2	<0.3	<0.1	<0.1	**0.19**	**0.08**	<0.1	-	-	**-**	-	-
BTT-MW CTP4	17/07/13	-	**57**	<0.1	**4**	**11**	<0.1	**11**	<1	**157**	**-**	<1.0	<1.0	<1.0	<0.5	<20	**260**	<20	**260**	**3,220**	<100	<1	**12**	<2	**0.06**	<0.3	<0.1	<0.1	<0.05	<0.05	<0.1	-	-	**-**	-	-
BTT-MW20	17/07/13	-	**1**	<0.1	<1	**2**	<0.1	<1	<1	**<5**	**-**	<1.0	<1.0	<1.0	<0.5	<20	<100	<20	<100	<100	<100	<1	<2	<2	<2	<0.3	<0.1	**0.2**	**0.58**	**0.5**	<0.1	-	-	**-**	-	-
BTT-MW001 [a]	17/07/13	-	<1	<0.1	<1	**2**	<0.1	<1	<1	**8**	**-**	<1.0	<1.0	<1.0	<0.5	<20	<100	<20	<100	<100	<100	<1	<2	<2	<2	<0.3	<0.1	**0.2**	**0.43**	**0.37**	<0.1	-	-	**-**	-	-
Groundwater Assessment Criteria (GAC) [d]																																				
GIL	(marine - high reliability)		-	0.7	27/4.4 [f]	1.3	4.4	0.1	7	15	5.96 [g]	50	-	-	-	-[h]	-[h]	-[h]	-[h]	-[h]	-[h]	500	-	-	-	-	-	-	-	-	-	0.4	-	-	-	-
HSL-C	2-<4m	sand	-	-	-	-	-	-	-	-	-	NL	-	-	-	-	-	NL	NL	-	-	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-
HSL-D	2-<4m	sand	-	-	-	-	-	-	-	-	-	NL	-	-	-	-	-	6,000	NL	-	-	5,000	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-
HSL-IMW	2-<4m	sand	-	-	-	-	-	-	-	-	-	NL	-	-	-	-	-	NL	NL	-	-	NL	NL	NL	NL	-	-	-	-	-	-	-	-	-	-	-
ADWG [i]			10	2	50 [j]	2,000	10	1	20	-	-	-	-	-	-	-	-	-	-	-	-	1	800	300	600	0.3	-	60	-	50	-	-	-	-	-	-
Reference Levels																																				
marine - low reliability [k]			4.5/2.3 [L]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180	5	350/ 200/75 [o]	100	-	-	330	70	-	-	-	0.05	-	-
Other			-	-	-	-	-	-	-	3,000 [m]	0.5 [m]	-	400 [n]	220 [n]	-	-	-	-	150 [o]	600 [o]		-	-	-	-	-	2.4 [n]	-	-		-	-	-	-	-	-	-

notes

a	QA/QC replicate of sample listed directly above
b	Where results of one or more component compound are above PQL sum of all results above PQL given, when all results are below PQL results quoted as <PQL of majority of individual analytes
c	Where results of one or more component compound are above PQL sum of all results above PQL given, when all results are below PQL results quoted as less than the sum of PQLs of the individual analytes
d	Refer to report body for details of GAC
e	ANZECC (2000) Guidelines for the protection of aquatic ecosystems – Marine Waters – 95% Level of Protection (LOP), with 99% LOP for bioaccumative compounds
f	Thresholds given in order Cr(III) / Cr (VI)
g	Ammonia thresholds quoted for pH of 6 based on field pH measurements
h	No threshold set. EPA advice indicates component compounds should be assessed were detectable TPH (detected as part of the TRH analysis) recorded
i	NHMRC (2011) National Water Quality Management Strategy *Australian Drinking Water Guidelines* [ADWG], health-based guideline
j	For chromium (VI)
k	ANZECC (2000). Low reliability trigger value for marine water
L	Thresholds given in order As(V) / As(III)
m	NHMRC (2011) National Water Quality Management Strategy Australian Drinking Water Guidelines [ADWG] Aesthetic-based threshold, no health-based threshold available
n	USEPA (May 2013) *Superfund: Preliminary Remediation Goals, Table Region 9 PRG*, screening levels for tapwater
o	Airport (Environment Protection) Regulations (1997), Schedule 2 Water Pollution Accepted Limits: Table 1.03 – Accepted limits of contamination
-	Not analysed/ not defined/ not applicable
Bold	Concetration above PQL
Bold Outline	Exceedance of reference value or above expected background level in absence of a GIL
Bold	Exceedance of GIL

Acronyms

As	arsenic, dissolved	OCP	organochlorine pesticides
BTEX	benzene, toluene, ethyl benzene, total xylenes	OPP	organophosphorus pesticides
Cd	cadmium, dissolved	PAH	polycyclic aromatic hydrocarbons
Cr	chromium (total), dissolved	Pb	lead, dissolved
Cu	copper, dissolved	PCB	polychlorinated biphenyls
HCB	hexachlorobenzene	PQL	practical quantitation limit
Hg	mercury, dissolved	TRH	total recoverable hydrocarbons, including total petroleum hydrocarbons (TPH)
NH3	ammonia	VOC	volatile organic compounds (excluding BTEX)
Ni	nickel, dissolved	Zn	zinc, dissolved

Appendix G

NATA Laboratory Reports

Chain of Custody Documentation

Chromatograms

Douglas Partners
Geotechnics · Environment · Groundwater

CHAIN OF CUSTODY

Project Name: Banksmeadow - PN
Project No: 37278.05 Sampler: ...NLE/MW
Project Mgr: NLE Mob. Phone: 0414 769 011
Email: nerilee.edwards@douglaspartners.com.au
Date Required: STD; ESdat Format Lab Quote No.

To: Envirolab Services
12 Ashley St Chatswood 2067
Attn: Tania Notaras
Phone: (02) 9910 6200 Fax: (02) 9910 6201
Email: tnotaras@envirolabservices.com.au

ENVIROLAB
Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9510 6200

Job No: 83246
Date Received: 17/12/12 COC 18/12/12
Time Received: 1400
Received by: MP / AH.
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Sample ID	Lab ID	Sampling Date	Sample Type S - soil W - water	Container type G - glass P - plastic	Analytes: HM8	TRH/BTEX MTBE	PAH	OCP OPP PCB	phenol	VOC	asbestos	pH	ammonia	Notes/preservation
1/0-0.1	1	11/12	S	G,P										Combo
1/0.2-0.3	2	"	"	"										Combo
1/0.5-1	3	"	"	"	✓	✓	✓	✓	✓		✓	+	CN	Combo 8a +CN
1/1-1.1	4	"	"	"										Combo
1/1.5-1.7	5	"	"	"		✓								Combo
2/0-0.1	6	"	"	"										Combo
2/0.2-0.3	7	"	"	"										Combo
2/0.5-0.7	8	"	"	"	✓	✓	✓	✓	✓		✓	✓	✓	Combo 8a +pH,NH3
2/1.7-1.8	9	"	"	"		✓								Combo
2/2.2-2.3	10	↓	"	"	✓	✓	✓	✓	✓					Combo 8
3/0.1-0.3	11	13/12	"	"	✓	✓	✓	✓	✓		✓			Combo 8a
3/0.5-0.6	12	"	"	"	✓	✓	✓							Combo 3 +CN
3/0.9-1.1	13	↓	↓	↓										Combo

Lab Report No.
Send Results to: Douglas Partners Address: 96 Hermitage Road West Ryde NSW 2114 Phone: (02) 4271 1836 Fax: (02) 4271 1897

Relinquished by: Signed: Date & Time: Transported to laboratory by: Hunter Express
Received By: AH Date & Time: 18/12/12

Form COC

Douglas Partners
Geotechnics · Environment · Groundwater

CHAIN OF CUSTODY

Project Name: Banksmeadow - PN.....
Project No: 37278.05.....Sampler: ...NLE/MW.....
Project Mgr: NLE..... Mob. Phone: 0414 769 011 .....
Email: nerilee.edwards@douglaspartners.com.au .....
Date Required: STD; ESdat Format.....Lab Quote No. .....

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12 Ashley St Chatswood 2067
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Phone: (02) 9910 6200 Fax: (02) 9910 6201
Email: tnotaras@envirolabservices.com.au

Sample ID	Lab ID	Sampling Date	Sample Type S - soil W - water	Container type G - glass P - plastic	Analytes									Notes/preservation
					HM8	TRH/BTEX MTBE	PAH	OCP OPP PCB	phenol	VOC	asbestos	pH	ammonia	
3/1.2-1.3	14	13/12	S	G, P										Combo
3/1.7-1.8	15	13/12				✓	✓			✓				Combo
4/0.1-0.3	-	11/12				✓								Combo
4/0.3-0.4	16													Combo
4/0.4-0.5	17				✓	✓	✓	✓	✓		✓			Combo 8 9
4/0.6-0.7	18													Combo
4/1-1.1	19					✓								Combo
4/1.8-1.9	20													Combo
4/2.7-2.8	21					✓	✓			✓				Combo
5/0-0.3	22				✓	✓	✓	✓	✓		✓		+CN	Combo 8 9 +CN
5/0.8-0.9	23													Combo
5/1.8-1.9	24													Combo
5/2.5-2.6	25	↓	↓	↓		✓	✓			✓				Combo

Lab Report No. .....
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Relinquished by: Signed: Date & Time: Transported to laboratory by: Hunter Express
Received By: Date & Time: 18/12

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Geotechnics · Environment · Groundwater

CHAIN OF CUSTODY

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Sample ID	Lab ID	Sampling Date	Sample Type S - soil W – water	Container type G – glass P - plastic	Analytes: HM8	TRH/BTEX MTBE	PAH	OCP OPP PCB	phenol	VOC	asbestos	pH	ammonia	Notes/preservation
6/0.1-0.3	26		S	G,P	✓									Combo
6/0.6-0.8	27		↓	↓	✓	✓	✓	✓	✓		✓	~~request~~ade		Combo 8 9 +CN
6/0.8-1	28													Combo
6/1.7-1.9	29													Combo
6/2.4-2.5	30													Combo
7/0.1-0.3	31	13/12												Combo
7/0.9-1.0	32	↓			✓	✓	✓	✓	✓	✓	✓	✓	✓	Combo 8 9 +VOC,P 1,4Dio
7/1.2-1.3	33													Combo
7/1.5-1.6	34													Combo
7/2.3-2.4	35	↓				✓				✓				Combo
8/0.2-0.3	36	12/12												Combo
8/0.5-0.6	37	↓			✓	✓	✓				✓		+CN	Combo 3 9 +CN
8/0.9-1.0	38	↓	↓	↓										Combo

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Relinquished by: Signed: Date & Time: Transported to laboratory by: Hunter Express
Received By: AM Date & Time: 18/12

Form COC

Douglas Partners
Geotechnics · Environment · Groundwater

CHAIN OF CUSTODY

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Project No: 37278.05.....Sampler: ...NLE/MW.....
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Sample ID	Lab ID	Sampling Date	Sample Type S - soil W – water	Container type G – glass P - plastic	Analytes: HM8	TRH/BTEX MTBE	PAH	OCP OPP PCB	phenol	VOC	asbestos	pH	ammonia	Notes/preservation
8/2.2-2.4	39	12/12	S	G, P		✓				✓		✓	✓	Combo
9/0.1-0.3	40	↓	↓	↓	✓	✓	✓				✓			Combo 39
9/0.9-1	41													Combo
9/1.6-1.7	42													Combo
9/2-2.1	43													Combo
10/0.1-0.3	44													Combo
10/0.5-0.6	45				✓	✓	✓	✓	✓		✓			Combo 89
10/0.9-1	46													Combo
10/1.4-1.6	47													Combo
10/1.9-2	48	↓												Combo
11/0.1-0.3	49	.			✓	✓	✓				✓			Combo 39
11/1.2-1.3	50													Combo
11/2.2-2.3	51		↓	↓		✓				✓			✓	Combo

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Relinquished by: Signed: Date & Time: Transported to laboratory by: Hunter Express
Received By: AW Date & Time: 18/12/12

Form COC

Douglas Partners
Geotechnics - Environment - Groundwater

CHAIN OF CUSTODY

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Project No: 37278.05.....Sampler: ...NLE/MW.....
Project Mgr: NLE..... Mob. Phone: 0414 769 011 .....
Email: nerilee.edwards@douglaspartners.com.au .....
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Sample ID	Lab ID	Sampling Date	Sample Type S - soil W – water	Container type G – glass P - plastic	Analytes: HM8	TRH/BTEX MTBE	PAH	OCP OPP PCB	phenol	VOC	asbestos	pH	ammonia	Notes/preservation
12/0.1-0.3	52		S	G,P	✓	✓	✓				✓			Combo 3 9
12/0.4-0.5	53													Combo
12/0.9-1.1	54													Combo
13/0.1-0.2	55	13/12												Combo
13/0.3-0.4	56				✓									Combo
13/0.6-0.7	57				✓	✓	✓	✓	✓		✓	✓	✓	Combo 8 9
13/1.1-1.2	58													Combo
13/1.9-2	59	↓												Combo
14/0.1-0.3	60	12/12												Combo
14/0.5-0.7	61				✓	✓	✓	✓	✓		✓			Combo 8 9
14/1.3-1.4	–													Combo
14/2-2.1	62	↓				✓								Combo
15/0.1-0.3	63		↓	↓	✓	✓	✓							Combo

Lab Report No. .....
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Relinquished by: Signed: Date & Time: Transported to laboratory by: Hunter Express
Received By: [illegible] Date & Time: 18/12/12

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Geotechnics · Environment · Groundwater

CHAIN OF CUSTODY

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Project No: 37278.05..... Sampler: ...NLE/MW.....
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Sample ID	Lab ID	Sampling Date	Sample Type S - soil W – water	Container type G – glass P - plastic	Analytes									Notes/preservation
					HM8	TRH/BTEX MTBE	PAH	OCP OPP PCB	phenol	VOC	asbestos	pH	ammonia	
F15/0.1-0.3	64		fibro	P							✓			Combo
15/0.4-0.5	65		S	S,P										Combo
15/1-1.1	66		|	|	✓	✓	✓	✓	✓					Combo 8
15/1.2-1.3	67		|	|										Combo
15/2.5-2.6	68		|	|		✓	✓			✓				Combo
16/0.2-0.25	69	13/12	~~S~~	|										Combo
16/0.3-0.5	70	|	|	|	✓	✓	✓	✓	✓	✓	✓	✓	✓	Combo 8 a
16/0.6-0.7	71	|	|	|										Combo
16/1-1.1	72	↓	|	|		✓	✓					✓	✓	Combo
17/0.1-0.3	132	12/12	|	|	✓	✓	✓			✓			+CN	Combo 3 9 +CN
17/0.5-0.6	73	|	|	|										Combo
17/1.4-1.5	74	|	|	|										Combo
17/2.1-2.5	75	↓	↓	↓		✓	✓			✓					Combo

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Project No: 37278.05 Sampler: ...NLE/MW
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Sample ID	Lab ID	Sampling Date	Sample Type S - soil W - water	Container type G - glass P - plastic	Analytes									Notes/preservation
					HM8	TRH/BTEX MTBE	PAH	OCP OPP PCB	phenol	VOC	asbestos	pH	ammonia	
18/0.1-0.3	76	13/12	S	G, P	✓	✓	✓	✓	✓		✓			Combo 8 9
18/0.3-0.4	77	"	"	"										Combo
18/0.9-1	78	"	"	"										Combo
18/1.9-2	79	"	"	"		✓								Combo
19/0-0.2	80	"	"	"										Combo
19/0.4-0.6	81	"	"	"	✓	✓	✓	✓	✓		✓		+CN	Combo 8 9 +CN
19/0.7-0.8	82	"	"	"										Combo
19/1.8-1.9	83	"	"	"										Combo
20/0.1-0.3	84	12/12	"	"										Combo
20/0.4-0.5	85	"	"	"	✓	✓	✓							Combo
20/0.5-0.6	86	"	"	"							✓			Combo 3 9
20/0.7-0.8	87	"	"	"										Combo
20/2.5-2.6	88	"	"	"	✓	✓	✓	✓	✓	✓				Combo 8 +VOC
														Combo

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Geotechnics · Environment · Groundwater

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Sample ID	Lab ID	Sampling Date	Sample Type S - soil W – water	Container type G – glass P - plastic	Analytes: HM8	TRH/BTEX MTBE	PAH	OCP OPP PCB	phenol	VOC	asbestos	pH	ammonia	Notes/preservation
21/0-0.1	89	14/12	S	G, P	✓	✓	✓				✓			Combo 3a
21/0.1-0.3	90	↓	↓	↓										Combo
21/0.3-0.4	91	↓	↓	↓										Combo
21/0.9-1	92	↓	↓	↓										Combo
22/0-0.1	93	↓	↓	↓										Combo
22/0.3-0.4	94	↓	↓	↓	✓	✓	✓	✓	✓		✓	✓	✓	Combo 8a
23/0.1-0.2	118	12/12	↓	↓	✓	✓	✓				✓			Combo 3a
23/0.3-0.4	119	↓	↓	↓										Combo
23/1.1-1.2	120	↓	↓	↓		✓				✓				Combo
24/0-0.05	95	14/12	↓	↓	✓	✓	✓	✓	✓		✓			Combo 8a
24/0.1-0.3	96	↓	↓	↓										Combo
24/0.5-0.6	97	↓	↓	↓										Combo
24/0.9-1	98	↓	↓	↓		✓								Combo

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Sample ID	Lab ID	Sampling Date	Sample Type S - soil W – water	Container type G – glass P - plastic	Analytes									Notes/preservation
					HM8	TRH/BTEX MTBE	PAH	OCP OPP PCB	phenol	VOC	asbestos	pH	ammonia	
25/0-0.1	99	14/12	S	G,P										Combo
25/0.1-0.3	100	"	"	"	✓	✓	✓				✓		+CN	Combo 3 9 +CN
25/0.5-0.6	101	"	"	"										Combo
25/0.9-1	102	"	"	"										Combo
26/0-0.1	103	"	"	"										Combo
26/0.1-0.2	104	"	"	"	✓	✓	✓	✓	✓		✓			Combo 8 9
26/0.3-0.4	105	"	"	"										Combo
26/0.9-1	106	"	"	"										Combo
27/0.1-0.3	133				✓	✓	✓	✓	✓		✓			Combo 8 9
27/0.4-0.5	107													Combo
27/0.9-1	108		↓	↓										Combo
~~F~~1/27/12	109	12/12	Fibro	P							✓			Combo
21A/S5	110	12/12	S	G,P	✓	✓	✓	✓	✓		✓			Combo 8 9

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Sample ID	Lab ID	Sampling Date	Sample Type S - soil W – water	Container type G – glass P - plastic	Analytes: HM8	TRH/BTEX MTBE	PAH	OCP OPP PCB	phenol	VOC	asbestos	pH	ammonia	Notes/preservation
TB1	111		S	G		BTEX								Combo
TB2	112		↓	↓		↓								Combo
TS1	113		↓	↓		↓								Combo
TS 2	114		↓	↓		↓								Combo
														Combo
4|0.2-0.3	115													Combo
TP6-A 0.6-0.8	116				✓	✓	✓	✓	✓		✓	rCN		Combo
TP11 2.9-3.0	117								-					Combo
=BH23 BH24 0.1-0.2	118													Combo
=BH23 BH24 0.3-0.4	119													Combo
=BH23 BH24 1.1-1.2	120													Combo
BD7|14/12/12	121													Combo
														Combo

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Sample ID	Lab ID	Sampling Date	Sample Type S - soil W – water	Container type G – glass P - plastic	Analytes: HM8	TRH/BTEX MTBE	PAH	OCP OPP PCB	phenol	VOC	asbestos	pH	ammonia	Notes/preservation
BD1A/111212	122	11/12	S	G	✓	✓	✓	✓	✓		✓	✓	✓	Combo
BD2/131212	124	13/12	↓	↓										Combo
BD1/121212	125	12/12			✓	✓	✓				✓			Combo
RD5/	127				✓	✓	✓							Combo
BD8/141212	129	14/12												Combo
BD6/141212	130	14/12	↓	↓										Combo
														Combo
TP14 material 0-1.3	131													Combo
														Combo
														Combo
														Combo
														Combo
														Combo
														Combo

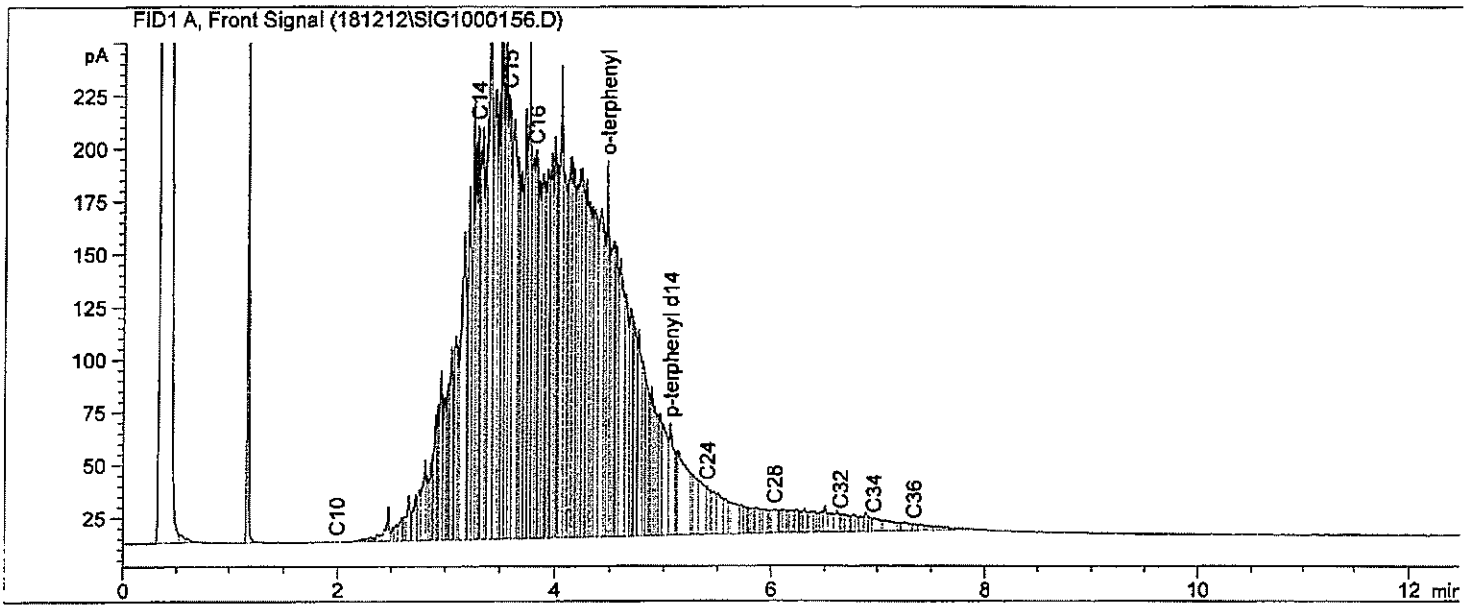
Lab Report No. .....
Send Results to: Douglas Partners Address: 96 Hermitage Road West Ryde NSW 2114
Phone: (02) 4271 1836
Fax: (02) 4271 1897

Relinquished by: R. McAlpine Signed: Date & Time: 17/12 Transported to laboratory by: Hunter Express
Received By: ATN Date & Time: 18/12/12

Data File C:\DATA\12_12\181212\SIG1000156.D
Sample Name: 83246-66

15/1-1-1

Acq. Operator	: AC	Seq. Line	: 86
Acq. Instrument	: GC#4	Location	: Vial 36
Injection Date	: 20/12/2012 4:05:40 AM	Inj	: 1
		Inj Volume	: 1 µl
Acq. Method	: C:\CHEM32\1\METHODS\NEPM.M		
Last changed	: 4/09/2012 2:28:52 PM by AC		
Analysis Method	: C:\METHODS\12_12\181212F.M		
Last changed	: 4/01/2013 5:56:10 PM by AC (modified after loading)		
Method Info	: FAST TPH WITH 15M HP5 COLUMNS		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, 19 December 2012 7:29:53 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

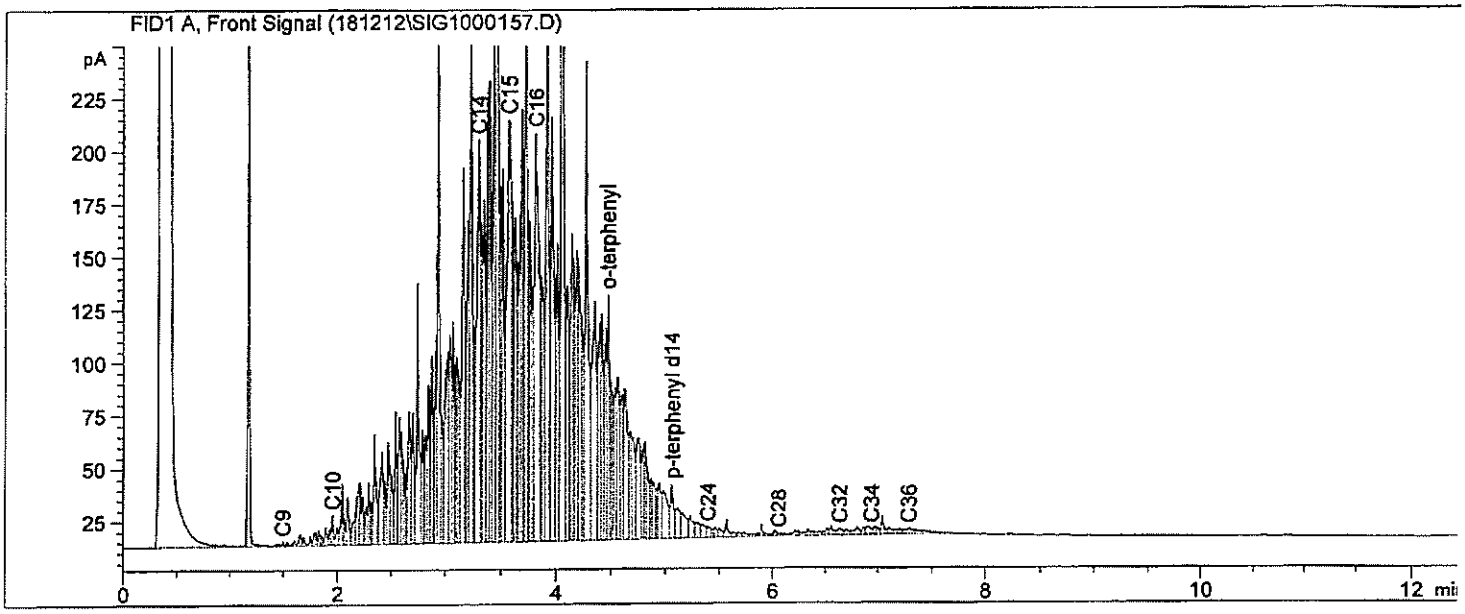
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [mg/L]	Grp	Name
1.488		-	-	-		C9
1.992	BV	2.78229e-1	1.55385e-1	4.32326e-2	1	C10
3.304	VV	224.20847	1.36196e-1	30.53633	1	C14
3.573	VV	402.08459	1.22274e-1	49.16450	2	C15
3.819	VV	269.96851	1.40419e-1	37.90877		C16
4.476	VV	277.94559	1.38005e-1	38.35780		o-terphenyl
5.067	VV	173.34621	1.52806e-1	26.48837		p-terphenyl d14
5.403	VV	43.61688	1.44404e-1	6.29844		C24
6.032	VV	44.02029	1.53577e-1	6.76052	2	C28
6.657	VV	9.82082	1.45450e-1	1.42843	3	C32
6.967	VV	28.42645	1.57275e-1	4.47077	3	C34
7.344	VV	9.04314	1.55792e-1	1.40884	3	C36
8.534		-	-	-		C40

Totals : 202.86602

Data File C:\DATA\12_12\181212\SIG1000157.D
Sample Name: 83246-68

15/2.5-2.6

Acq. Operator	: AC	Seq. Line	: 87
Acq. Instrument	: GC#4	Location	: Vial 37
Injection Date	: 20/12/2012 4:23:28 AM	Inj	: 1
		Inj Volume	: 1 µl
Acq. Method	: C:\CHEM32\1\METHODS\NEPM.M		
Last changed	: 4/09/2012 2:28:52 PM by AC		
Analysis Method	: C:\METHODS\12_12\181212F.M		
Last changed	: 4/01/2013 5:56:10 PM by AC (modified after loading)		
Method Info	: FAST TPH WITH 15M HP5 COLUMNS		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, 19 December 2012 7:29:53 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

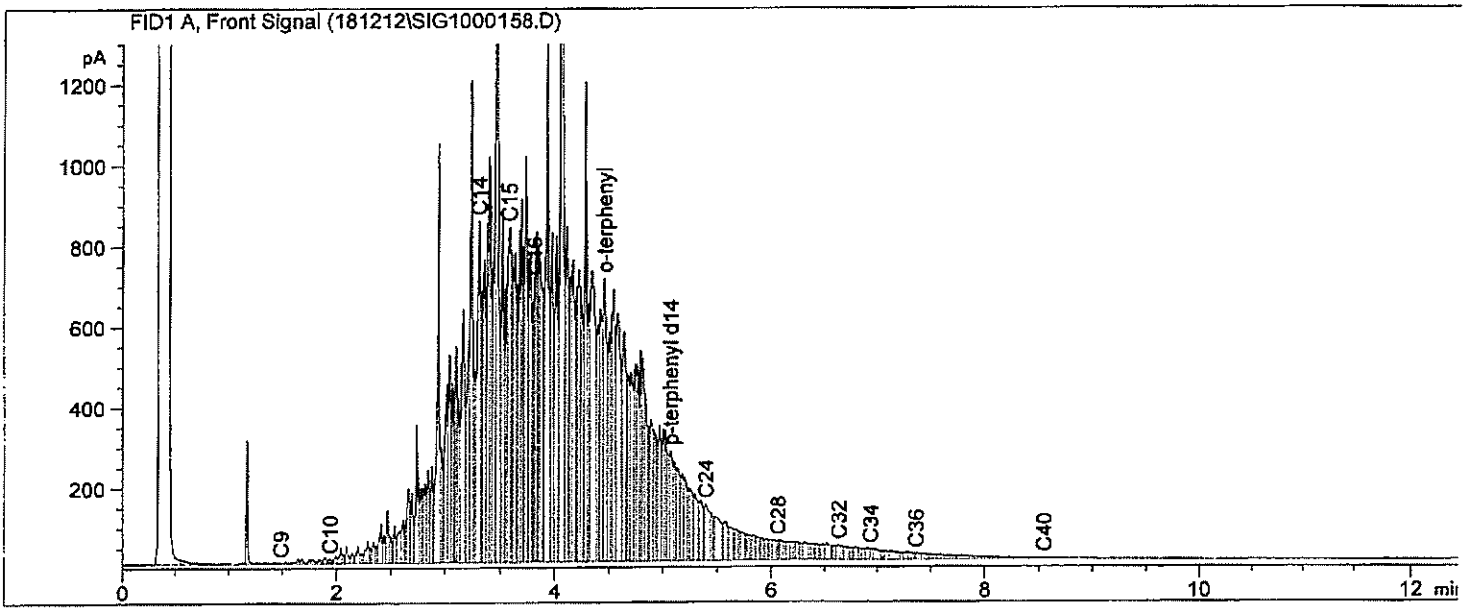
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [mg/L]	Grp	Name
1.493	VV	1.78790	1.50658e-1	2.69360e-1		C9
1.953	VV	15.06188	1.55385e-1	2.34039	1	C10
3.310	VV	396.96872	1.36196e-1	54.06561	1	C14
3.571	VV	485.01312	1.22274e-1	59.30451	2	C15
3.821	VV	552.58948	1.40419e-1	77.59418		C16
4.477	VV	139.55704	1.38005e-1	19.25953		o-terphenyl
5.068	VV	51.24609	1.52806e-1	7.83072		p-terphenyl d14
5.399	VV	11.73339	1.44404e-1	1.69435		C24
6.060	VV	1.65674	1.53577e-1	2.54438e-1	2	C28
6.645	VV	10.19111	1.45450e-1	1.48229	3	C32
6.943	VV	3.66426	1.57275e-1	5.76297e-1	3	C34
7.293	VV	18.16519	1.55792e-1	2.82998	3	C36
8.534		-	-	-		C40

Totals : 227.50165

Data File C:\DATA\12_12\181212\SIG1000158.D
Sample Name: 83246-70

16/0.3-0.5

Acq. Operator	: AC	Seq. Line	: 88
Acq. Instrument	: GC#4	Location	: Vial 38
Injection Date	: 20/12/2012 4:41:02 AM	Inj	: 1
		Inj Volume	: 1 µl
Acq. Method	: C:\CHEM32\1\METHODS\NEPM.M		
Last changed	: 4/09/2012 2:28:52 PM by AC		
Analysis Method	: C:\METHODS\12_12\181212F.M		
Last changed	: 4/01/2013 5:57:00 PM by AC (modified after loading)		
Method Info	: FAST TPH WITH 15M HP5 COLUMNS		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, 19 December 2012 7:29:53 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

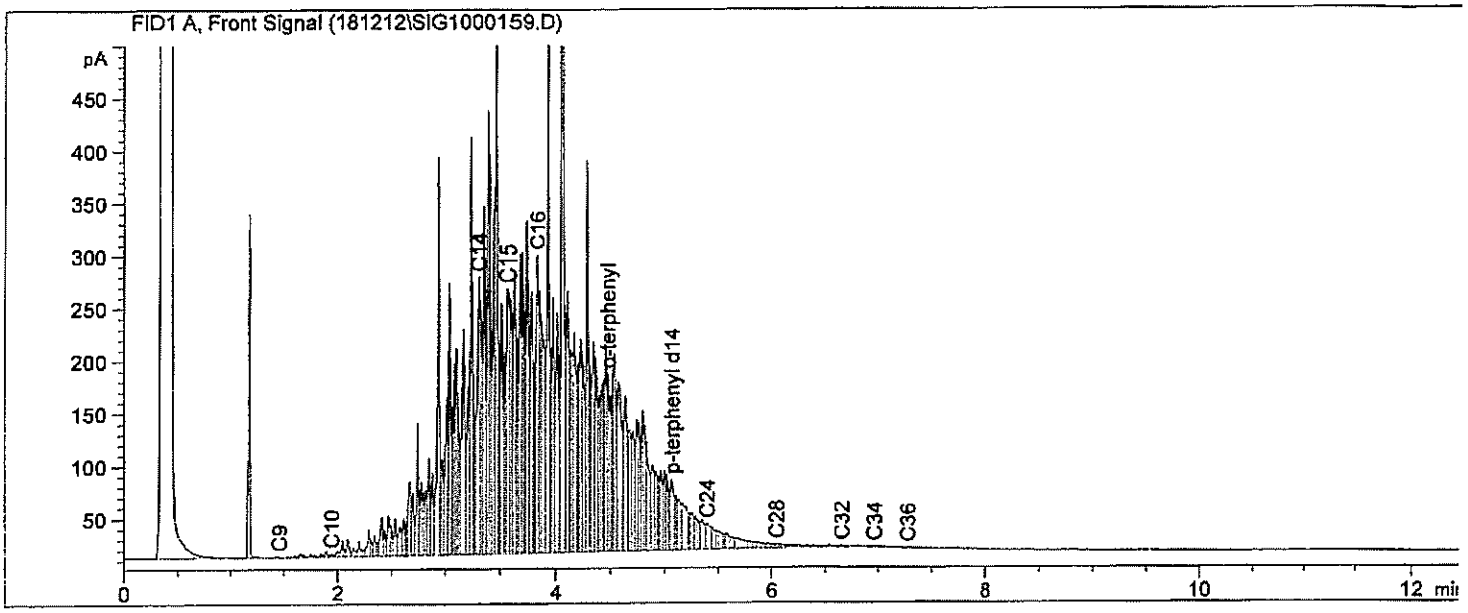
Signal 1: FID1 A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [mg/L]	Grp	Name
1.490	VV	1.04819	1.50658e-1	1.57917e-1		C9
1.943	VV	13.65866	1.55385e-1	2.12235	1	C10
3.313	VV	1765.71155	1.36196e-1	240.48312	1	C14
3.575	VV	1342.96582	1.22274e-1	164.20984	2	C15
3.812	VV	588.56183	1.40419e-1	82.64539		C16
4.461	VV	1578.41333	1.38005e-1	217.82848		o-terphenyl
5.073	VV	539.29968	1.52806e-1	82.40832		p-terphenyl d14
5.393	VV	411.13654	1.44404e-1	59.36970		C24
6.063	VV	49.25123	1.53577e-1	7.56388	2	C28
6.643	VV	98.33189	1.45450e-1	14.30234	3	C32
6.940	VV	45.50344	1.57275e-1	7.15656	3	C34
7.355	VV	46.61709	1.55792e-1	7.26255	3	C36
8.547	VV	3.02077	1.53015e-1	4.62223e-1		C40
Totals :				885.97266		

Data File C:\DATA\12_12\181212\SIG1000159.D
Sample Name: 83246-72

16/1 – 1-1

Acq. Operator	: AC	Seq. Line	: 89
Acq. Instrument	: GC#4	Location	: Vial 39
Injection Date	: 20/12/2012 4:58:36 AM	Inj	: 1
		Inj Volume	: 1 µl
Acq. Method	: C:\CHEM32\1\METHODS\NEPM.M		
Last changed	: 4/09/2012 2:28:52 PM by AC		
Analysis Method	: C:\METHODS\12_12\181212F.M		
Last changed	: 4/01/2013 5:57:15 PM by AC (modified after loading)		
Method Info	: FAST TPH WITH 15M HP5 COLUMNS		



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, 19 December 2012 7:29:53 AM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [mg/L]	Grp	Name
1.457	VV	4.79486e-1	1.50658e-1	7.22382e-2		C9
1.943	VV	5.84820	1.55385e-1	9.08722e-1	1	C10
3.310	VV	502.75726	1.36196e-1	68.47361	1	C14
3.566	VV	426.69641	1.22274e-1	52.17389	2	C15
3.824	VV	460.76050	1.40419e-1	64.69963		C16
4.477	VV	184.07285	1.38005e-1	25.40292		o-terphenyl
5.071	VV	145.46629	1.52806e-1	22.22815		p-terphenyl d14
5.399	VV	71.14113	1.44404e-1	10.27305		C24
6.042	VV	6.70070	1.53577e-1	1.02908	2	C28
6.661	VV	1.47798	1.45450e-1	2.14972e-1	3	C32
6.968	VV	1.44368	1.57275e-1	2.27055e-1	3	C34
7.284	VB	2.60027e-1	1.55792e-1	4.05101e-2	3	C36
8.534		-	-	-		C40

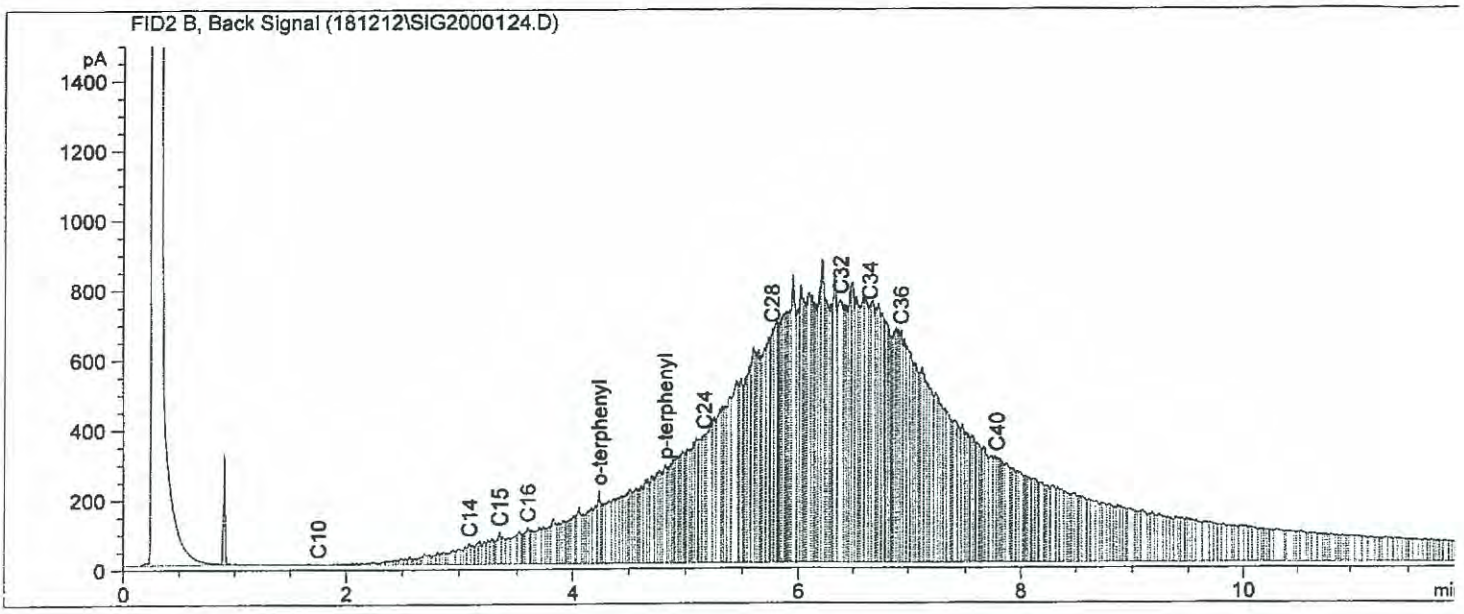
Totals : 245.74382

Data File C:\DATA\12_12\181212\SIG2000124.D
Sample Name: 83246-85

20/0.4 - 0.5

Acq. Operator : AC
Acq. Instrument : GC#4
Injection Date : 19/12/2012 6:41:59 PM
Seq. Line : 54
Location : Vial 54
Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\CHEM32\1\METHODS\NEPM.M
Last changed : 4/09/2012 2:28:52 PM by AC
Analysis Method : C:\METHODS\12_12\281212B.M
Last changed : 4/01/2013 5:57:57 PM by AC
(modified after loading)
Method Info : FAST TPH WITH 15M HP5 COLUMNS



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, 2 January 2013 4:10:18 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B, Back Signal

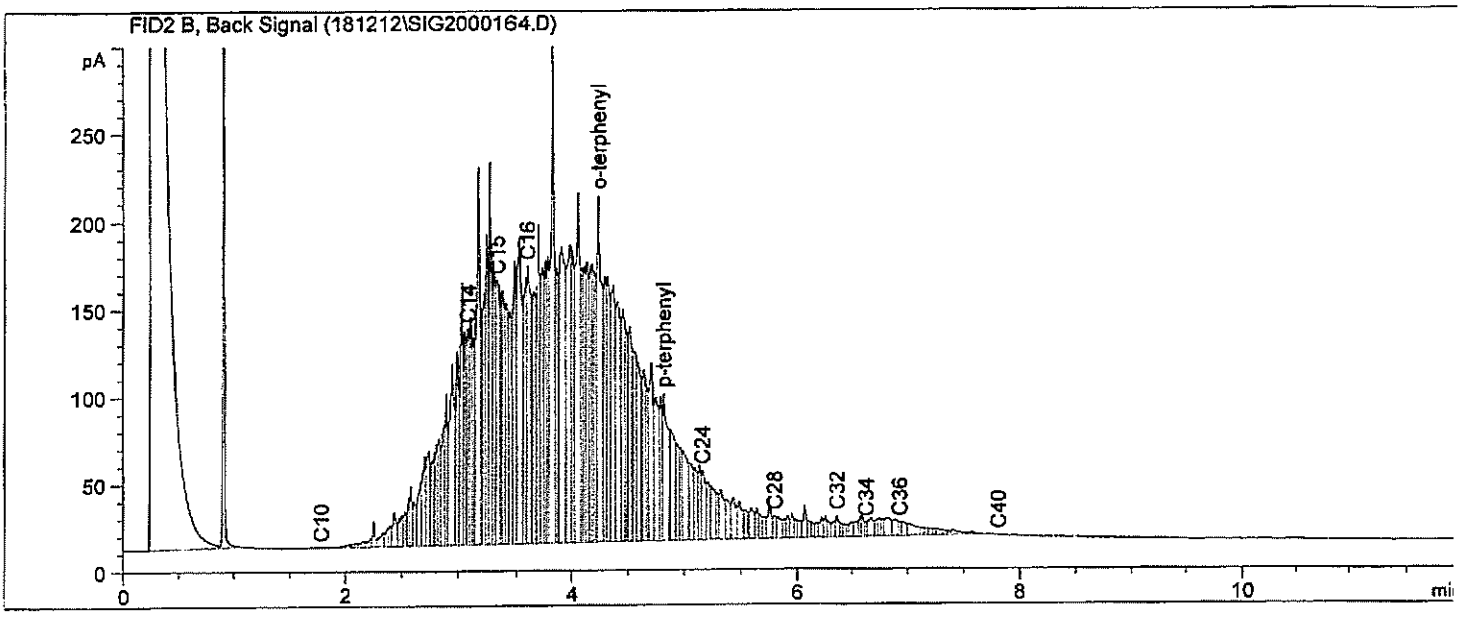
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [mg/L]	Grp	Name
1.255		-	-	-	1	C9
1.751	VV	8.89684e-1	1.30369e-1	1.15987e-1	1	C10
3.096	VV	115.44839	1.15725e-1	13.36024	1	C14
3.354	VV	206.61768	1.03971e-1	21.48229	2	C15
3.598	VV	234.04527	1.19133e-1	27.88246	2	C16
4.237	VV	371.85556	1.14344e-1	42.51962		o-terphenyl
4.823	VV	669.98297	1.27434e-1	85.37882		p-terphenyl
5.167	VV	582.56500	1.24197e-1	72.35295	2	C24
5.768	VV	896.59290	1.31224e-1	117.65432	2	C28
6.391	VV	2491.22827	1.23788e-1	308.38481	3	C32
6.656	VV	974.44037	1.33867e-1	130.44499	3	C34
6.937	VV	1082.22559	1.32657e-1	143.56457	3	C36
7.795	VV	405.33832	1.31344e-1	53.23859	3	C40

Totals : 1016.37964

Data File C:\DATA\12_12\181212\SIG2000164.D
Sample Name: 83246-98 rr

24/0.9-1

Acq. Operator	: AC	Seq. Line	: 94
Acq. Instrument	: GC#4	Location	: Vial 94
Injection Date	: 20/12/2012 12:57:00 PM	Inj	: 1
		Inj Volume	: 1 µl
Acq. Method	: C:\CHEM32\1\METHODS\NEPM.M		
Last changed	: 4/09/2012 2:28:52 PM by AC		
Analysis Method	: C:\METHODS\12_12\281212B.M		
Last changed	: 4/01/2013 5:58:18 PM by AC (modified after loading)		
Method Info	: FAST TPH WITH 15M HP5 COLUMNS		



External Standard Report

Sorted By	:	Signal	
Calib. Data Modified	:	Wednesday, 2 January 2013 4:10:18 PM	
Multiplier:	:	1.0000	
Dilution:	:	1.0000	

Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B, Back Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [mg/L]	Grp	Name
1.255		-	-	-	1	C9
1.782	VV	2.47892e-1	1.30369e-1	3.23175e-2	1	C10
3.093	VV	148.64886	1.15725e-1	17.20235	1	C14
3.346	VV	313.93896	1.03971e-1	32.64062	2	C15
3.599	VV	361.18555	1.19133e-1	43.02903	2	C16
4.238	VV	582.66956	1.14344e-1	66.62502		o-terphenyl
4.819	VV	262.76431	1.27434e-1	33.48519		p-terphenyl
5.165	VV	90.36333	1.24197e-1	11.22287	2	C24
5.801	VV	22.14663	1.31224e-1	2.90616	2	C28
6.368	VV	22.62879	1.23788e-1	2.80118	3	C32
6.627	VV	12.11570	1.33867e-1	1.62189	3	C34
6.928	VV	13.62164	1.32657e-1	1.80700	3	C36
7.811	VV	6.84778e-1	1.31344e-1	8.99412e-2	3	C40
Totals :				213.46359		

Envirolab Services Pty Ltd
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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 83246

Client:
Douglas Partners
96 Hermitage Rd
West Ryde
NSW 2114

Attention: Nerilee Edwards

Sample log in details:

Your Reference:	**37278.05, Banksmeadow - PN**
No. of samples:	130 Soils, 3 Materials
Date samples received / completed instructions received	17//12/12 / 18/12/12

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:	7/01/13 / 4/01/13
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:

Nancy Zhang
Chemist

Giovanni Agosti
Technical Manager

Lulu Guo
Approved Signatory

Alex MacLean
Chemist

NATA
ACCREDITED FOR TECHNICAL COMPETENCE

VOCs in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ----------	83246-15 3 1.7-1.8 13/12/2012 Soil	83246-21 4 2.7-2.8 11/12/2012 Soil	83246-25 5 2.5-2.6 11/12/2012 Soil	83246-32 7 0.9-1.0 13/12/2012 Soil	83246-35 7 2.3-2.4 13/12/2012 Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	21/12/2012	21/12/2012	21/12/2012	21/12/2012	21/12/2012
Dichlorodifluoromethane	mg/kg	<1	<1	<1	<1	<1
Chloromethane	mg/kg	<1	<1	<1	<1	<1
Vinyl Chloride	mg/kg	<1	<1	<1	<1	<1
Bromomethane	mg/kg	<1	<1	<1	<1	<1
Chloroethane	mg/kg	<1	<1	<1	<1	<1
Trichlorofluoromethane	mg/kg	<1	<1	<1	<1	<1
1,1-Dichloroethene	mg/kg	<1	<1	<1	<1	<1
trans-1,2-dichloroethene	mg/kg	<1	<1	<1	<1	<1
1,1-dichloroethane	mg/kg	<1	<1	<1	<1	<1
cis-1,2-dichloroethene	mg/kg	<1	<1	<1	<1	<1
bromochloromethane	mg/kg	<1	<1	<1	<1	<1
chloroform	mg/kg	<1	<1	<1	<1	<1
2,2-dichloropropane	mg/kg	<1	<1	<1	<1	<1
1,2-dichloroethane	mg/kg	<1	<1	<1	<1	<1
1,1,1-trichloroethane	mg/kg	<1	<1	<1	<1	<1
1,1-dichloropropene	mg/kg	<1	<1	<1	<1	<1
Cyclohexane	mg/kg	<1	<1	<1	<1	<1
carbon tetrachloride	mg/kg	<1	<1	<1	<1	<1
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
dibromomethane	mg/kg	<1	<1	<1	<1	<1
1,2-dichloropropane	mg/kg	<1	<1	<1	<1	<1
trichloroethene	mg/kg	<1	<1	<1	<1	<1
bromodichloromethane	mg/kg	<1	<1	<1	<1	<1
trans-1,3-dichloropropene	mg/kg	<1	<1	<1	<1	<1
cis-1,3-dichloropropene	mg/kg	<1	<1	<1	<1	<1
1,1,2-trichloroethane	mg/kg	<1	<1	<1	<1	<1
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-dichloropropane	mg/kg	<1	<1	<1	<1	<1
dibromochloromethane	mg/kg	<1	<1	<1	<1	<1
1,2-dibromoethane	mg/kg	<1	<1	<1	<1	<1
tetrachloroethene	mg/kg	<1	<1	<1	<1	<1
1,1,1,2-tetrachloroethane	mg/kg	<1	<1	<1	<1	<1
chlorobenzene	mg/kg	<1	<1	<1	<1	<1
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
bromoform	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
styrene	mg/kg	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	mg/kg	<1	<1	<1	<1	<1
o-Xylene	mg/kg	<1	<1	<1	<1	<1

VOCs in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ---------- 	83246-15 3 1.7-1.8 13/12/2012 Soil	83246-21 4 2.7-2.8 11/12/2012 Soil	83246-25 5 2.5-2.6 11/12/2012 Soil	83246-32 7 0.9-1.0 13/12/2012 Soil	83246-35 7 2.3-2.4 13/12/2012 Soil
1,2,3-trichloropropane	mg/kg	<1	<1	<1	<1	<1
isopropylbenzene	mg/kg	<1	<1	<1	<1	<1
bromobenzene	mg/kg	<1	<1	<1	<1	<1
n-propyl benzene	mg/kg	<1	<1	<1	<1	<1
2-chlorotoluene	mg/kg	<1	<1	<1	<1	<1
4-chlorotoluene	mg/kg	<1	<1	<1	<1	<1
1,3,5-trimethyl benzene	mg/kg	<1	<1	<1	<1	<1
tert-butyl benzene	mg/kg	<1	<1	<1	<1	<1
1,2,4-trimethyl benzene	mg/kg	<1	<1	<1	<1	<1
1,3-dichlorobenzene	mg/kg	<1	<1	<1	<1	<1
sec-butyl benzene	mg/kg	<1	<1	<1	<1	<1
1,4-dichlorobenzene	mg/kg	<1	<1	<1	<1	<1
4-isopropyl toluene	mg/kg	<1	<1	<1	<1	<1
1,2-dichlorobenzene	mg/kg	<1	<1	<1	<1	<1
n-butyl benzene	mg/kg	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	mg/kg	<1	<1	<1	<1	<1
1,2,4-trichlorobenzene	mg/kg	<1	<1	<1	<1	<1
hexachlorobutadiene	mg/kg	<1	<1	<1	<1	<1
1,2,3-trichlorobenzene	mg/kg	<1	<1	<1	<1	<1
Surrogate Dibromofluorometha	%	91	92	95	94	73
Surrogate aaa-Trifluorotoluene	%	97	95	86	102	103
Surrogate Toluene-d_8	%	96	96	97	97	100
Surrogate 4-Bromofluorobenzene	%	75	74	74	74	87

VOCs in soil						
Our Reference:	UNITS	83246-39	83246-51	83246-68	83246-70	83246-75
Your Reference	----------	8	11	15	16	17
Depth	----------	2.2-2.4	2.2-2.3	2.5-2.6	0.3-0.5	2.1-2.5
Date Sampled		12/12/2012	12/12/2012	12/12/2012	13/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	21/12/2012	21/12/2012	21/12/2012	21/12/2012	21/12/2012
Dichlorodifluoromethane	mg/kg	<1	<1	<1	<1	<1
Chloromethane	mg/kg	<1	<1	<1	<1	<1
Vinyl Chloride	mg/kg	<1	<1	<1	<1	<1
Bromomethane	mg/kg	<1	<1	<1	<1	<1
Chloroethane	mg/kg	<1	<1	<1	<1	<1
Trichlorofluoromethane	mg/kg	<1	<1	<1	<1	<1
1,1-Dichloroethene	mg/kg	<1	<1	<1	<1	<1
trans-1,2-dichloroethene	mg/kg	<1	<1	<1	<1	<1
1,1-dichloroethane	mg/kg	<1	<1	<1	<1	<1
cis-1,2-dichloroethene	mg/kg	<1	<1	<1	<1	<1
bromochloromethane	mg/kg	<1	<1	<1	<1	<1
chloroform	mg/kg	<1	<1	<1	<1	<1
2,2-dichloropropane	mg/kg	<1	<1	<1	<1	<1
1,2-dichloroethane	mg/kg	<1	<1	<1	<1	<1
1,1,1-trichloroethane	mg/kg	<1	<1	<1	<1	<1
1,1-dichloropropene	mg/kg	<1	<1	<1	<1	<1
Cyclohexane	mg/kg	<1	<1	<1	<1	<1
carbon tetrachloride	mg/kg	<1	<1	<1	<1	<1
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
dibromomethane	mg/kg	<1	<1	<1	<1	<1
1,2-dichloropropane	mg/kg	<1	<1	<1	<1	<1
trichloroethene	mg/kg	<1	<1	<1	<1	<1
bromodichloromethane	mg/kg	<1	<1	<1	<1	<1
trans-1,3-dichloropropene	mg/kg	<1	<1	<1	<1	<1
cis-1,3-dichloropropene	mg/kg	<1	<1	<1	<1	<1
1,1,2-trichloroethane	mg/kg	<1	<1	<1	<1	<1
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-dichloropropane	mg/kg	<1	<1	<1	<1	<1
dibromochloromethane	mg/kg	<1	<1	<1	<1	<1
1,2-dibromoethane	mg/kg	<1	<1	<1	<1	<1
tetrachloroethene	mg/kg	<1	<1	<1	<1	<1
1,1,1,2-tetrachloroethane	mg/kg	<1	<1	<1	<1	<1
chlorobenzene	mg/kg	<1	<1	<1	<1	<1
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
bromoform	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
styrene	mg/kg	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	mg/kg	<1	<1	<1	<1	<1
o-Xylene	mg/kg	<1	<1	<1	<1	<1
1,2,3-trichloropropane	mg/kg	<1	<1	<1	<1	<1

VOCs in soil						
Our Reference:	UNITS	83246-39	83246-51	83246-68	83246-70	83246-75
Your Reference	----------	8	11	15	16	17
Depth	----------	2.2-2.4	2.2-2.3	2.5-2.6	0.3-0.5	2.1-2.5
Date Sampled		12/12/2012	12/12/2012	12/12/2012	13/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
isopropylbenzene	mg/kg	<1	<1	<1	<1	<1
bromobenzene	mg/kg	<1	<1	<1	<1	<1
n-propyl benzene	mg/kg	<1	<1	<1	<1	<1
2-chlorotoluene	mg/kg	<1	<1	<1	<1	<1
4-chlorotoluene	mg/kg	<1	<1	<1	<1	<1
1,3,5-trimethyl benzene	mg/kg	<1	<1	1	<1	<1
tert-butyl benzene	mg/kg	<1	<1	<1	<1	<1
1,2,4-trimethyl benzene	mg/kg	<1	<1	2	<1	<1
1,3-dichlorobenzene	mg/kg	<1	<1	<1	<1	<1
sec-butyl benzene	mg/kg	<1	<1	<1	<1	<1
1,4-dichlorobenzene	mg/kg	<1	<1	<1	<1	<1
4-isopropyl toluene	mg/kg	<1	<1	<1	<1	<1
1,2-dichlorobenzene	mg/kg	<1	<1	<1	<1	<1
n-butyl benzene	mg/kg	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	mg/kg	<1	<1	<1	<1	<1
1,2,4-trichlorobenzene	mg/kg	<1	<1	<1	<1	<1
hexachlorobutadiene	mg/kg	<1	<1	<1	<1	<1
1,2,3-trichlorobenzene	mg/kg	<1	<1	<1	<1	<1
Surrogate Dibromofluorometha	%	85	85	86	75	71
Surrogate aaa-Trifluorotoluene	%	113	110	90	98	96
Surrogate Toluene-d_8	%	99	100	104	103	100
Surrogate 4-Bromofluorobenzene	%	80	78	108	125	88

VOCs in soil				
Our Reference:	UNITS	83246-87	83246-120	83246-132
Your Reference	----------	20	BH23	17
Depth	----------	0.7-0.8	1.1-1.2	0.1-0.3
Date Sampled		12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	21/12/2012	21/12/2012	21/12/2012
Dichlorodifluoromethane	mg/kg	<1	<1	<1
Chloromethane	mg/kg	<1	<1	<1
Vinyl Chloride	mg/kg	<1	<1	<1
Bromomethane	mg/kg	<1	<1	<1
Chloroethane	mg/kg	<1	<1	<1
Trichlorofluoromethane	mg/kg	<1	<1	<1
1,1-Dichloroethene	mg/kg	<1	<1	<1
trans-1,2-dichloroethene	mg/kg	<1	<1	<1
1,1-dichloroethane	mg/kg	<1	<1	<1
cis-1,2-dichloroethene	mg/kg	<1	<1	<1
bromochloromethane	mg/kg	<1	<1	<1
chloroform	mg/kg	<1	<1	<1
2,2-dichloropropane	mg/kg	<1	<1	<1
1,2-dichloroethane	mg/kg	<1	<1	<1
1,1,1-trichloroethane	mg/kg	<1	<1	<1
1,1-dichloropropene	mg/kg	<1	<1	<1
Cyclohexane	mg/kg	<1	<1	<1
carbon tetrachloride	mg/kg	<1	<1	<1
Benzene	mg/kg	<0.2	<0.2	<0.2
dibromomethane	mg/kg	<1	<1	<1
1,2-dichloropropane	mg/kg	<1	<1	<1
trichloroethene	mg/kg	<1	<1	<1
bromodichloromethane	mg/kg	<1	<1	<1
trans-1,3-dichloropropene	mg/kg	<1	<1	<1
cis-1,3-dichloropropene	mg/kg	<1	<1	<1
1,1,2-trichloroethane	mg/kg	<1	<1	<1
Toluene	mg/kg	<0.5	<0.5	<0.5
1,3-dichloropropane	mg/kg	<1	<1	<1
dibromochloromethane	mg/kg	<1	<1	<1
1,2-dibromoethane	mg/kg	<1	<1	<1
tetrachloroethene	mg/kg	<1	<1	<1
1,1,1,2-tetrachloroethane	mg/kg	<1	<1	<1
chlorobenzene	mg/kg	<1	<1	<1
Ethylbenzene	mg/kg	<1	<1	<1
bromoform	mg/kg	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2
styrene	mg/kg	<1	<1	<1
1,1,2,2-tetrachloroethane	mg/kg	<1	<1	<1
o-Xylene	mg/kg	<1	<1	<1
1,2,3-trichloropropane	mg/kg	<1	<1	<1

VOCs in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ---------- ---------- 	83246-87 20 0.7-0.8 12/12/2012 Soil	83246-120 BH23 1.1-1.2 12/12/2012 Soil	83246-132 17 0.1-0.3 12/12/2012 Soil
isopropylbenzene	mg/kg	<1	<1	<1
bromobenzene	mg/kg	<1	<1	<1
n-propyl benzene	mg/kg	<1	<1	<1
2-chlorotoluene	mg/kg	<1	<1	<1
4-chlorotoluene	mg/kg	<1	<1	<1
1,3,5-trimethyl benzene	mg/kg	<1	<1	<1
tert-butyl benzene	mg/kg	<1	<1	<1
1,2,4-trimethyl benzene	mg/kg	<1	<1	<1
1,3-dichlorobenzene	mg/kg	<1	<1	<1
sec-butyl benzene	mg/kg	<1	<1	<1
1,4-dichlorobenzene	mg/kg	<1	<1	<1
4-isopropyl toluene	mg/kg	<1	<1	<1
1,2-dichlorobenzene	mg/kg	<1	<1	<1
n-butyl benzene	mg/kg	<1	<1	<1
1,2-dibromo-3-chloropropane	mg/kg	<1	<1	<1
1,2,4-trichlorobenzene	mg/kg	<1	<1	<1
hexachlorobutadiene	mg/kg	<1	<1	<1
1,2,3-trichlorobenzene	mg/kg	<1	<1	<1
Surrogate Dibromofluorometha	%	68	73	69
Surrogate aaa-Trifluorotoluene	%	96	106	97
Surrogate Toluene-d_8	%	100	100	100
Surrogate 4-Bromofluorobenzene	%	87	87	87

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	83246-3	83246-5	83246-8	83246-9	83246-10
Your Reference	----------	1	1	2	2	2
Depth	----------	0.5-1	1.6-1.7	0.5-0.7	1.7-1.8	2.2-2.3
Date Sampled		11/12/2012	11/12/2012	11/12/2012	11/12/2012	11/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
MTBE	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	101	109	113	87	111

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	83246-11	83246-12	83246-15	83246-17	83246-19
Your Reference	----------	3	3	3	4	4
Depth	----------	0.1-0.3	0.5-0.6	1.7-1.8	0.4-0.5	1-1.1
Date Sampled		13/12/2012	13/12/2012	13/12/2012	11/12/2012	11/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
MTBE	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	114	124	97	120	112

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	83246-21	83246-22	83246-25	83246-32	83246-35
Your Reference	----------	4	5	5	7	7
Depth	----------	2.7-2.8	0-0.3	2.5-2.6	0.9-1.0	2.3-2.4
Date Sampled		11/12/2012	11/12/2012	11/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
MTBE	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	95	130	86	102	123

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	83246-37	83246-39	83246-40	83246-45	83246-49
Your Reference	----------	8	8	9	10	11
Depth	----------	0.5-0.6	2.2-2.4	0.1-0.3	0.5-0.6	0.1-0.3
Date Sampled		12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
MTBE	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	107	113	114	116	122

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	83246-51	83246-52	83246-57	83246-61	83246-62
Your Reference	----------	11	12	13	14	14
Depth	----------	2.2-2.3	0.1-0.3	0.6-0.7	0.5-0.7	2-2.1
Date Sampled		12/12/2012	12/12/2012	13/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
MTBE	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	110	113	126	104	99

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	83246-63	83246-66	83246-68	83246-70	83246-72
Your Reference	----------	15	15	15	16	16
Depth	----------	0.1-0.3	1-1.1	2.5-2.6	0.3-0.5	1-1.1
Date Sampled		12/12/2012	12/12/2012	12/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
MTBE	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
TRHC$_6$ - C$_9$	mg/kg	<25	<25	43	78	29
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	110	210	87
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	110	210	87
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	3	9	<1
Surrogate aaa-Trifluorotoluene	%	115	105	90	98	105

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	83246-75	83246-76	83246-79	83246-81	83246-85
Your Reference	----------	17	18	18	19	20
Depth	----------	2.1-2.5	0.1-0.3	1.9-2.0	0.4-0.6	0.4-0.5
Date Sampled		12/12/2012	13/12/2012	13/12/2012	13/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
MTBE	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	96	108	104	106	95

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	83246-87	83246-89	83246-94	83246-95	83246-98
Your Reference	----------	20	21	22	24	24
Depth	----------	0.7-0.8	0-0.1	0.3-0.4	0-0.05	0.9-1.0
Date Sampled		12/12/2012	14/12/2012	14/12/2012	14/12/2012	14/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
MTBE	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	96	113	108	104	101

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	83246-100	83246-104	83246-110	83246-111	83246-112
Your Reference	----------	25	26	21A/SS	TB1	TB2
Depth	----------	0.1-0.3	0.1-0.2	-	-	-
Date Sampled		14/12/2012	14/12/2012	12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
MTBE	mg/kg	<0.50	<0.50	<0.50	[NA]	[NA]
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	[NA]	[NA]
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	[NA]	[NA]
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	[NA]	[NA]
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	[NA]	[NA]
Surrogate aaa-Trifluorotoluene	%	112	107	108	110	106

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	83246-113	83246-114	83246-116	83246-118	83246-120
Your Reference	----------	TS1	TS2	TP6a	BH23	BH23
Depth	----------	-	-	0.6-0.8	0.1-0.2	1.1-1.2
Date Sampled		12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
MTBE	mg/kg	[NA]	[NA]	<0.50	<0.50	<0.50
TRHC$_6$ - C$_9$	mg/kg	[NA]	[NA]	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	[NA]	[NA]	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	[NA]	[NA]	<25	<25	<25
Benzene	mg/kg	106%	101%	<0.2	<0.2	<0.2
Toluene	mg/kg	115%	101%	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	109%	101%	<1	<1	<1
m+p-xylene	mg/kg	111%	103%	<2	<2	<2
o-Xylene	mg/kg	111%	101%	<1	<1	<1
naphthalene	mg/kg	[NA]	[NA]	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	115	101	103	109	114

vTRH(C6-C10)/BTEXN in Soil						
Our Reference:	UNITS	83246-122	83246-125	83246-127	83246-132	83246-133
Your Reference	----------	BD1A/111212	BD1/121212	BD5	17	27
Depth	----------	-	-	-	0.1-0.3	0.1-0.3
Date Sampled		12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
MTBE	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50
TRHC$_6$ - C$_9$	mg/kg	<25	<25	<25	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25	<25	<25	<25
vTPHC$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	107	105	124	97	116

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	83246-3	83246-5	83246-8	83246-9	83246-10
Your Reference	----------	1	1	2	2	2
Depth	----------	0.5-1	1.6-1.7	0.5-0.7	1.7-1.8	2.2-2.3
Date Sampled		11/12/2012	11/12/2012	11/12/2012	11/12/2012	11/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	110	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	400	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	370	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	320	<100
Surrogate o-Terphenyl	%	94	94	108	99	93

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	83246-11	83246-12	83246-15	83246-17	83246-19
Your Reference	----------	3	3	3	4	4
Depth	----------	0.1-0.3	0.5-0.6	1.7-1.8	0.4-0.5	1-1.1
Date Sampled		13/12/2012	13/12/2012	13/12/2012	11/12/2012	11/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	170	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	190	<100	<100	180	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	150	<100	<100	<100	<100
Surrogate o-Terphenyl	%	103	108	93	102	89

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	83246-21	83246-22	83246-25	83246-32	83246-35
Your Reference	----------	4	5	5	7	7
Depth	----------	2.7-2.8	0-0.3	2.5-2.6	0.9-1.0	2.3-2.4
Date Sampled		11/12/2012	11/12/2012	11/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	110	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	140	200	110	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	190	160	190	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	130	170	<100	<100
Surrogate o-Terphenyl	%	90	105	96	99	92

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	83246-37	83246-39	83246-40	83246-45	83246-49
Your Reference	----------	8	8	9	10	11
Depth	----------	0.5-0.6	2.2-2.4	0.1-0.3	0.5-0.6	0.1-0.3
Date Sampled		12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	120	<100	<100	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	170	<100	120	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	95	94	97	93	93

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	83246-51	83246-52	83246-57	83246-61	83246-62
Your Reference	----------	11	12	13	14	14
Depth	----------	2.2-2.3	0.1-0.3	0.6-0.7	0.5-0.7	2-2.1
Date Sampled		12/12/2012	12/12/2012	13/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	160	240	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	280	430	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	360	550	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	210	320	<100
Surrogate o-Terphenyl	%	93	92	106	125	90

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	83246-63	83246-66	83246-68	83246-70	83246-72
Your Reference	----------	15	15	15	16	16
Depth	----------	0.1-0.3	1-1.1	2.5-2.6	0.3-0.5	1-1.1
Date Sampled		12/12/2012	12/12/2012	12/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	930	1,600	5,300	1,600
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	5,300	4,200	25,000	6,500
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	260	100	910	160
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	2,700	3,300	12,000	3,800
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	2,700	3,300	12,000	3,800
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	3,600	2,600	18,000	4,400
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	130	<100	410	<100
Surrogate o-Terphenyl	%	103	#	#	#	#

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	83246-75	83246-76	83246-79	83246-81	83246-85
Your Reference	----------	17	18	18	19	20
Depth	----------	2.1-2.5	0.1-0.3	1.9-2.0	0.4-0.6	0.4-0.5
Date Sampled		12/12/2012	13/12/2012	13/12/2012	13/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	380
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	13,000
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	18,000
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	970
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	970
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	25,000
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	11,000
Surrogate o-Terphenyl	%	85	86	84	87	#

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	83246-87	83246-89	83246-94	83246-95	83246-98
Your Reference	----------	20	21	22	24	24
Depth	----------	0.7-0.8	0-0.1	0.3-0.4	0-0.05	0.9-1.0
Date Sampled		12/12/2012	14/12/2012	14/12/2012	14/12/2012	14/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	750
TRHC$_{15}$ - C$_{28}$	mg/kg	190	<100	<100	440	4,900
TRHC$_{29}$ - C$_{36}$	mg/kg	100	100	<100	1,200	280
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	1,900
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	1,900
TRH>C$_{16}$-C$_{34}$	mg/kg	250	120	<100	1,200	3,700
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	950	160
Surrogate o-Terphenyl	%	104	93	99	126	#

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	83246-100	83246-104	83246-110	83246-116	83246-118
Your Reference	----------	25	26	21A/SS	TP6a	BH23
Depth	----------	0.1-0.3	0.1-0.2	-	0.6-0.8	0.1-0.2
Date Sampled		14/12/2012	14/12/2012	12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	190
TRH>C$_{10}$-C$_{16}$	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	<100	<100	<100	<100	210
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	<100	<100	160
Surrogate o-Terphenyl	%	100	92	88	95	96

svTRH (C10-C40) in Soil						
Our Reference:	UNITS	83246-120	83246-122	83246-125	83246-127	83246-132
Your Reference	----------	BH23	BD1A/111212	BD1/121212	BD5	17
Depth	----------	1.1-1.2	-	-	-	0.1-0.3
Date Sampled		12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	590	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	120	<100	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	82	<50	<50	<50	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	82	<50	<50	<50	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	570	<100	130	<100	<100
TRH>C$_{34}$-C$_{40}$	mg/kg	<100	<100	150	<100	<100
Surrogate o-Terphenyl	%	#	95	91	98	88

svTRH (C10-C40) in Soil		
Our Reference:	UNITS	83246-133
Your Reference	----------	27
Depth	----------	0.1-0.3
Date Sampled		12/12/2012
Type of sample		Soil
Date extracted	-	19/12/2012
Date analysed	-	19/12/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100
TRH>C$_{10}$-C$_{16}$	mg/kg	<50
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	<50
TRH>C$_{16}$-C$_{34}$	mg/kg	120
TRH>C$_{34}$-C$_{40}$	mg/kg	<100
Surrogate o-Terphenyl	%	92

PAHs in Soil						
Our Reference:	UNITS	83246-3	83246-8	83246-10	83246-11	83246-12
Your Reference	----------	1	2	2	3	3
Depth	----------	0.5-1	0.5-0.7	2.2-2.3	0.1-0.3	0.5-0.6
Date Sampled		11/12/2012	11/12/2012	11/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Naphthalene	mg/kg	<0.1	0.3	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.3	<0.1	0.1	0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.2	<0.1	0.2	0.1
Pyrene	mg/kg	<0.1	0.1	<0.1	0.2	0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Chrysene	mg/kg	<0.1	0.1	<0.1	0.1	0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	0.12	0.06
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Benzo(a)pyrene TEQ	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d_{14}	%	99	99	102	98	101

PAHs in Soil						
Our Reference:	UNITS	83246-15	83246-17	83246-21	83246-22	83246-25
Your Reference	----------	3	4	4	5	5
Depth	----------	1.7-1.8	0.4-0.5	2.7-2.8	0-0.3	2.5-2.6
Date Sampled		13/12/2012	11/12/2012	11/12/2012	11/12/2012	11/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.7	<0.1	0.6	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.7	<0.1	1.0	<0.1
Pyrene	mg/kg	<0.1	0.6	<0.1	1.0	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.3	<0.1	0.6	<0.1
Chrysene	mg/kg	<0.1	0.4	<0.1	0.6	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	0.5	<0.2	1.0	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.23	<0.05	0.59	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.1	<0.1	0.4	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.1	<0.1	0.4	<0.1
Benzo(a)pyrene TEQ	mg/kg	<0.5	<0.5	<0.5	1	<0.5
Surrogate p-Terphenyl-d_{14}	%	101	97	105	97	104

PAHs in Soil						
Our Reference:	UNITS	83246-32	83246-37	83246-40	83246-45	83246-49
Your Reference	----------	7	8	9	10	11
Depth	----------	0.9-1.0	0.5-0.6	0.1-0.3	0.5-0.6	0.1-0.3
Date Sampled		13/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Naphthalene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.6	0.2	0.2	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.3	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	2.8	1.6	0.8	<0.1	0.1
Anthracene	mg/kg	0.8	0.5	0.3	<0.1	<0.1
Fluoranthene	mg/kg	5.2	4.0	2.3	0.1	0.4
Pyrene	mg/kg	5.3	3.9	2.5	0.1	0.5
Benzo(a)anthracene	mg/kg	2.8	1.9	1.4	<0.1	0.2
Chrysene	mg/kg	2.2	1.6	1.2	<0.1	0.2
Benzo(b+k)fluoranthene	mg/kg	4.0	3.2	2.6	<0.2	0.5
Benzo(a)pyrene	mg/kg	2.6	2.1	1.7	<0.05	0.31
Indeno(1,2,3-c,d)pyrene	mg/kg	1.3	1.2	1.1	<0.1	0.2
Dibenzo(a,h)anthracene	mg/kg	0.2	0.3	0.2	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	1	1	0.9	<0.1	0.2
Benzo(a)pyrene TEQ	mg/kg	4.0	3.0	2	<0.5	<0.5
Surrogate p-Terphenyl-d_{14}	%	100	101	111	103	103

PAHs in Soil						
Our Reference:	UNITS	83246-52	83246-57	83246-61	83246-63	83246-66
Your Reference	----------	12	13	14	15	15
Depth	----------	0.1-0.3	0.6-0.7	0.5-0.7	0.1-0.3	1-1.1
Date Sampled		12/12/2012	13/12/2012	12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Naphthalene	mg/kg	<0.1	0.2	0.1	0.1	<1
Acenaphthylene	mg/kg	<0.1	0.2	0.2	<0.1	<1
Acenaphthene	mg/kg	<0.1	0.2	<0.1	<0.1	<1
Fluorene	mg/kg	<0.1	0.1	<0.1	<0.1	<1
Phenanthrene	mg/kg	<0.1	2.0	1.5	0.1	<1
Anthracene	mg/kg	<0.1	0.6	0.6	<0.1	<1
Fluoranthene	mg/kg	<0.1	2.5	2.4	0.1	<1
Pyrene	mg/kg	<0.1	2.5	2.5	0.1	<1
Benzo(a)anthracene	mg/kg	<0.1	1.4	1.1	<0.1	<1
Chrysene	mg/kg	<0.1	1.2	1.0	<0.1	<1
Benzo(b+k)fluoranthene	mg/kg	<0.2	3.0	1.8	<0.2	<2
Benzo(a)pyrene	mg/kg	0.06	2.2	1.2	0.05	<0.5
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	1.5	0.8	<0.1	<1
Dibenzo(a,h)anthracene	mg/kg	<0.1	0.3	0.1	<0.1	<1
Benzo(g,h,i)perylene	mg/kg	<0.1	1.3	0.8	<0.1	<1
Benzo(a)pyrene TEQ	mg/kg	<0.5	3.0	2	<0.5	[NA]
Surrogate p-Terphenyl-d_{14}	%	106	100	99	102	94

PAHs in Soil						
Our Reference:	UNITS	83246-68	83246-70	83246-72	83246-75	83246-76
Your Reference	----------	15	16	16	17	18
Depth	----------	2.5-2.6	0.3-0.5	1-1.1	2.1-2.5	0.1-0.3
Date Sampled		12/12/2012	13/12/2012	13/12/2012	12/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Naphthalene	mg/kg	1.9	8.8	4.8	<0.1	<0.1
Acenaphthylene	mg/kg	<1	<1	<1	<0.1	<0.1
Acenaphthene	mg/kg	<1	4.1	1.5	<0.1	<0.1
Fluorene	mg/kg	1.9	9.6	4.9	<0.1	<0.1
Phenanthrene	mg/kg	1.2	13	8.6	<0.1	<0.1
Anthracene	mg/kg	<1	<1	1.7	<0.1	<0.1
Fluoranthene	mg/kg	<1	2.5	<1	<0.1	0.1
Pyrene	mg/kg	<1	6.8	1.4	<0.1	0.1
Benzo(a)anthracene	mg/kg	<1	1.6	<1	<0.1	0.1
Chrysene	mg/kg	<1	<1	<1	<0.1	0.1
Benzo(b+k)fluoranthene	mg/kg	<2	<2	<2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.5	<0.5	<0.5	<0.05	0.13
Indeno(1,2,3-c,d)pyrene	mg/kg	<1	<1	<1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<1	<1	<1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<1	<1	<1	<0.1	<0.1
Benzo(a)pyrene TEQ	mg/kg	[NA]	[NA]	[NA]	<0.5	<0.5
Surrogate p-Terphenyl-d_{14}	%	95	99	92	101	93

PAHs in Soil						
Our Reference:	UNITS	83246-81	83246-85	83246-87	83246-89	83246-94
Your Reference	----------	19	20	20	21	22
Depth	----------	0.4-0.6	0.4-0.5	0.7-0.8	0-0.1	0.3-0.4
Date Sampled		13/12/2012	12/12/2012	12/12/2012	14/12/2012	14/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Naphthalene	mg/kg	<0.1	<1	<0.1	0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<1	<0.1	0.1	0.6
Anthracene	mg/kg	<0.1	<1	<0.1	<0.1	0.1
Fluoranthene	mg/kg	<0.1	<1	<0.1	0.1	0.7
Pyrene	mg/kg	<0.1	<1	<0.1	0.1	0.6
Benzo(a)anthracene	mg/kg	<0.1	<1	<0.1	<0.1	0.3
Chrysene	mg/kg	<0.1	<1	<0.1	<0.1	0.2
Benzo(b+k)fluoranthene	mg/kg	<0.2	<2	<0.2	<0.2	0.4
Benzo(a)pyrene	mg/kg	<0.05	<0.5	<0.05	<0.05	0.27
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<1	<0.1	<0.1	0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<1	<0.1	<0.1	0.1
Benzo(a)pyrene TEQ	mg/kg	<0.5	[NA]	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d_{14}	%	77	91	101	98	103

PAHs in Soil						
Our Reference:	UNITS	83246-95	83246-100	83246-104	83246-110	83246-116
Your Reference	----------	24	25	26	21A/SS	TP6a
Depth	----------	0-0.05	0.1-0.3	0.1-0.2	-	0.6-0.8
Date Sampled		14/12/2012	14/12/2012	14/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Naphthalene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.1	0.2	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.2	0.3	0.1	<0.1
Pyrene	mg/kg	<0.1	0.2	0.3	0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.1	0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	0.1	0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.11	0.07	0.09	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d_{14}	%	102	106	99	107	105

PAHs in Soil						
Our Reference:	UNITS	83246-118	83246-122	83246-125	83246-127	83246-132
Your Reference	----------	BH23	BD1A/111212	BD1/121212	BD5	17
Depth	----------	0.1-0.2	-	-	-	0.1-0.3
Date Sampled		12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Naphthalene	mg/kg	<0.1	0.4	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.3	0.8	0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.2	3.4	<0.1	<0.1
Pyrene	mg/kg	<0.1	0.1	3.3	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.1	1.8	<0.1	<0.1
Chrysene	mg/kg	<0.1	0.1	1.7	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	3.7	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	2.5	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	1.6	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	0.3	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	1.6	<0.1	<0.1
Benzo(a)pyrene TEQ	mg/kg	<0.5	<0.5	4.0	<0.5	<0.5
Surrogate p-Terphenyl-d_{14}	%	99	99	100	103	103

PAHs in Soil		
Our Reference:	UNITS	83246-133
Your Reference	----------	27
Depth	----------	0.1-0.3
Date Sampled		12/12/2012
Type of sample		Soil
Date extracted	-	19/12/2012
Date analysed	-	19/12/2012
Naphthalene	mg/kg	0.1
Acenaphthylene	mg/kg	0.3
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	0.2
Phenanthrene	mg/kg	3.5
Anthracene	mg/kg	0.6
Fluoranthene	mg/kg	4.0
Pyrene	mg/kg	4.0
Benzo(a)anthracene	mg/kg	1.8
Chrysene	mg/kg	1.6
Benzo(b+k)fluoranthene	mg/kg	2.5
Benzo(a)pyrene	mg/kg	1.9
Indeno(1,2,3-c,d)pyrene	mg/kg	1.0
Dibenzo(a,h)anthracene	mg/kg	0.1
Benzo(g,h,i)perylene	mg/kg	0.9
Benzo(a)pyrene TEQ	mg/kg	3.0
Surrogate p-Terphenyl-d_{14}	%	99

Organochlorine Pesticides in soil						
Our Reference:	UNITS	83246-3	83246-8	83246-10	83246-11	83246-17
Your Reference	----------	1	2	2	3	4
Depth	----------	0.5-1	0.5-0.7	2.2-2.3	0.1-0.3	0.4-0.5
Date Sampled		11/12/2012	11/12/2012	11/12/2012	13/12/2012	11/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	85	86	84	88	88

Organochlorine Pesticides in soil						
Our Reference:	UNITS	83246-22	83246-32	83246-45	83246-57	83246-61
Your Reference	----------	5	7	10	13	14
Depth	----------	0-0.3	0.9-1.0	0.5-0.6	0.6-0.7	0.5-0.7
Date Sampled		11/12/2012	13/12/2012	12/12/2012	13/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	0.6
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	0.4	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	95	97	93	91

Organochlorine Pesticides in soil						
Our Reference:	UNITS	83246-66	83246-70	83246-76	83246-81	83246-87
Your Reference	----------	15	16	18	19	20
Depth	----------	1-1.1	0.3-0.5	0.1-0.3	0.4-0.6	0.7-0.8
Date Sampled		12/12/2012	13/12/2012	13/12/2012	13/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	87	67	90	93	92

Organochlorine Pesticides in soil						
Our Reference:	UNITS	83246-94	83246-95	83246-104	83246-110	83246-116
Your Reference	----------	22	24	26	21A/SS	TP6a
Depth	----------	0.3-0.4	0-0.05	0.1-0.2	-	0.6-0.8
Date Sampled		14/12/2012	14/12/2012	14/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/122/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	92	95	98	92

Organochlorine Pesticides in soil			
Our Reference:	UNITS	83246-122	83246-133
Your Reference	----------	BD1A/111212	27
Depth	----------	-	0.1-0.3
Date Sampled		12/12/2012	12/12/2012
Type of sample		Soil	Soil
Date extracted	-	19/122/2012	19/122/2012
Date analysed	-	20/12/2012	20/12/2012
HCB	mg/kg	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Surrogate TCMX	%	95	93

Organophosphorus Pesticides						
Our Reference:	UNITS	83246-3	83246-8	83246-10	83246-11	83246-17
Your Reference	----------	1	2	2	3	4
Depth	----------	0.5-1	0.5-0.7	2.2-2.3	0.1-0.3	0.4-0.5
Date Sampled		11/12/2012	11/12/2012	11/12/2012	13/12/2012	11/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	85	86	84	88	88

Organophosphorus Pesticides						
Our Reference:	UNITS	83246-22	83246-32	83246-45	83246-57	83246-61
Your Reference	----------	5	7	10	13	14
Depth	----------	0-0.3	0.9-1.0	0.5-0.6	0.6-0.7	0.5-0.7
Date Sampled		11/12/2012	13/12/2012	12/12/2012	13/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	95	97	93	91

Organophosphorus Pesticides						
Our Reference:	UNITS	83246-66	83246-70	83246-76	83246-81	83246-87
Your Reference	----------	15	16	18	19	20
Depth	----------	1-1.1	0.3-0.5	0.1-0.3	0.4-0.6	0.7-0.8
Date Sampled		12/12/2012	13/12/2012	13/12/2012	13/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	87	92	90	93	92

Organophosphorus Pesticides						
Our Reference:	UNITS	83246-94	83246-95	83246-104	83246-110	83246-116
Your Reference	----------	22	24	26	21A/SS	TP6a
Depth	----------	0.3-0.4	0-0.05	0.1-0.2	-	0.6-0.8
Date Sampled		14/12/2012	14/12/2012	14/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	92	95	98	92

Organophosphorus Pesticides			
Our Reference:	UNITS	83246-122	83246-133
Your Reference	----------	BD1A/111212	27
Depth	----------	-	0.1-0.3
Date Sampled		12/12/2012	12/12/2012
Type of sample		Soil	Soil
Date extracted	-	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012
Diazinon	mg/kg	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1
Surrogate TCMX	%	95	93

PCBs in Soil						
Our Reference:	UNITS	83246-3	83246-8	83246-10	83246-11	83246-17
Your Reference	----------	1	2	2	3	4
Depth	----------	0.5-1	0.5-0.7	2.2-2.3	0.1-0.3	0.4-0.5
Date Sampled		11/12/2012	11/12/2012	11/12/2012	13/12/2012	11/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	85	86	84	88	88

PCBs in Soil						
Our Reference:	UNITS	83246-22	83246-32	83246-45	83246-57	83246-61
Your Reference	----------	5	7	10	13	14
Depth	----------	0-0.3	0.9-1.0	0.5-0.6	0.6-0.7	0.5-0.7
Date Sampled		11/12/2012	13/12/2012	12/12/2012	13/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Surrogate TCLMX	%	96	95	97	93	91

PCBs in Soil						
Our Reference:	UNITS	83246-66	83246-70	83246-76	83246-81	83246-87
Your Reference	----------	15	16	18	19	20
Depth	----------	1-1.1	0.3-0.5	0.1-0.3	0.4-0.6	0.7-0.8
Date Sampled		12/12/2012	13/12/2012	13/12/2012	13/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	87	67	90	93	92

PCBs in Soil						
Our Reference:	UNITS	83246-94	83246-95	83246-104	83246-110	83246-116
Your Reference	----------	22	24	26	21A/SS	TP6a
Depth	----------	0.3-0.4	0-0.05	0.1-0.2	-	0.6-0.8
Date Sampled		14/12/2012	14/12/2012	14/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012	20/12/2012	20/12/2012	20/12/2012
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	93	92	95	98	92

PCBs in Soil			
Our Reference:	UNITS	83246-122	83246-133
Your Reference	----------	BD1A/111212	27
Depth	----------	-	0.1-0.3
Date Sampled		12/12/2012	12/12/2012
Type of sample		Soil	Soil
Date extracted	-	19/12/2012	19/12/2012
Date analysed	-	20/12/2012	20/12/2012
Arochlor 1016	mg/kg	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1
Surrogate TCLMX	%	95	93

Total Phenolics in Soil						
Our Reference:	UNITS	83246-3	83246-8	83246-10	83246-11	83246-17
Your Reference	----------	1	2	2	3	4
Depth	----------	0.5-1	0.5-0.7	2.2-2.3	0.1-0.3	0.4-0.5
Date Sampled		11/12/2012	11/12/2012	11/12/2012	13/12/2012	11/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/12/2012	28/12/2012	28/12/2012	28/12/2012	28/12/2012
Date analysed	-	31/12/2012	31/12/2012	31/12/2012	31/12/2012	31/12/2012
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Total Phenolics in Soil						
Our Reference:	UNITS	83246-22	83246-32	83246-45	83246-57	83246-61
Your Reference	----------	5	7	10	13	14
Depth	----------	0-0.3	0.9-1.0	0.5-0.6	0.6-0.7	0.5-0.7
Date Sampled		11/12/2012	13/12/2012	12/12/2012	13/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/12/2012	28/12/2012	28/12/2012	28/12/2012	28/12/2012
Date analysed	-	31/12/2012	31/12/2012	31/12/2012	31/12/2012	31/12/2012
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Total Phenolics in Soil						
Our Reference:	UNITS	83246-66	83246-70	83246-76	83246-81	83246-87
Your Reference	----------	15	16	18	19	20
Depth	----------	1-1.1	0.3-0.5	0.1-0.3	0.4-0.6	0.7-0.8
Date Sampled		12/12/2012	13/12/2012	13/12/2012	13/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/12/2012	28/12/2012	28/12/2012	28/12/2012	28/12/2012
Date analysed	-	31/12/2012	31/12/2012	31/12/2012	31/12/2012	31/12/2012
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Total Phenolics in Soil						
Our Reference:	UNITS	83246-94	83246-95	83246-104	83246-110	83246-116
Your Reference	----------	22	24	26	21A/SS	TP6a
Depth	----------	0.3-0.4	0-0.05	0.1-0.2	-	0.6-0.8
Date Sampled		14/12/2012	14/12/2012	14/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/12/2012	28/12/2012	28/12/2012	28/12/2012	28/12/2012
Date analysed	-	31/12/2012	31/12/2012	31/12/2012	31/12/2012	31/12/2012
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Total Phenolics in Soil			
Our Reference:	UNITS	83246-122	83246-133
Your Reference	----------	BD1A/111212	27
Depth	----------	-	0.1-0.3
Date Sampled		12/12/2012	12/12/2012
Type of sample		Soil	Soil
Date extracted	-	28/12/2012	28/12/2012
Date analysed	-	31/12/2012	31/12/2012
Total Phenolics (as Phenol)	mg/kg	<5	<5

Acid Extractable metals in soil						
Our Reference:	UNITS	83246-3	83246-8	83246-10	83246-11	83246-12
Your Reference	----------	1	2	2	3	3
Depth	----------	0.5-1	0.5-0.7	2.2-2.3	0.1-0.3	0.5-0.6
Date Sampled		11/12/2012	11/12/2012	11/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Arsenic	mg/kg	5	<4	<4	11	4
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	2	10	1	12	4
Copper	mg/kg	4	69	<1	47	53
Lead	mg/kg	4	40	<1	32	35
Mercury	mg/kg	<0.1	1.7	<0.1	0.2	0.2
Nickel	mg/kg	13	12	<1	32	16
Zinc	mg/kg	19	310	5	85	50

Acid Extractable metals in soil						
Our Reference:	UNITS	83246-17	83246-22	83246-26	83246-32	83246-37
Your Reference	----------	4	5	6	7	8
Depth	----------	0.4-0.5	0-0.3	0.1-0.3	0.9-1.0	0.5-0.6
Date Sampled		11/12/2012	11/12/2012	11/12/2012	13/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	0.7	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	5	10	8	8	8
Copper	mg/kg	490	45	57	10	27
Lead	mg/kg	17	14	15	33	70
Mercury	mg/kg	0.1	<0.1	<0.1	<0.1	0.1
Nickel	mg/kg	9	9	14	2	4
Zinc	mg/kg	96	36	36	32	630

Acid Extractable metals in soil						
Our Reference:	UNITS	83246-40	83246-45	83246-49	83246-52	83246-56
Your Reference	----------	9	10	11	12	13
Depth	----------	0.1-0.3	0.5-0.6	0.1-0.3	0.1-0.3	0.3-0.4
Date Sampled		12/12/2012	12/12/2012	12/12/2012	12/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Arsenic	mg/kg	10	5	<4	<4	150
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	1.5
Chromium	mg/kg	11	4	6	44	19
Copper	mg/kg	48	22	21	45	300
Lead	mg/kg	42	13	19	19	320
Mercury	mg/kg	0.1	<0.1	<0.1	<0.1	0.2
Nickel	mg/kg	7	8	7	4	23
Zinc	mg/kg	49	34	61	38	280

Acid Extractable metals in soil						
Our Reference:	UNITS	83246-57	83246-61	83246-63	83246-66	83246-70
Your Reference	----------	13	14	15	15	16
Depth	----------	0.6-0.7	0.5-0.7	0.1-0.3	1-1.1	0.3-0.5
Date Sampled		13/12/2012	12/12/2012	12/12/2012	12/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Arsenic	mg/kg	6	18	<4	<4	<4
Cadmium	mg/kg	<0.5	2.5	<0.5	<0.5	<0.5
Chromium	mg/kg	6	260	12	1	6
Copper	mg/kg	65	130	25	1	19
Lead	mg/kg	85	320	51	2	37
Mercury	mg/kg	0.2	4.0	0.9	<0.1	0.9
Nickel	mg/kg	12	22	11	<1	6
Zinc	mg/kg	140	1,100	120	12	120

Acid Extractable metals in soil						
Our Reference:	UNITS	83246-76	83246-81	83246-85	83246-87	83246-89
Your Reference	----------	18	19	20	20	21
Depth	----------	0.1-0.3	0.4-0.6	0.4-0.5	0.7-0.8	0-0.1
Date Sampled		13/12/2012	13/12/2012	12/12/2012	12/12/2012	14/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	1.0
Chromium	mg/kg	11	3	3	2	13
Copper	mg/kg	53	12	13	<1	75
Lead	mg/kg	12	9	13	<1	110
Mercury	mg/kg	0.2	<0.1	<0.1	<0.1	0.4
Nickel	mg/kg	29	10	13	<1	10
Zinc	mg/kg	37	19	5	<1	310

Acid Extractable metals in soil						
Our Reference:	UNITS	83246-94	83246-95	83246-100	83246-104	83246-110
Your Reference	----------	22	24	25	26	21A/SS
Depth	----------	0.3-0.4	0-0.05	0.1-0.3	0.1-0.2	-
Date Sampled		14/12/2012	14/12/2012	14/12/2012	14/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Arsenic	mg/kg	<4	<4	<4	<4	4
Cadmium	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	6	5	12	3	9
Copper	mg/kg	28	13	33	16	16
Lead	mg/kg	47	20	48	22	53
Mercury	mg/kg	<0.1	0.1	0.5	<0.1	0.2
Nickel	mg/kg	8	5	15	8	3
Zinc	mg/kg	120	46	100	92	70

Acid Extractable metals in soil						
Our Reference:	UNITS	83246-116	83246-118	83246-122	83246-125	83246-127
Your Reference	----------	TP6a	BH23	BD1A/111212	BD1/121212	BD5
Depth	----------	0.6-0.8	0.1-0.2	-	-	-
Date Sampled		12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Arsenic	mg/kg	<4	<4	<4	10	6
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	2	1	9	11	15
Copper	mg/kg	3	3	57	72	39
Lead	mg/kg	11	8	45	45	100
Mercury	mg/kg	<0.1	<0.1	1.4	<0.1	0.7
Nickel	mg/kg	1	<1	11	12	8
Zinc	mg/kg	3	9	320	53	120

Acid Extractable metals in soil					
Our Reference:	UNITS	83246-132	83246-133	83246-134	83246-135
Your Reference	----------	17	27	5 triplicate	13 triplicate
Depth	----------	0.1-0.3	0.1-0.3	0-0.3	0.6-0.70
Date Sampled		12/12/2012	12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil
Date digested	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Date analysed	-	19/12/2012	19/12/2012	19/12/2012	19/12/2012
Arsenic	mg/kg	<4	<4	4	9
Cadmium	mg/kg	0.8	<0.5	<0.5	<0.5
Chromium	mg/kg	7	10	9	7
Copper	mg/kg	33	25	38	68
Lead	mg/kg	170	92	21	130
Mercury	mg/kg	0.2	0.1	<0.1	0.2
Nickel	mg/kg	12	21	8	11
Zinc	mg/kg	170	180	48	350

Miscellaneous Inorg - soil						
Our Reference:	UNITS	83246-3	83246-8	83246-12	83246-22	83246-32
Your Reference	----------	1	2	3	5	7
Depth	----------	0.5-1	0.5-0.7	0.5-0.6	0-0.3	0.9-1.0
Date Sampled		11/12/2012	11/12/2012	13/12/2012	11/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/12/2012	18/12/2012	18/12/2012	18/12/2012	18/12/2012
Date analysed	-	18/12/2012	18/12/2012	18/12/2012	18/12/2012	18/12/2012
pH 1:5 soil:water	pH Units	[NA]	8.5	[NA]	[NA]	8.7
Total Cyanide	mg/kg	<0.5	[NA]	<0.5	<0.5	[NA]
Ammonia as N in soil	mg/kg	[NA]	4.4	[NA]	[NA]	2.9

Miscellaneous Inorg - soil						
Our Reference:	UNITS	83246-37	83246-39	83246-51	83246-57	83246-70
Your Reference	----------	8	8	11	13	16
Depth	----------	0.5-0.6	2.2-2.4	2.2-2.3	0.6-0.7	0.3-0.5
Date Sampled		12/12/2012	12/12/2012	12/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/12/2012	18/12/2012	18/12/2012	18/12/2012	18/12/2012
Date analysed	-	18/12/2012	18/12/2012	18/12/2012	18/12/2012	18/12/2012
pH 1:5 soil:water	pH Units	[NA]	7.9	[NA]	8.7	7.4
Total Cyanide	mg/kg	<0.5	[NA]	[NA]	[NA]	[NA]
Ammonia as N in soil	mg/kg	[NA]	1.3	0.9	1.9	14

Miscellaneous Inorg - soil						
Our Reference:	UNITS	83246-72	83246-81	83246-94	83246-100	83246-116
Your Reference	----------	16	19	22	25	TP6a
Depth	----------	1-1.1	0.4-0.6	0.3-0.4	0.1-0.3	0.6-0.8
Date Sampled		13/12/2012	13/12/2012	14/12/2012	14/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/12/2012	18/12/2012	18/12/2012	18/12/2012	18/12/2012
Date analysed	-	18/12/2012	18/12/2012	18/12/2012	18/12/2012	18/12/2012
pH 1:5 soil:water	pH Units	7.9	[NA]	8.6	[NA]	[NA]
Total Cyanide	mg/kg	[NA]	<0.5	[NA]	<0.5	<0.5
Ammonia as N in soil	mg/kg	2.3	[NA]	1.9	[NA]	[NA]

Miscellaneous Inorg - soil			
Our Reference:	UNITS	83246-122	83246-132
Your Reference	----------	BD1A/111212	17
Depth	----------	-	0.1-0.3
Date Sampled		12/12/2012	12/12/2012
Type of sample		Soil	Soil
Date prepared	-	18/12/2012	18/12/2012
Date analysed	-	18/12/2012	18/12/2012
pH 1:5 soil:water	pH Units	8.9	[NA]
Total Cyanide	mg/kg	[NA]	<0.5
Ammonia as N in soil	mg/kg	4.5	[NA]

Moisture						
Our Reference:	UNITS	83246-3	83246-5	83246-8	83246-9	83246-10
Your Reference	----------	1	1	2	2	2
Depth	----------	0.5-1	1.6-1.7	0.5-0.7	1.7-1.8	2.2-2.3
Date Sampled		11/12/2012	11/12/2012	11/12/2012	11/12/2012	11/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/12	19/12/12	19/12/12	19/12/12	19/12/12
Date analysed	-	20/12/12	20/12/12	20/12/12	20/12/12	20/12/12
Moisture	%	22	21	25	70	22

Moisture						
Our Reference:	UNITS	83246-11	83246-12	83246-15	83246-17	83246-19
Your Reference	----------	3	3	3	4	4
Depth	----------	0.1-0.3	0.5-0.6	1.7-1.8	0.4-0.5	1-1.1
Date Sampled		13/12/2012	13/12/2012	13/12/2012	11/12/2012	11/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/12	19/12/12	19/12/12	19/12/12	19/12/12
Date analysed	-	20/12/12	20/12/12	20/12/12	20/12/12	20/12/12
Moisture	%	9.7	15	6.9	8.4	19

Moisture						
Our Reference:	UNITS	83246-21	83246-22	83246-25	83246-26	83246-32
Your Reference	----------	4	5	5	6	7
Depth	----------	2.7-2.8	0-0.3	2.5-2.6	0.1-0.3	0.9-1.0
Date Sampled		11/12/2012	11/12/2012	11/12/2012	11/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/12	19/12/12	19/12/12	19/12/12	19/12/12
Date analysed	-	20/12/12	20/12/12	20/12/12	20/12/12	20/12/12
Moisture	%	22	7.8	50	5.5	8.1

Moisture						
Our Reference:	UNITS	83246-35	83246-37	83246-39	83246-40	83246-45
Your Reference	----------	7	8	8	9	10
Depth	----------	2.3-2.4	0.5-0.6	2.2-2.4	0.1-0.3	0.5-0.6
Date Sampled		13/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/12	19/12/12	19/12/12	19/12/12	19/12/12
Date analysed	-	20/12/12	20/12/12	20/12/12	20/12/12	20/12/12
Moisture	%	5.2	8.1	3.5	6.8	8.2

Moisture						
Our Reference:	UNITS	83246-49	83246-51	83246-52	83246-56	83246-57
Your Reference	----------	11	11	12	13	13
Depth	----------	0.1-0.3	2.2-2.3	0.1-0.3	0.3-0.4	0.6-0.7
Date Sampled		12/12/2012	12/12/2012	12/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/12	19/12/12	19/12/12	19/12/12	19/12/12
Date analysed	-	20/12/12	20/12/12	20/12/12	20/12/12	20/12/12
Moisture	%	4.6	2.6	7.4	5.5	4.6

Moisture						
Our Reference:	UNITS	83246-61	83246-62	83246-63	83246-66	83246-68
Your Reference	----------	14	14	15	15	15
Depth	----------	0.5-0.7	2-2.1	0.1-0.3	1-1.1	2.5-2.6
Date Sampled		12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/12	19/12/12	19/12/12	19/12/12	19/12/12
Date analysed	-	20/12/12	20/12/12	20/12/12	20/12/12	20/12/12
Moisture	%	19	18	4.5	6.8	23

Moisture						
Our Reference:	UNITS	83246-70	83246-72	83246-75	83246-76	83246-79
Your Reference	----------	16	16	17	18	18
Depth	----------	0.3-0.5	1-1.1	2.1-2.5	0.1-0.3	1.9-2.0
Date Sampled		13/12/2012	13/12/2012	12/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/12	19/12/12	19/12/12	19/12/12	19/12/12
Date analysed	-	20/12/12	20/12/12	20/12/12	20/12/12	20/12/12
Moisture	%	11	6.2	9.1	3.5	2.1

Moisture						
Our Reference:	UNITS	83246-81	83246-85	83246-87	83246-89	83246-94
Your Reference	----------	19	20	20	21	22
Depth	----------	0.4-0.6	0.4-0.5	0.7-0.8	0-0.1	0.3-0.4
Date Sampled		13/12/2012	12/12/2012	12/12/2012	14/12/2012	14/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/12	19/12/12	19/12/12	19/12/12	19/12/12
Date analysed	-	20/12/12	20/12/12	20/12/12	20/12/12	20/12/12
Moisture	%	3.4	15	3.8	1.8	4.6

Moisture						
Our Reference:	UNITS	83246-95	83246-98	83246-100	83246-104	83246-110
Your Reference	----------	24	24	25	26	21A/SS
Depth	----------	0-0.05	0.9-1.0	0.1-0.3	0.1-0.2	-
Date Sampled		14/12/2012	14/12/2012	14/12/2012	14/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/12	19/12/12	19/12/12	19/12/12	19/12/12
Date analysed	-	20/12/12	20/12/12	20/12/12	20/12/12	20/12/12
Moisture	%	13	12	15	6.0	3.3

Moisture						
Our Reference:	UNITS	83246-111	83246-112	83246-116	83246-118	83246-120
Your Reference	----------	TB1	TB2	TP6a	BH23	BH23
Depth	----------	-	-	0.6-0.8	0.1-0.2	1.1-1.2
Date Sampled		12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/12	19/12/12	19/12/12	19/12/12	19/12/12
Date analysed	-	20/12/12	20/12/12	20/12/12	20/12/12	20/12/12
Moisture	%	4.0	19	28	13	8.9

Moisture						
Our Reference:	UNITS	83246-122	83246-125	83246-127	83246-132	83246-133
Your Reference	----------	BD1A/111212	BD1/121212	BD5	17	27
Depth	----------	-	-	-	0.1-0.3	0.1-0.3
Date Sampled		12/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/12	19/12/12	19/12/12	19/12/12	19/12/12
Date analysed	-	20/12/12	20/12/12	20/12/12	20/12/12	20/12/12
Moisture	%	19	6.3	4.1	2.3	5.1

Asbestos ID - soils						
Our Reference:	UNITS	83246-3	83246-8	83246-11	83246-17	83246-22
Your Reference	----------	1	2	3	4	5
Depth	----------	0.5-1	0.5-0.7	0.1-0.3	0.4-0.5	0-0.3
Date Sampled		11/12/2012	11/12/2012	13/12/2012	11/12/2012	11/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	2/01/2013	2/01/2013	2/01/2013	2/01/2013	2/01/2013
Sample mass tested	g	Approx 40g	35.92g	Approx 50g	Approx 60g	Approx 40g
Sample Description	-	Brown fine-grained sandy soil	Dark grey fine-grained soil & rocks	Brown fine-grained soil & rocks	Dark brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - soils						
Our Reference:	UNITS	83246-32	83246-37	83246-40	83246-45	83246-49
Your Reference	----------	7	8	9	10	11
Depth	----------	0.9-1.0	0.5-0.6	0.1-0.3	0.5-0.6	0.1-0.3
Date Sampled		13/12/2012	12/12/2012	12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	2/01/2013	2/01/2013	2/01/2013	2/01/2013	2/01/2013
Sample mass tested	g	Approx 50g	Approx 50g	Approx 50g	Approx 40g	Approx 60g
Sample Description	-	Brown coarse-grained soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Dark brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - soils						
Our Reference:	UNITS	83246-52	83246-57	83246-61	83246-70	83246-76
Your Reference	----------	12	13	14	16	18
Depth	----------	0.1-0.3	0.6-0.7	0.5-0.7	0.3-0.5	0.1-0.3
Date Sampled		12/12/2012	13/12/2012	12/12/2012	13/12/2012	13/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	2/01/2013	2/01/2013	2/01/2013	2/01/2013	2/01/2013
Sample mass tested	g	Approx 60g	Approx 60g	Approx 40g	Approx 50g	Approx 60g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - soils						
Our Reference:	UNITS	83246-81	83246-85	83246-89	83246-94	83246-95
Your Reference	----------	19	20	21	22	24
Depth	----------	0.4-0.6	0.4-0.5	0-0.1	0.3-0.4	0-0.05
Date Sampled		13/12/2012	12/12/2012	14/12/2012	14/12/2012	14/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	2/01/2013	2/01/2013	2/01/2013	2/01/2013	2/01/2013
Sample mass tested	g	Approx 40g	Approx 100g	Approx 60g	Approx 50g	Approx 50g
Sample Description	-	Grey coarse-grained soil & rocks	Black hard bitumen-like rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - soils						
Our Reference:	UNITS	83246-100	83246-104	83246-110	83246-116	83246-118
Your Reference	----------	25	26	21A/SS	TP6a	BH23
Depth	----------	0.1-0.3	0.1-0.2	-	0.6-0.8	0.1-0.2
Date Sampled		14/12/2012	14/12/2012	12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	2/01/2013	2/01/2013	2/01/2013	2/01/2013	2/01/2013
Sample mass tested	g	Approx 50g	Approx 50g	Approx 50g	Approx 40g	Approx 50g
Sample Description	-	Brown coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Light brown coarse-grained soil & rocks	White powdery quartz cement debris	Brown fine-grained sandy soil
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - soils				
Our Reference:	UNITS	83246-122	83246-125	83246-133
Your Reference	----------	BD1A/111212	BD1/121212	27
Depth	----------	-	-	0.1-0.3
Date Sampled		12/12/2012	12/12/2012	12/12/2012
Type of sample		Soil	Soil	Soil
Date analysed	-	2/01/2013	2/01/2013	2/01/2013
Sample mass tested	g	Approx 50g	Approx 50g	66.60g
Sample Description	-	Grey coarse-grained soil & rocks	Light brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	Chrysotile asbestos detected Amosite asbestos detected
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - materials			
Our Reference:	UNITS	83246-64	83246-109
Your Reference	----------	F15	F1/121212
Depth	----------	0.1-0.3	-
Date Sampled		12/12/2012	12/12/2012
Type of sample		Material	Material
Date analysed	-	21/12/2012	21/12/2012
Mass / Dimension of Sample	-	102x80x3mm	131x47x5mm
Sample Description	-	Off-white vitreous fibre sheet material	Grey compressed fibre cement & bitumen
Asbestos ID in materials	-	No asbestos detected Synthetic mineral fibre detected	Chrysotile asbestos detected Amosite asbestos detected

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 draft 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 draft Guideline on Investigation Levels for Soil and Groundwater.
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 draft B1 Guideline on Investigation Levels for Soil and Groundwater.
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.
Inorg-030	Total Phenolics - determined colorimetrically following disitillation, based upon APHA 22nd ED 5530 D.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA 22nd ED, 4500-H+.
Inorg-013	Cyanide - total determined colourimetrically after distillation, based on APHA 22nd ED, 4500-CN_C,E. Free cyanide determined colourimetrically after filtration and confirmed by diffusion.
Inorg-057	Ammonia - determined colourimetrically based on EPA350.1 and APHA 22nd ED 4500-NH3 F, Soils are analysed following a KCl extraction.
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 4 hours.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.

QUALITY CONTROL VOCs in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			19/12/2012	83246-15	19/12/2012 || 19/12/2012	LCS-1	19/12/2012
Date analysed	-			21/12/2012	83246-15	21/12/2012 || 21/12/2012	LCS-1	21/12/2012
Dichlorodifluoromethane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
Chloromethane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
Vinyl Chloride	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
Bromomethane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
Chloroethane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
Trichlorofluoromethane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
1,1-Dichloroethene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
trans-1,2-dichloroethene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
1,1-dichloroethane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	LCS-1	130%
cis-1,2-dichloroethene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
bromochloromethane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
chloroform	mg/kg	1	Org-014	<1	83246-15	<1 || <1	LCS-1	117%
2,2-dichloropropane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
1,2-dichloroethane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	LCS-1	114%
1,1,1-trichloroethane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	LCS-1	116%
1,1-dichloropropene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
Cyclohexane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
carbon tetrachloride	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
Benzene	mg/kg	0.2	Org-014	<0.2	83246-15	<0.2 || <0.2	[NR]	[NR]
dibromomethane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
1,2-dichloropropane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
trichloroethene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	LCS-1	102%
bromodichloromethane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	LCS-1	102%
trans-1,3-dichloropropene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
cis-1,3-dichloropropene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
1,1,2-trichloroethane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
Toluene	mg/kg	0.5	Org-014	<0.5	83246-15	<0.5 || <0.5	[NR]	[NR]
1,3-dichloropropane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
dibromochloromethane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	LCS-1	96%
1,2-dibromoethane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
tetrachloroethene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	LCS-1	119%
1,1,1,2-tetrachloroethane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
chlorobenzene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
Ethylbenzene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
bromoform	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
m+p-xylene	mg/kg	2	Org-014	<2	83246-15	<2 || <2	[NR]	[NR]
styrene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
o-Xylene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
1,2,3-trichloropropane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]

QUALITY CONTROL VOCs in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
isopropylbenzene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
bromobenzene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
n-propyl benzene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
2-chlorotoluene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
4-chlorotoluene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
1,3,5-trimethyl benzene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
tert-butyl benzene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
1,2,4-trimethyl benzene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
1,3-dichlorobenzene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
sec-butyl benzene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
1,4-dichlorobenzene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
4-isopropyl toluene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
1,2-dichlorobenzene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
n-butyl benzene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
1,2,4-trichlorobenzene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
hexachlorobutadiene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
1,2,3-trichlorobenzene	mg/kg	1	Org-014	<1	83246-15	<1 || <1	[NR]	[NR]
Surrogate Dibromofluorometha	%		Org-014	69	83246-15	91 || 91 || RPD: 0	LCS-1	94%
Surrogate aaa-Trifluorotoluene	%		Org-014	91	83246-15	97 || 96 || RPD: 1	LCS-1	101%
Surrogate Toluene-d_8	%		Org-014	100	83246-15	96 || 96 || RPD: 0	LCS-1	96%
Surrogate 4-Bromofluorobenzene	%		Org-014	87	83246-15	75 || 74 || RPD: 1	LCS-1	77%

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	-			19/12/2012	83246-3	19/12/2012 || 19/12/2012	LCS-2	19/12/2012
Date analysed	-			19/12/2012	83246-3	20/12/2012 || 20/12/2012	LCS-2	19/12/2012
MTBE	mg/kg	0.5	Org-014	<0.50	83246-3	<0.50 || <0.50	[NR]	[NR]
TRH C_6 - C_9	mg/kg	25	Org-016	<25	83246-3	<25 || <25	LCS-2	122%
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	83246-3	<25 || <25	LCS-2	122%
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	25	Org-016	25	83246-3	<25 || <25	[NR]	[NR]
Benzene	mg/kg	0.2	Org-016	<0.2	83246-3	<0.2 || <0.2	LCS-2	136%
Toluene	mg/kg	0.5	Org-016	<0.5	83246-3	<0.5 || <0.5	LCS-2	124%
Ethylbenzene	mg/kg	1	Org-016	<1	83246-3	<1 || <1	LCS-2	114%
m+p-xylene	mg/kg	2	Org-016	<2	83246-3	<2 || <2	LCS-2	119%
o-Xylene	mg/kg	1	Org-016	<1	83246-3	<1 || <1	LCS-2	119%
naphthalene	mg/kg	1	Org-014	<1	83246-3	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	116	83246-3	101 || 108 || RPD: 7	LCS-2	121%

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	-			19/12/2012	83246-3	19/12/2012 || 19/12/2012	LCS-1	19/12/2012
Date analysed	-			19/12/2012	83246-3	19/12/2012 || 19/12/2012	LCS-1	19/12/2012
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	83246-3	<50 || <50	LCS-1	98%
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	83246-3	<100 || <100	LCS-1	108%
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	83246-3	<100 || <100	LCS-1	91%
TRH >C_{10}-C_{16}	mg/kg	50	Org-003	<50	83246-3	<50 || <50	LCS-1	98%
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	50	Org-003	50	83246-3	<50 || <50	[NR]	[NR]
TRH >C_{16}-C_{34}	mg/kg	100	Org-003	<100	83246-3	<100 || <100	LCS-1	108%
TRH >C_{34}-C_{40}	mg/kg	100	Org-003	<100	83246-3	<100 || <100	LCS-1	91%
Surrogate o-Terphenyl	%		Org-003	96	83246-3	94 || 91 || RPD: 3	LCS-1	112%

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base || Duplicate || %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			19/12/2012	83246-3	19/12/2012 || 19/12/2012	LCS-1	19/12/2012
Date analysed	-			19/12/2012	83246-3	19/12/2012 || 19/12/2012	LCS-1	19/12/2012
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	83246-3	<0.1 || <0.1	LCS-1	107%
Acenaphthylene	mg/kg	0.1	Org-012 subset	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012 subset	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012 subset	<0.1	83246-3	<0.1 || <0.1	LCS-1	104%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	83246-3	<0.1 || <0.1	LCS-1	101%
Anthracene	mg/kg	0.1	Org-012 subset	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012 subset	<0.1	83246-3	<0.1 || <0.1	LCS-1	103%
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	83246-3	<0.1 || <0.1	LCS-1	105%
Benzo(a)anthracene	mg/kg	0.1	Org-012 subset	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012 subset	<0.1	83246-3	<0.1 || <0.1	LCS-1	104%
Benzo(b+k)fluoranthene	mg/kg	0.2	Org-012 subset	<0.2	83246-3	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012 subset	<0.05	83246-3	<0.05 || <0.05	LCS-1	121%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012 subset	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012 subset	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012 subset	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Benzo(a)pyrene TEQ	mg/kg	0.5	Org-012 subset	0.5	83246-3	<0.5 || <0.5	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%		Org-012 subset	106	83246-3	99 || 101 || RPD: 2	LCS-1	98%

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	-			19/12/2012	83246-3	19/12/2012 || 19/12/2012	LCS-1	19/12/2012
Date analysed	-			20/12/2012	83246-3	20/12/2012 || 20/12/2012	LCS-1	20/12/2012
HCB	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	LCS-1	86%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	LCS-1	91%
Heptachlor	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	LCS-1	90%
delta-BHC	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	LCS-1	102%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	LCS-1	93%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	LCS-1	86%
Dieldrin	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	LCS-1	89%
Endrin	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	LCS-1	94%
pp-DDD	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	LCS-1	77%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	LCS-1	102%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%		Org-005	87	83246-3	85 || 91 || RPD: 7	LCS-1	80%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			19/12/2012	83246-3	19/12/2012 || 19/12/2012	LCS-1	19/12/2012
Date analysed	-			20/12/2012	83246-3	20/12/2012 || 20/12/2012	LCS-1	20/12/2012
Diazinon	mg/kg	0.1	Org-008	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Dimethoate	mg/kg	0.1	Org-008	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Ronnel	mg/kg	0.1	Org-008	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	0.1	Org-008	<0.1	83246-3	<0.1 || <0.1	LCS-1	80%
Fenitrothion	mg/kg	0.1	Org-008	<0.1	83246-3	<0.1 || <0.1	LCS-1	94%
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	0.1	Org-008	<0.1	83246-3	<0.1 || <0.1	LCS-1	84%
Surrogate TCMX	%		Org-008	87	83246-3	85 || 91 || RPD: 7	LCS-1	86%
QUALITY CONTROL PCBs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			19/12/2012	83246-3	19/12/2012 || 19/12/2012	LCS-1	19/12/2012
Date analysed	-			20/12/2012	83246-3	20/12/2012 || 20/12/2012	LCS-1	20/12/2012
Arochlor 1016	mg/kg	0.1	Org-006	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	0.1	Org-006	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	Org-006	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	Org-006	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	Org-006	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	Org-006	<0.1	83246-3	<0.1 || <0.1	LCS-1	114%
Arochlor 1260	mg/kg	0.1	Org-006	<0.1	83246-3	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%		Org-006	87	83246-3	85 || 91 || RPD: 7	LCS-1	84%
QUALITY CONTROL Total Phenolics in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			28/12/2012	83246-3	28/12/2012 || 28/12/2012	LCS-1	28/12/2012
Date analysed	-			28/12/2012	83246-3	31/12/2012 || 31/12/2012	LCS-1	31/12/2012
Total Phenolics (as Phenol)	mg/kg	5	Inorg-030	<5	83246-3	<5 || <5	LCS-1	104%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date digested	-			19/12/2012	83246-3	19/12/2012 || 19/12/2012	LCS-1	19/12/2012
Date analysed	-			19/12/2012	83246-3	19/12/2012 || 19/12/2012	LCS-1	19/12/2012
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	83246-3	5 || 6 || RPD: 18	LCS-1	94%
Cadmium	mg/kg	0.5	Metals-020 ICP-AES	<0.5	83246-3	<0.5 || <0.5	LCS-1	97%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	83246-3	2 || 2 || RPD: 0	LCS-1	96%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	83246-3	4 || 4 || RPD: 0	LCS-1	97%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	83246-3	4 || 5 || RPD: 22	LCS-1	92%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	83246-3	<0.1 || <0.1	LCS-1	99%
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	83246-3	13 || 12 || RPD: 8	LCS-1	96%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	83246-3	19 || 22 || RPD: 15	LCS-1	95%

QUALITY CONTROL Miscellaneous Inorg - soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			18/12/2012	83246-8	18/12/2012 || 18/12/2012	LCS-1	18/12/2012
Date analysed	-			18/12/2012	83246-8	18/12/2012 || 18/12/2012	LCS-1	18/12/2012
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	83246-8	8.5 || [N/T]	LCS-1	101%
Total Cyanide	mg/kg	0.5	Inorg-013	<0.5	[NT]	[NT]	LCS-1	96%
Ammonia as N in soil	mg/kg	0.5	Inorg-057	<0.5	83246-8	4.4 || 4.5 || RPD: 2	LCS-1	101%

QUALITY CONTROL Moisture	UNITS	PQL	METHOD	Blank
Date prepared	-			[NT]
Date analysed	-			[NT]
Moisture	%	0.1	Inorg-008	[NT]

QUALITY CONTROL Asbestos ID - soils	UNITS	PQL	METHOD	Blank
Date analysed	-			[NT]

QUALITY CONTROL Asbestos ID - materials	UNITS	PQL	METHOD	Blank
Date analysed	-			[NT]

QUALITY CONTROL VOCs in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-87	19/12/2012 || 19/12/2012	83246-32	19/12/2012
Date analysed	-	83246-87	21/12/2012 || 21/12/2012	83246-32	21/12/2012
Dichlorodifluoromethane	mg/kg	83246-87	<1 || <1	[NR]	[NR]
Chloromethane	mg/kg	83246-87	<1 || <1	[NR]	[NR]
Vinyl Chloride	mg/kg	83246-87	<1 || <1	[NR]	[NR]
Bromomethane	mg/kg	83246-87	<1 || <1	[NR]	[NR]
Chloroethane	mg/kg	83246-87	<1 || <1	[NR]	[NR]
Trichlorofluoromethane	mg/kg	83246-87	<1 || <1	[NR]	[NR]
1,1-Dichloroethene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
trans-1,2-dichloroethene	mg/kg	83246-87	<1 || <1	[NR]	[NR]

QUALITY CONTROL VOCs in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
1,1-dichloroethane	mg/kg	83246-87	<1 || <1	83246-32	105%
cis-1,2-dichloroethene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
bromochloromethane	mg/kg	83246-87	<1 || <1	[NR]	[NR]
chloroform	mg/kg	83246-87	<1 || <1	83246-32	123%
2,2-dichloropropane	mg/kg	83246-87	<1 || <1	[NR]	[NR]
1,2-dichloroethane	mg/kg	83246-87	<1 || <1	83246-32	125%
1,1,1-trichloroethane	mg/kg	83246-87	<1 || <1	83246-32	126%
1,1-dichloropropene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
Cyclohexane	mg/kg	83246-87	<1 || <1	[NR]	[NR]
carbon tetrachloride	mg/kg	83246-87	<1 || <1	[NR]	[NR]
Benzene	mg/kg	83246-87	<0.2 || <0.2	[NR]	[NR]
dibromomethane	mg/kg	83246-87	<1 || <1	[NR]	[NR]
1,2-dichloropropane	mg/kg	83246-87	<1 || <1	[NR]	[NR]
trichloroethene	mg/kg	83246-87	<1 || <1	83246-32	110%
bromodichloromethane	mg/kg	83246-87	<1 || <1	83246-32	107%
trans-1,3-dichloropropene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
cis-1,3-dichloropropene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
1,1,2-trichloroethane	mg/kg	83246-87	<1 || <1	[NR]	[NR]
Toluene	mg/kg	83246-87	<0.5 || <0.5	[NR]	[NR]
1,3-dichloropropane	mg/kg	83246-87	<1 || <1	[NR]	[NR]
dibromochloromethane	mg/kg	83246-87	<1 || <1	83246-32	106%
1,2-dibromoethane	mg/kg	83246-87	<1 || <1	[NR]	[NR]
tetrachloroethene	mg/kg	83246-87	<1 || <1	83246-32	140%
1,1,1,2-tetrachloroethane	mg/kg	83246-87	<1 || <1	[NR]	[NR]
chlorobenzene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
Ethylbenzene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
bromoform	mg/kg	83246-87	<1 || <1	[NR]	[NR]
m+p-xylene	mg/kg	83246-87	<2 || <2	[NR]	[NR]
styrene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
1,1,2,2-tetrachloroethane	mg/kg	83246-87	<1 || <1	[NR]	[NR]
o-Xylene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
1,2,3-trichloropropane	mg/kg	83246-87	<1 || <1	[NR]	[NR]
isopropylbenzene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
bromobenzene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
n-propyl benzene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
2-chlorotoluene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
4-chlorotoluene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
1,3,5-trimethyl benzene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
tert-butyl benzene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
1,2,4-trimethyl benzene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
1,3-dichlorobenzene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
sec-butyl benzene	mg/kg	83246-87	<1 || <1	[NR]	[NR]

QUALITY CONTROL VOCs in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
1,4-dichlorobenzene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
4-isopropyl toluene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
1,2-dichlorobenzene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
n-butyl benzene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
1,2-dibromo-3-chloropropane	mg/kg	83246-87	<1 || <1	[NR]	[NR]
1,2,4-trichlorobenzene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
hexachlorobutadiene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
1,2,3-trichlorobenzene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
Surrogate Dibromofluorometha	%	83246-87	68 || 69 || RPD: 1	83246-32	101%
Surrogate aaa-Trifluorotoluene	%	83246-87	96 || 91 || RPD: 5	83246-32	114%
Surrogate Toluene-d_8	%	83246-87	100 || 100 || RPD: 0	83246-32	98%
Surrogate 4-Bromofluorobenzene	%	83246-87	87 || 87 || RPD: 0	83246-32	88%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-22	19/12/2012 || 19/12/2012	LCS-3	19/12/2012
Date analysed	-	83246-22	20/12/2012 || 20/12/2012	LCS-3	19/12/2012
MTBE	mg/kg	83246-22	<0.50 || <0.50	[NR]	[NR]
TRHC_6 - C_9	mg/kg	83246-22	<25 || <25	LCS-3	116%
TRHC_6 - C_{10}	mg/kg	83246-22	<25 || <25	LCS-3	116%
vTPHC_6 - C_{10} less BTEX (F1)	mg/kg	83246-22	<25 || <25	[NR]	[NR]
Benzene	mg/kg	83246-22	<0.2 || <0.2	LCS-3	130%
Toluene	mg/kg	83246-22	<0.5 || <0.5	LCS-3	116%
Ethylbenzene	mg/kg	83246-22	<1 || <1	LCS-3	110%
m+p-xylene	mg/kg	83246-22	<2 || <2	LCS-3	113%
o-Xylene	mg/kg	83246-22	<1 || <1	LCS-3	113%
naphthalene	mg/kg	83246-22	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	83246-22	130 || 117 || RPD: 11	LCS-3	112%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-22	19/12/2012 || 19/12/2012	LCS-2	19/12/2012
Date analysed	-	83246-22	19/12/2012 || 19/12/2012	LCS-2	20/12/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	83246-22	<50 || <50	LCS-2	95%
TRHC$_{15}$ - C$_{28}$	mg/kg	83246-22	<100 || <100	LCS-2	107%
TRHC$_{29}$ - C$_{36}$	mg/kg	83246-22	140 || <100	LCS-2	91%
TRH>C$_{10}$-C$_{16}$	mg/kg	83246-22	<50 || <50	LCS-2	95%
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	83246-22	<50 || <50	[NR]	[NR]
TRH>C$_{16}$-C$_{34}$	mg/kg	83246-22	190 || 140 || RPD: 30	LCS-2	107%
TRH>C$_{34}$-C$_{40}$	mg/kg	83246-22	130 || <100	LCS-2	91%
Surrogate o-Terphenyl	%	83246-22	105 || 92 || RPD: 13	LCS-2	111%

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-22	19/12/2012 || 19/12/2012	LCS-2	19/12/2012
Date analysed	-	83246-22	19/12/2012 || 19/12/2012	LCS-2	19/12/2012
Naphthalene	mg/kg	83246-22	<0.1 || 0.1	LCS-2	104%
Acenaphthylene	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	83246-22	<0.1 || <0.1	LCS-2	107%
Phenanthrene	mg/kg	83246-22	0.6 || 0.4 || RPD: 40	LCS-2	108%
Anthracene	mg/kg	83246-22	0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	83246-22	1.0 || 0.7 || RPD: 35	LCS-2	115%
Pyrene	mg/kg	83246-22	1.0 || 0.7 || RPD: 35	LCS-2	115%
Benzo(a)anthracene	mg/kg	83246-22	0.6 || 0.5 || RPD: 18	LCS-2	104%
Chrysene	mg/kg	83246-22	0.6 || 0.4 || RPD: 40	[NR]	[NR]
Benzo(b+k)fluoranthene	mg/kg	83246-22	1.0 || 0.9 || RPD: 11	LCS-2	119%
Benzo(a)pyrene	mg/kg	83246-22	0.59 || 0.49 || RPD: 19	[NR]	[NR]
Indeno(1,2,3-c,d)pyrene	mg/kg	83246-22	0.4 || 0.3 || RPD: 29	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	83246-22	0.4 || 0.3 || RPD: 29	[NR]	[NR]
Benzo(a)pyrene TEQ	mg/kg	83246-22	1 || 1 || RPD: 0	[NR]	[NR]
Surrogate p-Terphenyl-d$_{14}$	%	83246-22	97 || 86 || RPD: 12	LCS-2	99%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-22	19/12/2012 || 19/12/2012	LCS-2	19/12/2012
Date analysed	-	83246-22	20/12/2012 || 20/12/2012	LCS-2	20/12/2012
HCB	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	83246-22	<0.1 || <0.1	LCS-2	83%
gamma-BHC	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	83246-22	<0.1 || <0.1	LCS-2	86%
Heptachlor	mg/kg	83246-22	<0.1 || <0.1	LCS-2	79%
delta-BHC	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	83246-22	<0.1 || <0.1	LCS-2	100%
Heptachlor Epoxide	mg/kg	83246-22	<0.1 || <0.1	LCS-2	86%
gamma-Chlordane	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	83246-22	<0.1 || <0.1	LCS-2	79%
Dieldrin	mg/kg	83246-22	<0.1 || <0.1	LCS-2	82%
Endrin	mg/kg	83246-22	<0.1 || <0.1	LCS-2	75%
pp-DDD	mg/kg	83246-22	<0.1 || <0.1	LCS-2	75%
Endosulfan II	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	83246-22	<0.1 || <0.1	LCS-2	88%
Methoxychlor	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%	83246-22	96 || 85 || RPD: 12	LCS-2	80%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-22	19/12/2012 || 19/12/2012	LCS-2	19/12/2012
Date analysed	-	83246-22	20/12/2012 || 20/12/2012	LCS-2	20/12/2012
Diazinon	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
Dimethoate	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
Ronnel	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	83246-22	<0.1 || <0.1	LCS-2	100%
Fenitrothion	mg/kg	83246-22	<0.1 || <0.1	LCS-2	98%
Bromophos-ethyl	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	83246-22	<0.1 || <0.1	LCS-2	106%
Surrogate TCMX	%	83246-22	96 || 85 || RPD: 12	LCS-2	93%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-22	19/12/2012 || 19/12/2012	LCS-2	19/12/2012
Date analysed	-	83246-22	20/12/2012 || 20/12/2012	LCS-2	20/12/2012
Arochlor 1016	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	83246-22	<0.1 || <0.1	LCS-2	79%
Arochlor 1260	mg/kg	83246-22	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	83246-22	96 || 85 || RPD: 12	LCS-2	102%
QUALITY CONTROL Total Phenolics in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-61	28/12/2012 || 28/12/2012	LCS-2	28/12/2012
Date analysed	-	83246-61	31/12/2012 || 31/12/2012	LCS-2	31/12/2012
Total Phenolics (as Phenol)	mg/kg	83246-61	<5 || <5	LCS-2	99%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	83246-22	19/12/2012 || 19/12/2012	LCS-2	19/12/2012
Date analysed	-	83246-22	19/12/2012 || 19/12/2012	LCS-2	19/12/2012
Arsenic	mg/kg	83246-22	<4 || 4	LCS-2	95%
Cadmium	mg/kg	83246-22	<0.5 || <0.5	LCS-2	96%
Chromium	mg/kg	83246-22	10 || 20 || RPD: 67	LCS-2	97%
Copper	mg/kg	83246-22	45 || 41 || RPD: 9	LCS-2	97%
Lead	mg/kg	83246-22	14 || 20 || RPD: 35	LCS-2	93%
Mercury	mg/kg	83246-22	<0.1 || <0.1	LCS-2	98%
Nickel	mg/kg	83246-22	9 || 14 || RPD: 43	LCS-2	96%
Zinc	mg/kg	83246-22	36 || 52 || RPD: 36	LCS-2	96%

QUALITY CONTROL Miscellaneous Inorg - soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date prepared	-	83246-32	18/12/2012 || 18/12/2012
Date analysed	-	83246-32	18/12/2012 || 18/12/2012
pH 1:5 soil:water	pH Units	83246-32	8.7 || 8.8 || RPD: 1
Total Cyanide	mg/kg	[NT]	[NT]

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-57	19/12/2012 || 19/12/2012	LCS-1	19/12/2012
Date analysed	-	83246-57	20/12/2012 || 20/12/2012	LCS-1	20/12/2012
MTBE	mg/kg	83246-57	<0.50 || <0.50	[NR]	[NR]
TRH C_6 - C_9	mg/kg	83246-57	<25 || <25	LCS-1	125%
TRH C_6 - C_{10}	mg/kg	83246-57	<25 || <25	LCS-1	125%
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	83246-57	<25 || <25	[NR]	[NR]
Benzene	mg/kg	83246-57	<0.2 || <0.2	LCS-1	140%
Toluene	mg/kg	83246-57	<0.5 || <0.5	LCS-1	124%
Ethylbenzene	mg/kg	83246-57	<1 || <1	LCS-1	113%
m+p-xylene	mg/kg	83246-57	<2 || <2	LCS-1	123%
o-Xylene	mg/kg	83246-57	<1 || <1	LCS-1	122%
naphthalene	mg/kg	83246-57	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	83246-57	126 || 122 || RPD: 3	LCS-1	118%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-57	19/12/2012 || 19/12/2012	LCS-3	19/12/2012
Date analysed	-	83246-57	19/12/2012 || 19/12/2012	LCS-3	20/12/2012
TRH C_{10} - C_{14}	mg/kg	83246-57	<50 || <50	LCS-3	123%
TRH C_{15} - C_{28}	mg/kg	83246-57	160 || 280 || RPD: 55	LCS-3	111%
TRH C_{29} - C_{36}	mg/kg	83246-57	280 || 590 || RPD: 71	LCS-3	88%
TRH >C_{10}-C_{16}	mg/kg	83246-57	<50 || <50	LCS-3	123%
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	83246-57	<50 || <50	[NR]	[NR]
TRH >C_{16}-C_{34}	mg/kg	83246-57	360 || 710 || RPD: 65	LCS-3	111%
TRH >C_{34}-C_{40}	mg/kg	83246-57	210 || 370 || RPD: 55	LCS-3	88%
Surrogate o-Terphenyl	%	83246-57	106 || 108 || RPD: 2	LCS-3	71%

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-57	19/12/2012 || 19/12/2012	LCS-3	19/12/2012
Date analysed	-	83246-57	19/12/2012 || 19/12/2012	LCS-3	19/12/2012
Naphthalene	mg/kg	83246-57	0.2 || 0.2 || RPD: 0	LCS-3	107%
Acenaphthylene	mg/kg	83246-57	0.2 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	83246-57	0.2 || 0.1 || RPD: 67	[NR]	[NR]
Fluorene	mg/kg	83246-57	0.1 || <0.1	LCS-3	102%
Phenanthrene	mg/kg	83246-57	2.0 || 0.8 || RPD: 86	LCS-3	102%
Anthracene	mg/kg	83246-57	0.6 || 0.3 || RPD: 67	[NR]	[NR]
Fluoranthene	mg/kg	83246-57	2.5 || 1.7 || RPD: 38	LCS-3	105%
Pyrene	mg/kg	83246-57	2.5 || 2.3 || RPD: 8	LCS-3	106%
Benzo(a)anthracene	mg/kg	83246-57	1.4 || 1.5 || RPD: 7	[NR]	[NR]
Chrysene	mg/kg	83246-57	1.2 || 1.6 || RPD: 29	LCS-3	102%
Benzo(b+k)fluoranthene	mg/kg	83246-57	3.0 || 5.8 || RPD: 64	[NR]	[NR]
Benzo(a)pyrene	mg/kg	83246-57	2.2 || 4.7 || RPD: 72	LCS-3	110%
Indeno(1,2,3-c,d)pyrene	mg/kg	83246-57	1.5 || 3.4 || RPD: 78	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	83246-57	0.3 || 0.6 || RPD: 67	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	83246-57	1.3 || 2.9 || RPD: 76	[NR]	[NR]
Benzo(a)pyrene TEQ	mg/kg	83246-57	3.0 || 6.0 || RPD: 67	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%	83246-57	100 || 101 || RPD: 1	LCS-3	101%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-57	19/12/2012 || 19/12/2012	83246-32	19/12/2012
Date analysed	-	83246-57	20/12/2012 || 20/12/2012	83246-32	20/12/2012
HCB	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	83246-57	<0.1 || <0.1	83246-32	93%
gamma-BHC	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	83246-57	<0.1 || <0.1	83246-32	106%
Heptachlor	mg/kg	83246-57	<0.1 || <0.1	83246-32	97%
delta-BHC	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	83246-57	<0.1 || <0.1	83246-32	110%
Heptachlor Epoxide	mg/kg	83246-57	<0.1 || <0.1	83246-32	101%
gamma-Chlordane	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	83246-57	<0.1 || <0.1	83246-32	94%
Dieldrin	mg/kg	83246-57	<0.1 || <0.1	83246-32	98%
Endrin	mg/kg	83246-57	<0.1 || <0.1	83246-32	105%
pp-DDD	mg/kg	83246-57	<0.1 || <0.1	83246-32	84%
Endosulfan II	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	83246-57	0.4 || 0.4 || RPD: 0	[NR]	[NR]

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Endrin Aldehyde	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	83246-57	<0.1 || <0.1	83246-32	115%
Methoxychlor	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%	83246-57	93 || 99 || RPD: 6	83246-32	87%
QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-57	19/12/2012 || 19/12/2012	83246-32	19/12/2012
Date analysed	-	83246-57	20/12/2012 || 20/12/2012	83246-32	20/12/2012
Diazinon	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
Dimethoate	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
Ronnel	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	83246-57	<0.1 || <0.1	83246-32	87%
Fenitrothion	mg/kg	83246-57	<0.1 || <0.1	83246-32	86%
Bromophos-ethyl	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	83246-57	<0.1 || <0.1	83246-32	90%
Surrogate TCMX	%	83246-57	93 || 99 || RPD: 6	83246-32	87%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-57	19/12/2012 || 19/12/2012	83246-32	19/12/2012
Date analysed	-	83246-57	20/12/2012 || 20/12/2012	83246-32	20/12/2012
Arochlor 1016	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	83246-57	<0.1 || <0.1	83246-32	110%
Arochlor 1260	mg/kg	83246-57	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	83246-57	93 || 99 || RPD: 6	83246-32	88%

QUALITY CONTROL Total Phenolics in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-110	28/12/2012 || 28/12/2012	83246-8	28/12/2012
Date analysed	-	83246-110	31/12/2012 || 31/12/2012	83246-8	31/12/2012
Total Phenolics (as Phenol)	mg/kg	83246-110	<5 || <5	83246-8	88%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	83246-57	19/12/2012 || 19/12/2012	LCS-3	19/12/2012
Date analysed	-	83246-57	19/12/2012 || 19/12/2012	LCS-3	19/12/2012
Arsenic	mg/kg	83246-57	6 || 8 || RPD: 29	LCS-3	95%
Cadmium	mg/kg	83246-57	<0.5 || <0.5	LCS-3	97%
Chromium	mg/kg	83246-57	6 || 7 || RPD: 15	LCS-3	97%
Copper	mg/kg	83246-57	65 || 54 || RPD: 18	LCS-3	98%
Lead	mg/kg	83246-57	85 || 160 || RPD: 61	LCS-3	93%
Mercury	mg/kg	83246-57	0.2 || 0.2 || RPD: 0	LCS-3	99%
Nickel	mg/kg	83246-57	12 || 8 || RPD: 40	LCS-3	97%
Zinc	mg/kg	83246-57	140 || 240 || RPD: 53	LCS-3	96%
QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-87	19/12/2012 || 19/12/2012	83246-32	19/12/2012
Date analysed	-	83246-87	20/12/2012 || 20/12/2012	83246-32	19/12/2012
MTBE	mg/kg	83246-87	<0.50 || <0.50	[NR]	[NR]
TRHC$_6$ - C$_9$	mg/kg	83246-87	<25 || <25	83246-32	105%
TRHC$_6$ - C$_{10}$	mg/kg	83246-87	<25 || <25	83246-32	105%
vTPH C$_6$ - C$_{10}$ less BTEX (F1)	mg/kg	83246-87	<25 || <25	[NR]	[NR]
Benzene	mg/kg	83246-87	<0.2 || <0.2	83246-32	108%
Toluene	mg/kg	83246-87	<0.5 || <0.5	83246-32	97%
Ethylbenzene	mg/kg	83246-87	<1 || <1	83246-32	101%
m+p-xylene	mg/kg	83246-87	<2 || <2	83246-32	109%
o-Xylene	mg/kg	83246-87	<1 || <1	83246-32	109%
naphthalene	mg/kg	83246-87	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	83246-87	96 || 91 || RPD: 5	83246-32	105%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-87	19/12/2012 || 19/12/2012	83246-32	19/12/2012
Date analysed	-	83246-87	19/12/2012 || 19/12/2012	83246-32	20/12/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	83246-87	<50 || <50	83246-32	104%
TRHC$_{15}$ - C$_{28}$	mg/kg	83246-87	190 || <100	83246-32	133%
TRHC$_{29}$ - C$_{36}$	mg/kg	83246-87	100 || <100	83246-32	120%
TRH>C$_{10}$-C$_{16}$	mg/kg	83246-87	<50 || <50	83246-32	104%
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	83246-87	<50 || <50	[NR]	[NR]
TRH>C$_{16}$-C$_{34}$	mg/kg	83246-87	250 || <100	83246-32	133%
TRH>C$_{34}$-C$_{40}$	mg/kg	83246-87	<100 || <100	83246-32	120%
Surrogate o-Terphenyl	%	83246-87	104 || 86 || RPD: 19	83246-32	80%

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-87	19/12/2012 || 19/12/2012	83246-32	19/12/2012
Date analysed	-	83246-87	19/12/2012 || 19/12/2012	83246-32	19/12/2012
Naphthalene	mg/kg	83246-87	<0.1 || <0.1	83246-32	109%
Acenaphthylene	mg/kg	83246-87	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	83246-87	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	83246-87	<0.1 || <0.1	83246-32	117%
Phenanthrene	mg/kg	83246-87	<0.1 || <0.1	83246-32	#
Anthracene	mg/kg	83246-87	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	83246-87	<0.1 || <0.1	83246-32	#
Pyrene	mg/kg	83246-87	<0.1 || <0.1	83246-32	#
Benzo(a)anthracene	mg/kg	83246-87	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	83246-87	<0.1 || <0.1	83246-32	#
Benzo(b+k)fluoranthene	mg/kg	83246-87	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	83246-87	<0.05 || <0.05	83246-32	#
Indeno(1,2,3-c,d)pyrene	mg/kg	83246-87	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	83246-87	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	83246-87	<0.1 || <0.1	[NR]	[NR]
Benzo(a)pyrene TEQ	mg/kg	83246-87	<0.5 || <0.5	[NR]	[NR]
Surrogate p-Terphenyl-d$_{14}$	%	83246-87	101 || 103 || RPD: 2	83246-32	98%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	83246-61	19/12/2012
Date analysed	-	[NT]	[NT]	83246-61	20/12/2012
HCB	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	[NT]	[NT]	83246-61	105%
gamma-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	[NT]	[NT]	83246-61	92%
Heptachlor	mg/kg	[NT]	[NT]	83246-61	106%
delta-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	[NT]	[NT]	83246-61	116%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	83246-61	108%
gamma-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	[NT]	[NT]	83246-61	100%
Dieldrin	mg/kg	[NT]	[NT]	83246-61	105%
Endrin	mg/kg	[NT]	[NT]	83246-61	110%
pp-DDD	mg/kg	[NT]	[NT]	83246-61	88%
Endosulfan II	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	83246-61	115%
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%	[NT]	[NT]	83246-61	93%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	83246-61	19/12/2012
Date analysed	-	[NT]	[NT]	83246-61	20/12/2012
Diazinon	mg/kg	[NT]	[NT]	[NR]	[NR]
Dimethoate	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Ronnel	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyriphos	mg/kg	[NT]	[NT]	83246-61	87%
Fenitrothion	mg/kg	[NT]	[NT]	83246-61	86%
Bromophos-ethyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	[NT]	[NT]	83246-61	90%
Surrogate TCMX	%	[NT]	[NT]	83246-61	87%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	83246-61	19/12/2012
Date analysed	-	[NT]	[NT]	83246-61	20/12/2012
Arochlor 1016	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1221	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1232	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1242	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1248	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1254	mg/kg	[NT]	[NT]	83246-61	125%
Arochlor 1260	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	83246-61	104%
QUALITY CONTROL Total Phenolics in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	83246-122	28/12/2012
Date analysed	-	[NT]	[NT]	83246-122	31/12/2012
Total Phenolics (as Phenol)	mg/kg	[NT]	[NT]	83246-122	94%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	83246-87	19/12/2012 || 19/12/2012	83246-32	19/12/2012
Date analysed	-	83246-87	19/12/2012 || 19/12/2012	83246-32	19/12/2012
Arsenic	mg/kg	83246-87	<4 || <4	83246-32	77%
Cadmium	mg/kg	83246-87	<0.5 || <0.5	83246-32	82%
Chromium	mg/kg	83246-87	2 || 1 || RPD: 67	83246-32	#
Copper	mg/kg	83246-87	<1 || <1	83246-32	122%
Lead	mg/kg	83246-87	<1 || <1	83246-32	#
Mercury	mg/kg	83246-87	<0.1 || <0.1	83246-32	93%
Nickel	mg/kg	83246-87	<1 || <1	83246-32	72%
Zinc	mg/kg	83246-87	<1 || <1	83246-32	#

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-127	19/12/2012 || 19/12/2012	83246-61	19/12/2012
Date analysed	-	83246-127	20/12/2012 || 20/12/2012	83246-61	20/12/2012
MTBE	mg/kg	83246-127	<0.50 || <0.50	83246-61	99%
TRH C_6 - C_9	mg/kg	83246-127	<25 || <25	83246-61	99%
TRH C_6 - C_{10}	mg/kg	83246-127	<25 || <25	[NR]	[NR]
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	83246-127	<25 || <25	[NR]	[NR]
Benzene	mg/kg	83246-127	<0.2 || <0.2	83246-61	111%
Toluene	mg/kg	83246-127	<0.5 || <0.5	83246-61	99%
Ethylbenzene	mg/kg	83246-127	<1 || <1	83246-61	95%
m+p-xylene	mg/kg	83246-127	<2 || <2	83246-61	95%
o-Xylene	mg/kg	83246-127	<1 || <1	83246-61	94%
naphthalene	mg/kg	83246-127	<1 || <1	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	83246-127	124 || 110 || RPD: 12	83246-61	99%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-127	19/12/2012 || 19/12/2012	83246-61	19/12/2012
Date analysed	-	83246-127	19/12/2012 || 19/12/2012	83246-61	20/12/2012
TRH C_{10} - C_{14}	mg/kg	83246-127	<50 || <50	83246-61	88%
TRH C_{15} - C_{28}	mg/kg	83246-127	<100 || <100	83246-61	107%
TRH C_{29} - C_{36}	mg/kg	83246-127	<100 || <100	83246-61	136%
TRH >C_{10}-C_{16}	mg/kg	83246-127	<50 || <50	83246-61	88%
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	83246-127	<50 || <50	[NR]	[NR]
TRH >C_{16}-C_{34}	mg/kg	83246-127	<100 || <100	83246-61	107%
TRH >C_{34}-C_{40}	mg/kg	83246-127	<100 || <100	83246-61	131%
Surrogate o-Terphenyl	%	83246-127	98 || 96 || RPD: 2	83246-61	84%

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-127	19/12/2012 || 19/12/2012	83246-61	19/12/2012
Date analysed	-	83246-127	19/12/2012 || 19/12/2012	83246-61	19/12/2012
Naphthalene	mg/kg	83246-127	<0.1 || 0.1	83246-61	107%
Acenaphthylene	mg/kg	83246-127	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	83246-127	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	83246-127	<0.1 || <0.1	83246-61	102%
Phenanthrene	mg/kg	83246-127	0.1 || 0.2 || RPD: 67	83246-61	104%
Anthracene	mg/kg	83246-127	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	83246-127	<0.1 || 0.1	83246-61	105%
Pyrene	mg/kg	83246-127	<0.1 || 0.1	83246-61	105%
Benzo(a)anthracene	mg/kg	83246-127	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	83246-127	<0.1 || <0.1	83246-61	93%

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Benzo(b+k)fluoranthene	mg/kg	83246-127	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	83246-127	<0.05 || 0.05	83246-61	93%
Indeno(1,2,3-c,d)pyrene	mg/kg	83246-127	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	83246-127	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	83246-127	<0.1 || <0.1	[NR]	[NR]
Benzo(a)pyrene TEQ	mg/kg	83246-127	<0.5 || <0.5	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%	83246-127	103 || 101 || RPD: 2	83246-61	93%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	83246-110	19/12/2012 || 19/12/2012	83246-61	19/12/2012
Date analysed	-	83246-110	19/12/2012 || 19/12/2012	83246-61	19/12/2012
Arsenic	mg/kg	83246-110	4 || 5 || RPD: 22	83246-61	90%
Cadmium	mg/kg	83246-110	<0.5 || <0.5	83246-61	90%
Chromium	mg/kg	83246-110	9 || 10 || RPD: 11	83246-61	93%
Copper	mg/kg	83246-110	16 || 15 || RPD: 6	83246-61	100%
Lead	mg/kg	83246-110	53 || 58 || RPD: 9	83246-61	81%
Mercury	mg/kg	83246-110	0.2 || 0.2 || RPD: 0	83246-61	103%
Nickel	mg/kg	83246-110	3 || 3 || RPD: 0	83246-61	91%
Zinc	mg/kg	83246-110	70 || 61 || RPD: 14	83246-61	87%
QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	83246-125	19/12/2012
Date analysed	-	[NT]	[NT]	83246-125	20/12/2012
MTBE	mg/kg	[NT]	[NT]	[NR]	[NR]
TRHC_6 - C_9	mg/kg	[NT]	[NT]	83246-125	109%
TRHC_6 - C_{10}	mg/kg	[NT]	[NT]	83246-125	109%
vTPHC_6 - C_{10} less BTEX (F1)	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzene	mg/kg	[NT]	[NT]	83246-125	123%
Toluene	mg/kg	[NT]	[NT]	83246-125	110%
Ethylbenzene	mg/kg	[NT]	[NT]	83246-125	103%
m+p-xylene	mg/kg	[NT]	[NT]	83246-125	105%
o-Xylene	mg/kg	[NT]	[NT]	83246-125	106%
naphthalene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%	[NT]	[NT]	83246-125	109%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	83246-110	19/12/2012 || 19/12/2012	83246-125	19/12/2012
Date analysed	-	83246-110	19/12/2012 || 19/12/2012	83246-125	20/12/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	83246-110	<50 || <50	83246-125	109%
TRHC$_{15}$ - C$_{28}$	mg/kg	83246-110	<100 || <100	83246-125	110%
TRHC$_{29}$ - C$_{36}$	mg/kg	83246-110	<100 || <100	83246-125	130%
TRH>C$_{10}$-C$_{16}$	mg/kg	83246-110	<50 || <50	83246-125	109%
TRH>C$_{16}$-C$_{34}$	mg/kg	83246-110	<100 || <100	83246-125	110%
TRH>C$_{34}$-C$_{40}$	mg/kg	83246-110	<100 || <100	83246-125	130%
Surrogate o-Terphenyl	%	83246-110	88 || 89 || RPD: 1	83246-125	72%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	83246-125	19/12/2012
Date analysed	-	[NT]	[NT]	83246-125	19/12/2012
Naphthalene	mg/kg	[NT]	[NT]	83246-125	105%
Acenaphthylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	[NT]	[NT]	83246-125	102%
Phenanthrene	mg/kg	[NT]	[NT]	83246-125	#
Anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	[NT]	[NT]	83246-125	#
Pyrene	mg/kg	[NT]	[NT]	83246-125	#
Benzo(a)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	[NT]	[NT]	83246-125	#
Benzo(b+k)fluoranthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	[NT]	[NT]	83246-125	#
Indeno(1,2,3-c,d)pyrene	mg/kg	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene TEQ	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d$_{14}$	%	[NT]	[NT]	83246-125	99%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	[NT]	[NT]	83246-125	19/12/2012
Date analysed	-	[NT]	[NT]	83246-125	19/12/2012
Arsenic	mg/kg	[NT]	[NT]	83246-125	97%
Cadmium	mg/kg	[NT]	[NT]	83246-125	82%
Chromium	mg/kg	[NT]	[NT]	83246-125	89%
Copper	mg/kg	[NT]	[NT]	83246-125	78%
Lead	mg/kg	[NT]	[NT]	83246-125	77%
Mercury	mg/kg	[NT]	[NT]	83246-125	99%
Nickel	mg/kg	[NT]	[NT]	83246-125	75%
Zinc	mg/kg	[NT]	[NT]	83246-125	83%

QUALITY CONTROL Miscellaneous Inorg - soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date prepared	-	83246-8	18/12/2012 || 18/12/2012
Date analysed	-	83246-8	18/12/2012 || 18/12/2012
pH 1:5 soil:water	pH Units	83246-8	8.5 || [N/T]
Total Cyanide	mg/kg	[NT]	[NT]
Ammonia as N in soil	mg/kg	83246-8	4.4 || 4.5 || RPD: 2

Report Comments:

Asbestos: A portion of the supplied sample was sub-sampled for asbestos analysis according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g of sample in its own container.

Sample 83246-8; Loose fibre bundles of amosite asbestos identified within the sample (total weight 0.0006g). This is 100% asbestos fibres by weight, which in 40g of soil is g/kg (i.e. > reporting limit for the method of 0.1g/kg).

Sample 83246-133; Chrysotile and amosite asbestos identified embedded in a fragment of fibre cement (total weight0.2897g). It is estimated that the fibre cement contains up to 15% asbestos fibres by weight. This calculates to 0.0435g of asbestos fibres, which in 66.60g of soil is 0.65g/kg (i.e. > reporting limit for the method of 0.1g/kg).

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteriae has been exceeded for 83246-22 for Cr. Therefore a triplicate result has been issued as laboratory sample number 83246-134.

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteriae has been exceeded for 83246-57 for Pb and Zn. Therefore a triplicate result has been issued as laboratory sample number 83246-135.

Acid Extractable Metals in Soil: # Percent recovery is not possible to report due to the high concentration of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

PAH(in soil)The RPD for duplicate results is accepted due to the non homogenous nature of the sample/s.# Percent recovery is not possible to report as the high concentration of analytes in the sample/s have caused interference.PQL has been raised due to interference from analytes(other than those being tested) in the sample/s.

Total Recoverable Hydrocarbons in soil:(NEPM)The RPD for duplicate results is accepted due to the non homogenous nature of the sample/s.# Percent recovery is not possible to report as the high concentration of analytes in the sample/s have caused interference.

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

This report supersedes the previous report due to amendment to sample ID's.

Asbestos ID was analysed by Approved Identifier: Lulu Guo
Asbestos ID was authorised by Approved Signatory: Lulu Guo

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

Envirolab Services Pty Ltd
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SAMPLE RECEIPT ADVICE

Client:

Douglas Partners
96 Hermitage Rd
West Ryde NSW 2114

ph: 02 9809 0666
Fax: 02 9809 4095

Attention: Nerilee Edwards

Sample log in details:

Your reference:	**37278.05, Banksmeadow - PN**
Envirolab Reference:	**83246**
Date received:	17//12/12
Date results expected to be reported:	**7/01/13**

Samples received in appropriate condition for analysis:	YES
No. of samples provided	130 Soils, 3 Materials
Turnaround time requested:	Standard
Temperature on receipt	Cool
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.

Contact details:

Please direct any queries to Aileen Hie or Jacinta Hurst
ph: 02 9910 6200 fax: 02 9910 6201
email: ahie@envirolabservices.com.au or jhurst@envirolabservices.com.au

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CERTIFICATE OF ANALYSIS 83246-A

Client:
Douglas Partners
96 Hermitage Rd
West Ryde
NSW 2114

Attention: Nerilee Edwards

Sample log in details:

Your Reference:	**37278.05, Banksmeadow - PN**
No. of samples:	Additional Testing on 5 Soils, 1 Material
Date samples received / completed instructions received	17//12/12 / 04/01/13

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:	11/01/13 / 10/01/13
Date of Preliminary Report:	Not issued

NATA accreditation number 2901. This document shall not be reproduced except in full.
Accredited for compliance with ISO/IEC 17025. **Tests not covered by NATA are denoted with *.**

Results Approved By:

Nancy Zhang
Chemist

Nick Sarlamis
Inorganics Supervisor

Lulu Guo
Approved Signatory

Alex MacLean
Chemist

Jeremy Faircloth
Chemist

VOCs in soil		
Our Reference:	UNITS	83246-A-72
Your Reference	----------	16
Depth	----------	1-1.1
Date Sampled		13/12/2012
Type of sample		Soil
Date extracted	-	07/01/2013
Date analysed	-	08/01/2013
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
Cyclohexane	mg/kg	<1
carbon tetrachloride	mg/kg	<1
Benzene	mg/kg	<0.2
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
Toluene	mg/kg	<0.5
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
Ethylbenzene	mg/kg	<1
bromoform	mg/kg	<1
m+p-xylene	mg/kg	<2
styrene	mg/kg	<1
1,1,2,2-tetrachloroethane	mg/kg	<1
o-Xylene	mg/kg	<1

VOCs in soil		
Our Reference:	UNITS	83246-A-72
Your Reference	----------	16
Depth	----------	1-1.1
Date Sampled		13/12/2012
Type of sample		Soil
1,2,3-trichloropropane	mg/kg	<1
isopropylbenzene	mg/kg	<1
bromobenzene	mg/kg	<1
n-propyl benzene	mg/kg	<1
2-chlorotoluene	mg/kg	<1
4-chlorotoluene	mg/kg	<1
1,3,5-trimethyl benzene	mg/kg	<1
tert-butyl benzene	mg/kg	<1
1,2,4-trimethyl benzene	mg/kg	<1
1,3-dichlorobenzene	mg/kg	<1
sec-butyl benzene	mg/kg	<1
1,4-dichlorobenzene	mg/kg	<1
4-isopropyl toluene	mg/kg	<1
1,2-dichlorobenzene	mg/kg	<1
n-butyl benzene	mg/kg	<1
1,2-dibromo-3-chloropropane	mg/kg	<1
1,2,4-trichlorobenzene	mg/kg	<1
hexachlorobutadiene	mg/kg	<1
1,2,3-trichlorobenzene	mg/kg	<1
Surrogate Dibromofluorometha	%	94
Surrogate aaa-Trifluorotoluene	%	110
Surrogate Toluene-d_8	%	98
Surrogate 4-Bromofluorobenzene	%	108

Aromatic & Aliphatic TPH			
Our Reference:	UNITS	83246-A-70	83246-A-85
Your Reference	----------	16	20
Depth	----------	0.3-0.5	0.4-0.5
Date Sampled		13/12/2012	12/12/2012
Type of sample		Soil	Soil
Date extracted	-	07/01/2013	07/01/2013
Date analysed	-	09/01/2013	09/01/2013
C16-C35 Aliphatic	mg/kg	14,000	7,700
>C35 Aliphatic	mg/kg	<200	2,600
C16-C35 Aromatic	mg/kg	5,800	8,800
Surrogate 1-chlorooctadecane	%	#	#

vTRH(C6-C10)/BTEXN in Soil			
Our Reference:	UNITS	83246-A-2	83246-A-88
Your Reference	----------	1	20
Depth	----------	0.2-0.3	2.5-2.6
Date Sampled		11/12/2012	12/12/2012
Type of sample		Soil	Soil
Date extracted	-	07/01/2013	07/01/2013
Date analysed	-	08/01/2013	08/01/2013
TRHC$_6$ - C$_9$	mg/kg	<25	<25
TRHC$_6$ - C$_{10}$	mg/kg	<25	<25
vTPHC$_6$ - 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
MTBE	mg/kg	<0.50	<0.50
Surrogate aaa-Trifluorotoluene	%	94	106

svTRH (C10-C40) in Soil			
Our Reference:	UNITS	83246-A-2	83246-A-88
Your Reference	----------	1	20
Depth	----------	0.2-0.3	2.5-2.6
Date Sampled		11/12/2012	12/12/2012
Type of sample		Soil	Soil
Date extracted	-	07/01/2013	07/01/2013
Date analysed	-	07/01/2013	07/01/2013
$TRHC_{10}$ - C_{14}	mg/kg	<50	<50
$TRHC_{15}$ - C_{28}	mg/kg	<100	<100
$TRHC_{29}$ - C_{36}	mg/kg	<100	240
$TRH>C_{10}$-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	260
$TRH>C_{34}$-C_{40}	mg/kg	<100	<100
Surrogate o-Terphenyl	%	90	95

PAHs in Soil		
Our Reference:	UNITS	83246-A-2
Your Reference	----------	1
Depth	----------	0.2-0.3
Date Sampled		11/12/2012
Type of sample		Soil
Date extracted	-	07/01/2013
Date analysed	-	07/01/2013
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Benzo(a)pyrene TEQ	mg/kg	<0.5
Surrogate p-Terphenyl-d_{14}	%	99

Total Phenolics in Soil		
Our Reference:	UNITS	83246-A-2
Your Reference	----------	1
Depth	----------	0.2-0.3
Date Sampled		11/12/2012
Type of sample		Soil
Date extracted	-	07/01/2013
Date analysed	-	07/01/2013
Total Phenolics (as Phenol)	mg/kg	<5

Acid Extractable metals in soil		
Our Reference:	UNITS	83246-A-2
Your Reference	----------	1
Depth	----------	0.2-0.3
Date Sampled		11/12/2012
Type of sample		Soil
Date digested	-	07/01/2013
Date analysed	-	07/01/2013
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.5
Chromium	mg/kg	4
Copper	mg/kg	12
Lead	mg/kg	12
Mercury	mg/kg	0.4
Nickel	mg/kg	4
Zinc	mg/kg	27

Moisture			
Our Reference:	UNITS	83246-A-2	83246-A-88
Your Reference	----------	1	20
Depth	----------	0.2-0.3	2.5-2.6
Date Sampled		11/12/2012	12/12/2012
Type of sample		Soil	Soil
Date prepared	-	07/01/2013	07/01/2013
Date analysed	-	08/01/2013	08/01/2013
Moisture	%	15	5.4

Asbestos ID - materials		
Our Reference:	UNITS	83246-A-131
Your Reference	----------	TP14 material
Depth	----------	0-1.3
Date Sampled		12/12/2012
Type of sample		Material
Date analysed	-	21/12/2012
Mass / Dimension of Sample	-	230x90x5mm
Sample Description	-	Beige compressed fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected Amosite asbestos detected

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-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. Fractionation with pentane through a silica gel column for aliphatics and DCM for aromatics.
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 draft 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 draft Guideline on Investigation Levels for Soil and Groundwater.
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 draft B1 Guideline on Investigation Levels for Soil and Groundwater.
Inorg-030	Total Phenolics - determined colorimetrically following disitillation, based upon APHA 22nd ED 5530 D.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 4 hours.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.

QUALITY CONTROL VOCs in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			07/01/2013	[NT]	[NT]	LCS-1	07/01/2013
Date analysed	-			08/01/2013	[NT]	[NT]	LCS-1	08/01/2013
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	111%
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	109%
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	105%
1,1,1-trichloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-1	102%
1,1-dichloropropene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Cyclohexane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
carbon tetrachloride	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Benzene	mg/kg	0.2	Org-014	<0.2	[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	106%
bromodichloromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-1	100%
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]
Toluene	mg/kg	0.5	Org-014	<0.5	[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	98%
1,2-dibromoethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
tetrachloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-1	116%
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]
Ethylbenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
bromoform	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
m+p-xylene	mg/kg	2	Org-014	<2	[NT]	[NT]	[NR]	[NR]
styrene	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]
o-Xylene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2,3-trichloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL VOCs in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
isopropylbenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
bromobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
n-propyl benzene	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]
1,3,5-trimethyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
tert-butyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2,4-trimethyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,3-dichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
sec-butyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,4-dichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
4-isopropyl toluene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2-dichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
n-butyl benzene	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]
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	84	[NT]	[NT]	LCS-1	98%
Surrogate aaa-Trifluorotoluene	%		Org-014	109	[NT]	[NT]	LCS-1	108%
Surrogate Toluene-d_8	%		Org-014	96	[NT]	[NT]	LCS-1	95%
Surrogate 4-Bromofluorobenzene	%		Org-014	86	[NT]	[NT]	LCS-1	83%

QUALITY CONTROL Aromatic & Aliphatic TPH	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			07/01/2013	[NT]	[NT]	LCS-1	07/01/2013
Date analysed	-			08/01/2013	[NT]	[NT]	LCS-1	08/01/2013
C16-C35 Aliphatic	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	129%
>C35 Aliphatic	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	77%
C16-C35 Aromatic	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-1	85%
Surrogate 1-chlorooctadecane	%	0	Org-003	93	[NT]	[NT]	LCS-1	104%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			07/01/2013	[NT]	[NT]	LCS-1	07/01/2013
Date analysed	-			08/01/2013	[NT]	[NT]	LCS-1	07/01/2013
TRH C_6 - C_9	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-1	107%
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-1	107%
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	25	Org-016	[NT]	[NT]	[NT]	[NR]	[NR]
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	LCS-1	114%
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	LCS-1	107%
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-1	99%
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	LCS-1	106%
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-1	107%
naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
MTBE	mg/kg	0.5	Org-014	<0.50	[NT]	[NT]	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	109	[NT]	[NT]	LCS-1	99%

QUALITY CONTROL svTRH (C10-C40) in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			07/01/2013	[NT]	[NT]	LCS-1	07/01/2013
Date analysed	-			07/01/2013	[NT]	[NT]	LCS-1	07/01/2013
TRHC$_{10}$ - C$_{14}$	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-1	77%
TRHC$_{15}$ - C$_{28}$	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	91%
TRHC$_{29}$ - C$_{36}$	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	85%
TRH>C$_{10}$-C$_{16}$	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-1	77%
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	mg/kg	50	Org-003	[NT]	[NT]	[NT]	[NR]	[NR]
TRH>C$_{16}$-C$_{34}$	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	91%
TRH>C$_{34}$-C$_{40}$	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	85%
Surrogate o-Terphenyl	%		Org-003	89	[NT]	[NT]	LCS-1	118%
QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			07/01/2013	[NT]	[NT]	LCS-1	07/01/2013
Date analysed	-			07/01/2013	[NT]	[NT]	LCS-1	07/01/2013
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-1	110%
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	106%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-1	110%
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	107%
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-1	109%
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	104%
Benzo(b+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	102%
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]

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Benzo(a)pyrene TEQ	mg/kg	0.5	Org-012 subset	[NT]	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%		Org-012 subset	95	[NT]	[NT]	LCS-1	90%
QUALITY CONTROL Total Phenolics in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			07/01/2013	[NT]	[NT]	LCS-1	07/01/2013
Date analysed	-			07/01/2013	[NT]	[NT]	LCS-1	07/01/2013
Total Phenolics (as Phenol)	mg/kg	5	Inorg-030	<5	[NT]	[NT]	LCS-1	87%
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 digested	-			07/01/2013	[NT]	[NT]	LCS-1	07/01/2013
Date analysed	-			07/01/2013	[NT]	[NT]	LCS-1	07/01/2013
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	LCS-1	99%
Cadmium	mg/kg	0.5	Metals-020 ICP-AES	<0.5	[NT]	[NT]	LCS-1	101%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	97%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	100%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	102%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	LCS-1	98%
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	102%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	104%

QUALITY CONTROL Moisture	UNITS	PQL	METHOD	Blank
Date prepared	-			[NT]
Date analysed	-			[NT]
Moisture	%	0.1	Inorg-008	[NT]
QUALITY CONTROL Asbestos ID - materials	UNITS	PQL	METHOD	Blank
Date analysed	-			[NT]

Report Comments:

Aliph_Arom's in soil: PQL has been raised due to the high concentration of analytes in the sample/s, resulting in the sample/s requiring dilution and

Percent recovery is not possible to report as the high concentration of analytes in the sample/s have caused interference.

Asbestos ID was analysed by Approved Identifier:	Alex Tam
Asbestos ID was authorised by Approved Signatory:	Lulu Guo

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 batched of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

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 and 10-140% for SVOC and speciated phenols is acceptable.

Douglas Partners
Geotechnics · Environment · Groundwater

CHAIN OF CUSTODY

Project Name: Banksmeadow - LN
Project No: 37278.05 Sampler: NLE
Project Mgr: NLE Mob. Phone: 0414 769 011
Email: nerilee.edwards@douglaspartners.com.au
Date Required: STD; Lab Quote No.

To: Envirolab Services
12 Ashley St Chatswood 2067
Attn: Tania Notaras
Phone: (02) 9910 6200 Fax: (02) 9910 6201
Email: tnotaras@envirolabservices.com.au

ENVIROLAB
Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 84337
Date Received: 18/1/13
Time Received: 10:30
Received by: PT
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Sample ID	Lab ID	Sampling Date	Sample Type S - soil W – water	Container type G – glass P - plastic	Analytes: HM8 ANZECC	TRH/ BTEX MTBE	PAH (low level)	phenol	OCP/OPP PCB (trace level)	VOC	hardness	ammonia		Notes/preservation
GW3	1	17/1	W	G, P										Combo
GW-CPT4	2													Combo
GW-EW101	3													Combo
BD1A/170113	4													Combo
TB1/170113	5													Combo
TS1/170113	6													Combo
														Combo
														Combo
														Combo
														Combo
														Combo
														Combo
														Combo

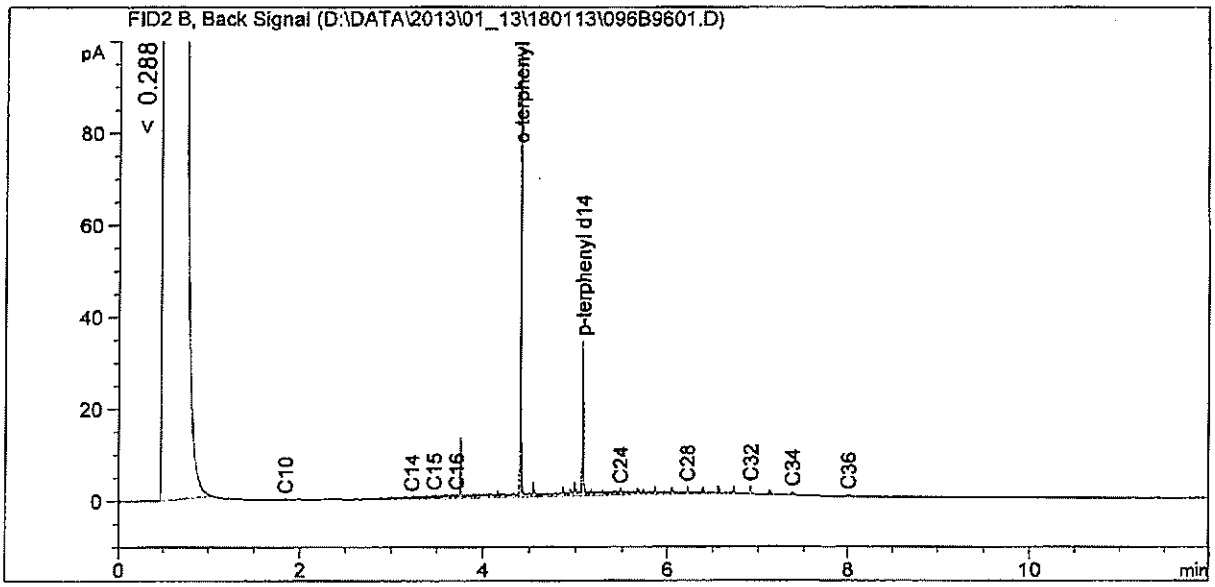
Lab Report No.
Send Results to: Douglas Partners Address: 96 Hermitage Road West Ryde NSW 2114
Phone: (02) 4271 1836
Fax: (02) 4271 1897

Relinquished by: Signed: Date & Time: Transported to laboratory by: Hunter Express
Received By: Pkost Date & Time: 18/1/13 10:30

Data File D:\DATA\2013\01_13\180113\096B9601.D
Sample Name: 84337-1w

gw3

```
==========================================================================
Acq. Operator    : Amanda GC#6                        Seq. Line :  96
Acq. Instrument  : GC6                                Location  : Vial 96
Injection Date   : 1/21/2013 11:47:21 PM                  Inj   :  1
                                                   Inj Volume   : 1 µl
Acq. Method      : C:\CHEM32\1\METHODS\NEPMNEW.M
Last changed     : 1/21/2013 5:38:16 PM by Amanda GC#6
                   (modified after loading)
Analysis Method  : D:\METHODS\2013\01_13\180113B.M
Last changed     : 1/21/2013 7:57:05 AM by Amanda GC#6
Method Info      : FAST TPH WITH 15M HP5 COLUMNS
```

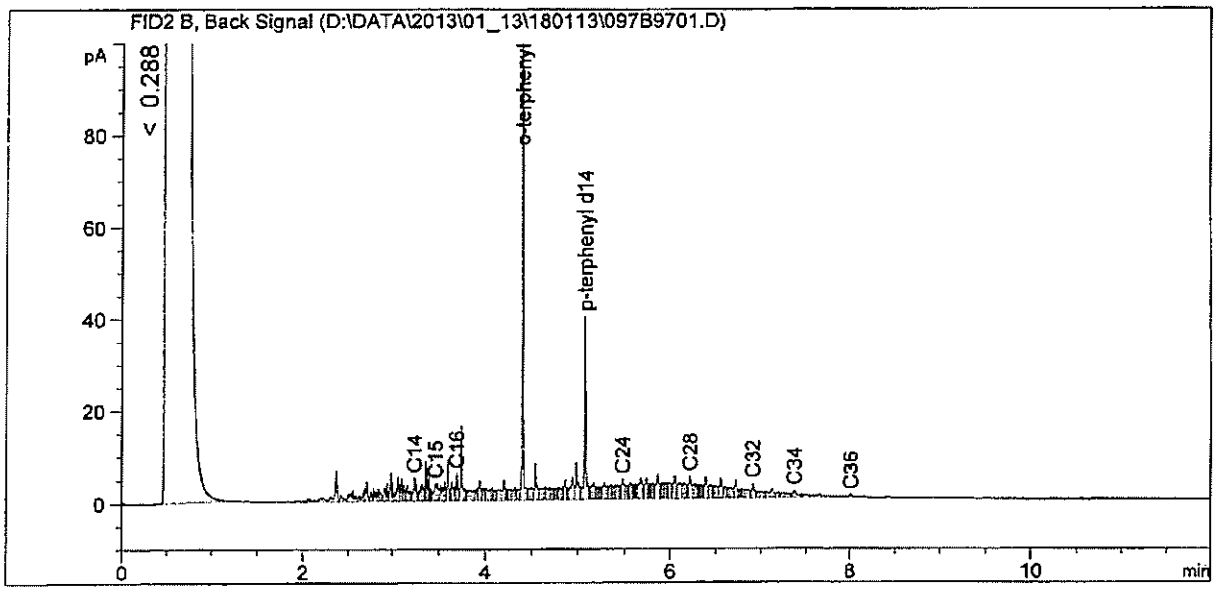



```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, January 21, 2013 7:57:02 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B, Back Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [mg/L]
-------|------|----------|----------|----------|--|------------------
  1.210          -           -          -       1 C9
  1.843 BV     3.45856e-1 1.82509e-1 6.31220e-2  1 C10
  3.227 VV     5.08900e-1 1.60375e-1 8.16146e-2  1 C14
  3.471 VV     6.82200e-1 1.43391e-1 9.78215e-2  2 C15
  3.718 BV     5.76612e-1 1.64157e-1 9.46550e-2  2 C16
  4.397 VV      105.42805 1.65793e-1   17.47919    o-terphenyl
  5.074 VV       26.80962 1.68350e-1    4.51340    p-terphenyl d14
  5.485 VV        1.80500 1.66063e-1 2.99743e-1  2 C24
  6.221 VV        1.45233 1.76130e-1 2.55799e-1  2 C28
  6.913 BB        1.63066 1.66489e-1 2.71487e-1  3 C32
  7.373 BV        1.25073 1.81091e-1 2.26496e-1  3 C34
  8.007 VB        1.05036 1.80354e-1 1.89436e-1  3 C36
 10.280           -           -          -       3 C40

Totals :                                23.57276
```

Data File D:\DATA\2013\01_13\180113\097B9701.D
Sample Name: 84337-2w

GW-CPT4

```
==========================================================================
Acq. Operator    : Amanda GC#6                      Seq. Line :  97
Acq. Instrument  : GC6                               Location : Vial 97
Injection Date   : 1/22/2013 12:03:19 AM                 Inj :   1
                                                   Inj Volume : 1 µl
Acq. Method      : C:\CHEM32\1\METHODS\NEPMNEW.M
Last changed     : 1/21/2013 5:38:16 PM by Amanda GC#6
                   (modified after loading)
Analysis Method  : D:\METHODS\2013\01_13\180113B.M
Last changed     : 1/21/2013 7:57:05 AM by Amanda GC#6
                   (modified after loading) (Current integration events modified)
Method Info      : FAST TPH WITH 15M HP5 COLUMNS
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Monday, January 21, 2013 7:57:02 AM
Multiplier:                   :      1.0000
Dilution:                     :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [mg/L]	Grp	Name
1.210		-	-	-	1	C9
1.834		-	-	-	1	C10
3.235	VV	5.34480	1.60375e-1	8.57170e-1	1	C14
3.468	VV	4.70663	1.43391e-1	6.74890e-1	2	C15
3.704	VV	5.05333	1.64157e-1	8.29539e-1	2	C16
4.398	VV	118.98240	1.65793e-1	19.72640		o-terphenyl
5.074	VV	36.24652	1.68350e-1	6.10210		p-terphenyl d14
5.484	VV	7.41745	1.66063e-1	1.23176	2	C24
6.222	VV	7.18174	1.76130e-1	1.26492	2	C28
6.912	VV	6.34588	1.66489e-1	1.05652	3	C32
7.371	VV	3.66372	1.81091e-1	6.63464e-1	3	C34
8.012	VV	1.00508	1.80354e-1	1.81270e-1	3	C36
10.280		-	-	-	3	C40
Totals :				32.58803		

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

CERTIFICATE OF ANALYSIS 84337

Client:
Douglas Partners
96 Hermitage Rd
West Ryde
NSW 2114

Attention: Nerilee Edwards

Sample log in details:

Your Reference:	**37278.05, Banksmeadow**		
No. of samples:	6 waters		
Date samples received / completed instructions received	18/01/13	/	18/01/13

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:	25/01/13	/	31/01/13
Date of Preliminary Report:	30/01/2013		

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

Results Approved By:

Rhian Morgan
Reporting Supervisor

Nick Sarlamis
Inorganics Supervisor

Jeremy Faircloth
Chemist

VOCs in water Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	84337-1 GW3 17/01/2013 Water	84337-2 GW-CPT4 17/01/2013 Water	84337-3 GW-EU101 17/01/2013 Water	84337-4 BD1A/170113 17/01/2013 Water
Date extracted	-	21/01/2013	21/01/2013	21/01/2013	21/01/2013
Date analysed	-	21/01/2013	21/01/2013	21/01/2013	21/01/2013
Dichlorodifluoromethane	µg/L	<10	<10	<10	<10
Chloromethane	µg/L	<10	<10	<10	<10
Vinyl Chloride	µg/L	14	<10	<10	<10
Bromomethane	µg/L	<10	<10	<10	<10
Chloroethane	µg/L	<10	<10	<10	<10
Trichlorofluoromethane	µg/L	<10	<10	<10	<10
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Trans-1,2-dichloroethene	µg/L	<1	<1	<1	<1
1,1-dichloroethane	µg/L	2	<1	<1	<1
Cis-1,2-dichloroethene	µg/L	19	2	<1	2
Bromochloromethane	µg/L	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1
2,2-dichloropropane	µg/L	<1	<1	<1	<1
1,2-dichloroethane	µg/L	<1	<1	<1	<1
1,1,1-trichloroethane	µg/L	<1	<1	<1	<1
1,1-dichloropropene	µg/L	<1	<1	<1	<1
Cyclohexane	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Benzene	µg/L	<1	<1	<1	<1
Dibromomethane	µg/L	<1	<1	<1	<1
1,2-dichloropropane	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	8	4	<1	3
Bromodichloromethane	µg/L	<1	<1	<1	<1
trans-1,3-dichloropropene	µg/L	<1	<1	<1	<1
cis-1,3-dichloropropene	µg/L	<1	<1	<1	<1
1,1,2-trichloroethane	µg/L	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1
1,3-dichloropropane	µg/L	<1	<1	<1	<1
Dibromochloromethane	µg/L	<1	<1	<1	<1
1,2-dibromoethane	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	4	6	<1	6
1,1,1,2-tetrachloroethane	µg/L	<1	<1	<1	<1
Chlorobenzene	µg/L	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1
Bromoform	µg/L	<1	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2	<2
Styrene	µg/L	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	µg/L	<1	<1	<1	<1
o-xylene	µg/L	<1	<1	<1	<1
1,2,3-trichloropropane	µg/L	<1	<1	<1	<1

VOCs in water Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	84337-1 GW3 17/01/2013 Water	84337-2 GW-CPT4 17/01/2013 Water	84337-3 GW-EU101 17/01/2013 Water	84337-4 BD1A/170113 17/01/2013 Water
Isopropylbenzene	µg/L	<1	<1	<1	<1
Bromobenzene	µg/L	<1	<1	<1	<1
n-propyl benzene	µg/L	<1	<1	<1	<1
2-chlorotoluene	µg/L	<1	<1	<1	<1
4-chlorotoluene	µg/L	<1	<1	<1	<1
1,3,5-trimethyl benzene	µg/L	<1	<1	<1	<1
Tert-butyl benzene	µg/L	<1	<1	<1	<1
1,2,4-trimethyl benzene	µg/L	<1	<1	<1	<1
1,3-dichlorobenzene	µg/L	<1	<1	<1	<1
Sec-butyl benzene	µg/L	<1	<1	<1	<1
1,4-dichlorobenzene	µg/L	<1	<1	<1	<1
4-isopropyl toluene	µg/L	<1	<1	<1	<1
1,2-dichlorobenzene	µg/L	<1	<1	<1	<1
n-butyl benzene	µg/L	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	µg/L	<1	<1	<1	<1
1,2,4-trichlorobenzene	µg/L	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<1	<1	<1	<1
1,2,3-trichlorobenzene	µg/L	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	114	113	108	114
Surrogate toluene-d8	%	99	99	98	99
Surrogate 4-BFB	%	100	98	99	100

vTRH(C6-C10)/BTEXN in Water						
Our Reference:	UNITS	84337-1	84337-2	84337-3	84337-4	84337-5
Your Reference	----------	GW3	GW-CPT4	GW-EU101	BD1A/170113	TB1/170113
Date Sampled	----------	17/01/2013	17/01/2013	17/01/2013	17/01/2013	17/01/2013
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	19/01/2013	19/01/2013	19/01/2013	19/01/2013	19/01/2013
Date analysed	-	19/01/2013	19/01/2013	19/01/2013	19/01/2013	19/01/2013
MTBE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0
TRHC$_6$ - C$_9$	µg/L	29	13	<10	13	<10
TRHC$_6$ - C$_{10}$	µg/L	30	14	<10	14	<10
TRHC$_6$ - C$_{10}$ less BTEX (F1)	µg/L	30	14	<10	14	<10
Benzene	µg/L	<1	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2	<2	<2
o-xylene	µg/L	<1	<1	<1	<1	<1
Naphthalene	µg/L	<1	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	117	121	113	122	118
Surrogate toluene-d8	%	99	98	102	98	97
Surrogate 4-BFB	%	87	85	91	84	84

vTRH(C6-C10)/BTEXN in Water		
Our Reference:	UNITS	84337-6
Your Reference	----------	TS1/170113
Date Sampled	----------	17/01/2013
Type of sample		Water
Date extracted	-	19/01/2013
Date analysed	-	19/01/2013
Benzene	µg/L	103%
Toluene	µg/L	116%
Ethylbenzene	µg/L	122%
m+p-xylene	µg/L	127%
o-xylene	µg/L	125%
Surrogate Dibromofluoromethane	%	107
Surrogate toluene-d8	%	94
Surrogate 4-BFB	%	103

svTRH (C10-C40) in Water					
Our Reference:	UNITS	84337-1	84337-2	84337-3	84337-4
Your Reference	----------	GW3	GW-CPT4	GW-EU101	BD1A/170113
Date Sampled	----------	17/01/2013	17/01/2013	17/01/2013	17/01/2013
Type of sample		Water	Water	Water	Water
Date extracted	-	21/01/2013	21/01/2013	21/01/2013	21/01/2013
Date analysed	-	21/01/2013	21/01/2013	21/01/2013	21/01/2013
TRHC$_{10}$ - C$_{14}$	µg/L	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	µg/L	100	210	<100	170
TRHC$_{29}$ - C$_{36}$	µg/L	<100	<100	<100	<100
TRH>C$_{10}$ - C$_{16}$	µg/L	<50	75	<50	62
TRH>C$_{10}$ - C$_{16}$ less Naphthalene (F2)	µg/L	<50	75	<50	62
TRH>C$_{16}$ - C$_{34}$	µg/L	130	230	<100	160
TRH>C$_{34}$ - C$_{40}$	µg/L	<100	<100	<100	<100
Surrogate o-Terphenyl	%	90	99	78	90

PAHs in Water - Low Level Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	84337-1 GW3 17/01/2013 Water	84337-2 GW-CPT4 17/01/2013 Water	84337-3 GW-EU101 17/01/2013 Water	84337-4 BD1A/170113 17/01/2013 Water
Date extracted	-	21/01/2013	21/01/2013	21/01/2013	21/01/2013
Date analysed	-	21/01/2013	21/01/2013	21/01/2013	21/01/2013
Naphthalene	µg/L	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	µg/L	<0.1	<0.1	<0.1	<0.1
Acenaphthene	µg/L	<0.1	0.1	<0.1	0.1
Fluorene	µg/L	<0.1	0.2	<0.1	0.2
Phenanthrene	µg/L	<0.1	<0.1	<0.1	<0.1
Anthracene	µg/L	<0.1	<0.1	<0.1	<0.1
Fluoranthene	µg/L	<0.1	<0.1	<0.1	<0.1
Pyrene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1
Chrysene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	µg/L	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d_{14}	%	70	72	#	71

OCP in water - trace level Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	84337-1 GW3 17/01/2013 Water	84337-2 GW-CPT4 17/01/2013 Water	84337-3 GW-EU101 17/01/2013 Water	84337-4 BD1A/170113 17/01/2013 Water
Date extracted	-	23/01/2013	23/01/2013	23/01/2013	23/01/2013
Date analysed	-	30/01/2013	30/01/2013	30/01/2013	30/01/2013
HCB	µg/L	0.020	0.007	0.018	0.006
Heptachlor	µg/L	<0.001	<0.001	<0.001	<0.001
Heptachlor Epoxide	µg/L	<0.001	<0.001	<0.001	<0.001
Aldrin	µg/L	<0.001	<0.001	<0.001	<0.001
gamma-BHC (Lindane)	µg/L	<0.001	<0.001	<0.001	<0.001
alpha-BHC	µg/L	<0.001	<0.001	<0.001	<0.001
beta-BHC	µg/L	<0.001	<0.001	<0.001	<0.001
delta-BHC	µg/L	<0.001	<0.001	<0.001	<0.001
trans-Chlordane	µg/L	<0.001	<0.001	<0.001	<0.001
cis-Chlordane	µg/L	<0.001	<0.001	<0.001	<0.001
Oxychlordane	µg/L	<0.001	<0.001	<0.001	<0.001
Dieldrin	µg/L	<0.001	<0.001	<0.001	<0.001
p,p-DDE	µg/L	<0.001	<0.001	<0.001	<0.001
p,p-DDD	µg/L	<0.001	<0.001	<0.001	<0.001
p,p-DDT	µg/L	<0.001	<0.001	<0.001	<0.001
Endrin	µg/L	<0.001	<0.001	<0.001	<0.001
Endrin Aldehyde	µg/L	<0.001	<0.001	<0.001	<0.001
Endrin Ketone	µg/L	<0.001	<0.001	<0.001	<0.001
alpha-Endosulfan	µg/L	<0.001	<0.001	<0.001	<0.001
beta-Endosulfan	µg/L	<0.001	<0.001	<0.001	<0.001
Endosulfan Sulfate	µg/L	<0.001	<0.001	<0.001	<0.001
Methoxychlor	µg/L	<0.001	<0.001	<0.001	<0.001
Surrogate OC Recovery	%	59	74	57	69

OP Pesticides -Trace Level Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	84337-1 GW3 17/01/2013 Water	84337-2 GW-CPT4 17/01/2013 Water	84337-3 GW-EU101 17/01/2013 Water	84337-4 BD1A/170113 17/01/2013 Water
Date extracted	-	23/01/2013	23/01/2013	23/01/2013	23/01/2013
Date analysed	-	30/01/2013	30/01/2013	30/01/2013	30/01/2013
Demeton-S-methyl	µg/L	<0.01	<0.01	<0.01	<0.01
Dichlorvos	µg/L	<0.01	<0.01	<0.01	<0.01
Diazinon	µg/L	<0.01	<0.01	<0.01	<0.01
Dimethoate	µg/L	<0.01	<0.01	<0.01	<0.01
Chlorpyrifos	µg/L	<0.01	<0.01	<0.01	<0.01
Chlorpyrifos methyl	µg/L	<0.01	<0.01	<0.01	<0.01
Malathion	µg/L	<0.01	<0.01	<0.01	<0.01
Fenthion	µg/L	<0.01	<0.01	<0.01	<0.01
Azinphos Ethyl	µg/L	<0.01	<0.01	<0.01	<0.01
Azinphos Methyl	µg/L	<0.01	<0.01	<0.01	<0.01
Chlorfenvinphos (E)	µg/L	<0.01	<0.01	<0.01	<0.01
Chlorfenvinphos (Z)	µg/L	<0.01	<0.01	<0.01	<0.01
Ethion	µg/L	<0.01	<0.01	<0.01	<0.01
Fenitrothion	µg/L	<0.01	<0.01	<0.01	<0.01
Parathion (Ethyl)	µg/L	<0.01	<0.01	<0.01	<0.01
Parathion (Methyl)	µg/L	<0.01	<0.01	<0.01	<0.01
Primiphos Ethyl	µg/L	<0.01	<0.01	<0.01	<0.01
Primiphos Methyl	µg/L	<0.01	<0.01	<0.01	<0.01
Surrogate OP Recovery - TPP	%	73	85	73	88

PCB in water - trace level Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	84337-1 GW3 17/01/2013 Water	84337-2 GW-CPT4 17/01/2013 Water	84337-3 GW-EU101 17/01/2013 Water	84337-4 BD1A/170113 17/01/2013 Water
Date extracted	-	23/01/2013	23/01/2013	23/01/2013	23/01/2013
Date analysed	-	30/01/2013	30/01/2013	30/01/2013	30/01/2013
Aroclor 1016	µg/L	<0.01	<0.01	<0.01	<0.01
Aroclor 1221	µg/L	<0.01	<0.01	<0.01	<0.01
Aroclor 1232	µg/L	<0.01	<0.01	<0.01	<0.01
Aroclor 1242	µg/L	<0.01	<0.01	<0.01	<0.01
Aroclor 1248	µg/L	<0.01	<0.01	<0.01	<0.01
Aroclor 1254	µg/L	<0.01	<0.01	<0.01	<0.01
Aroclor 1260	µg/L	<0.01	<0.01	<0.01	<0.01
Total PCB's (as above)	µg/L	<0.01	<0.01	<0.01	<0.01

Total Phenolics in Water					
Our Reference:	UNITS	84337-1	84337-2	84337-3	84337-4
Your Reference	----------	GW3	GW-CPT4	GW-EU101	BD1A/170113
Date Sampled	----------	17/01/2013	17/01/2013	17/01/2013	17/01/2013
Type of sample		Water	Water	Water	Water
Date extracted	-	22/01/2013	22/01/2013	22/01/2013	22/01/2013
Date analysed	-	22/01/2013	22/01/2013	22/01/2013	22/01/2013
Total Phenolics (as Phenol)	mg/L	<0.05	<0.05	<0.05	<0.05

HM in water - dissolved Our Reference: Your Reference Date Sampled Type of sample	UNITS ---------- ----------	84337-1 GW3 17/01/2013 Water	84337-2 GW-CPT4 17/01/2013 Water	84337-3 GW-EU101 17/01/2013 Water	84337-4 BD1A/170113 17/01/2013 Water
Date prepared	-	21/1/2013	21/1/2013	21/1/2013	21/1/2013
Date analysed	-	21/1/2013	21/1/2013	21/1/2013	21/1/2013
Arsenic-Dissolved	µg/L	5	2	6	2
Cadmium-Dissolved	µg/L	<0.1	<0.1	<0.1	<0.1
Chromium-Dissolved	µg/L	3	1	5	<1
Copper-Dissolved	µg/L	<1	<1	<1	<1
Lead-Dissolved	µg/L	<1	<1	<1	<1
Mercury-Dissolved	µg/L	<0.05	<0.05	0.10	<0.05
Nickel-Dissolved	µg/L	<1	1	1	1
Zinc-Dissolved	µg/L	7	17	6	86

Miscellaneous Inorganics					
Our Reference:	UNITS	84337-1	84337-2	84337-3	84337-4
Your Reference	----------	GW3	GW-CPT4	GW-EU101	BD1A/170113
Date Sampled	----------	17/01/2013	17/01/2013	17/01/2013	17/01/2013
Type of sample		Water	Water	Water	Water
Date prepared	-	22/01/2012	22/01/2012	22/01/2012	22/01/2012
Date analysed	-	22/01/2012	22/01/2012	22/01/2012	22/01/2012
Ammonia as N in water	mg/L	2.5	0.52	2.1	0.53
Hardness	mgCaCO3 /L	87	180	71	170
Calcium - Dissolved	mg/L	27	56	21	53
Magnesium - Dissolved	mg/L	4.9	10	4.6	9.2

Method ID	Methodology Summary
Org-013	Water samples are analysed directly 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 draft 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 draft Guideline on Investigation Levels for Soil and Groundwater.
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 draft B1 Guideline on Investigation Levels for Soil and Groundwater.
Ext-020	Analysis subcontracted to Australian Government - National Measurement Institute. NATA Accreditation No: 198
Inorg-030	Total Phenolics - determined colorimetrically following disitillation, based upon APHA 22nd ED 5530 D.
Metals-022 ICP-MS	Determination of various metals by ICP-MS.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-057	Ammonia - determined colourimetrically based on EPA350.1 and APHA 22nd ED 4500-NH3 F, Soils are analysed following a KCl extraction.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.

QUALITY CONTROL VOCs in water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			21/01/2013	[NT]	[NT]	LCS-W1	21/01/2013
Date analysed	-			21/01/2013	[NT]	[NT]	LCS-W1	21/01/2013
Dichlorodifluoromethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NR]	[NR]
Chloromethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NR]	[NR]
Vinyl Chloride	µg/L	10	Org-013	<10	[NT]	[NT]	[NR]	[NR]
Bromomethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NR]	[NR]
Chloroethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NR]	[NR]
Trichlorofluoromethane	µg/L	10	Org-013	<10	[NT]	[NT]	[NR]	[NR]
1,1-Dichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Trans-1,2-dichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,1-dichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	105%
Cis-1,2-dichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Bromochloromethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Chloroform	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	106%
2,2-dichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2-dichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	78%
1,1,1-trichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	96%
1,1-dichloropropene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Cyclohexane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Carbon tetrachloride	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Dibromomethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2-dichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Trichloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	94%
Bromodichloromethane	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	111%
trans-1,3-dichloropropene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
cis-1,3-dichloropropene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,1,2-trichloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Toluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,3-dichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Dibromochloromethane	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	116%
1,2-dibromoethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Tetrachloroethene	µg/L	1	Org-013	<1	[NT]	[NT]	LCS-W1	103%
1,1,1,2-tetrachloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Chlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Ethylbenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Bromoform	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
m+p-xylene	µg/L	2	Org-013	<2	[NT]	[NT]	[NR]	[NR]
Styrene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,1,2,2-tetrachloroethane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
o-xylene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL VOCs in water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
1,2,3-trichloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Isopropylbenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Bromobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
n-propyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
2-chlorotoluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
4-chlorotoluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,3,5-trimethyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Tert-butyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2,4-trimethyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,3-dichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Sec-butyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,4-dichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
4-isopropyl toluene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2-dichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
n-butyl benzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2-dibromo-3-chloropropane	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2,4-trichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Hexachlorobutadiene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
1,2,3-trichlorobenzene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Surrogate Dibromofluoromethane	%		Org-013	112	[NT]	[NT]	LCS-W1	110%
Surrogate toluene-d8	%		Org-013	100	[NT]	[NT]	LCS-W1	100%
Surrogate 4-BFB	%		Org-013	102	[NT]	[NT]	LCS-W1	96%

QUALITY CONTROL vTRH(C6-C10)/BTEXN in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			19/01/2013	[NT]	[NT]	LCS-W1	19/01/2013
Date analysed	-			19/01/2013	[NT]	[NT]	LCS-W1	19/01/2013
MTBE	µg/L	1	Org-013	<1.0	[NT]	[NT]	[NR]	[NR]
TRH C_6 - C_9	µg/L	10	Org-016	<10	[NT]	[NT]	LCS-W1	109%
TRH C_6 - C_{10}	µg/L	10	Org-016	<10	[NT]	[NT]	LCS-W1	109%
TRH C_6 - C_{10} less BTEX (F1)	µg/L	10	Org-016	[NT]	[NT]	[NT]	[NR]	[NR]
Benzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	105%
Toluene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	106%
Ethylbenzene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	109%
m+p-xylene	µg/L	2	Org-016	<2	[NT]	[NT]	LCS-W1	112%
o-xylene	µg/L	1	Org-016	<1	[NT]	[NT]	LCS-W1	110%
Naphthalene	µg/L	1	Org-013	<1	[NT]	[NT]	[NR]	[NR]
Surrogate Dibromofluoromethane	%		Org-016	102	[NT]	[NT]	LCS-W1	103%
Surrogate toluene-d8	%		Org-016	102	[NT]	[NT]	LCS-W1	95%
Surrogate 4-BFB	%		Org-016	88	[NT]	[NT]	LCS-W1	102%

QUALITY CONTROL svTRH (C10-C40) in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			21/01/2013	[NT]	[NT]	LCS-W1	21/01/2013
Date analysed	-			21/01/2013	[NT]	[NT]	LCS-W1	21/01/2013
TRH C_{10} - C_{14}	µg/L	50	Org-003	<50	[NT]	[NT]	LCS-W1	77%
TRH C_{15} - C_{28}	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W1	102%
TRH C_{29} - C_{36}	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W1	86%
TRH>C_{10} - C_{16}	µg/L	50	Org-003	<50	[NT]	[NT]	LCS-W1	77%
TRH>C_{10} - C_{16} less Naphthalene (F2)	µg/L	50	Org-003	[NT]	[NT]	[NT]	[NR]	[NR]
TRH>C_{16} - C_{34}	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W1	102%
TRH>C_{34} - C_{40}	µg/L	100	Org-003	<100	[NT]	[NT]	LCS-W1	86%
Surrogate o-Terphenyl	%		Org-003	95	[NT]	[NT]	LCS-W1	96%

QUALITY CONTROL PAHs in Water - Low Level	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			21/01/2013	[NT]	[NT]	LCS-W1	21/01/2013
Date analysed	-			21/01/2013	[NT]	[NT]	LCS-W1	21/01/2013
Naphthalene	µg/L	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-W1	88%
Acenaphthylene	µg/L	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	µg/L	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Fluorene	µg/L	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-W1	88%
Phenanthrene	µg/L	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-W1	83%
Anthracene	µg/L	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Fluoranthene	µg/L	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-W1	86%
Pyrene	µg/L	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-W1	87%
Benzo(a)anthracene	µg/L	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Chrysene	µg/L	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-W1	82%
Benzo(b+k)fluoranthene	µg/L	0.2	Org-012 subset	<0.2	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	µg/L	0.1	Org-012 subset	<0.1	[NT]	[NT]	LCS-W1	86%
Indeno(1,2,3-c,d)pyrene	µg/L	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	µg/L	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	µg/L	0.1	Org-012 subset	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene TEQ	µg/L	0.5	Org-012 subset	[NT]	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%		Org-012 subset	123	[NT]	[NT]	LCS-W1	85%

QUALITY CONTROL OCP in water - trace level	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			23/01/2013	[NT]	[NT]	LCS-W1	23/01/2013
Date analysed	-			30/01/2013	[NT]	[NT]	LCS-W1	23/01/2013
HCB	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
Heptachlor	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	LCS-W1	97%
Heptachlor Epoxide	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
Aldrin	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	LCS-W1	89%
gamma-BHC (Lindane)	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	LCS-W1	96%
alpha-BHC	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
beta-BHC	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
delta-BHC	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
trans-Chlordane	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
cis-Chlordane	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
Oxychlordane	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
Dieldrin	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	LCS-W1	95%
p,p-DDE	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
p,p-DDD	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
p,p-DDT	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	LCS-W1	107%
Endrin	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	LCS-W1	91%
Endrin Aldehyde	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
Endrin Ketone	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
alpha-Endosulfan	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
beta-Endosulfan	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulfate	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
Methoxychlor	µg/L	0.001	Ext-020	<0.001	[NT]	[NT]	[NR]	[NR]
Surrogate OC Recovery	%		Ext-020	[NT]	[NT]	[NT]	LCS-W1	81%

QUALITY CONTROL OP Pesticides - Trace Level	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			23/01/2013	[NT]	[NT]	LCS-W1	23/01/2013
Date analysed	-			30/01/2013	[NT]	[NT]	LCS-W1	30/01/2013
Demeton-S-methyl	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Dichlorvos	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Diazinon	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	LCS-W1	84%
Dimethoate	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	LCS-W1	75%
Chlorpyrifos methyl	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Malathion	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Fenthion	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Azinphos Ethyl	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Azinphos Methyl	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Chlorfenvinphos (E)	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Chlorfenvinphos (Z)	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Ethion	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	LCS-W1	82%
Fenitrothion	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Parathion (Ethyl)	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	LCS-W1	80%
Parathion (Methyl)	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Primiphos Ethyl	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Primiphos Methyl	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Surrogate OP Recovery - TPP	%		Ext-020	[NT]	[NT]	[NT]	LCS-W1	72%

QUALITY CONTROL PCB in water - trace level	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			23/01/2013	[NT]	[NT]	LCS-W1	23/01/2013
Date analysed	-			30/01/2013	[NT]	[NT]	LCS-W1	30/01/2013
Aroclor 1016	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Aroclor 1221	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Aroclor 1232	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Aroclor 1242	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Aroclor 1248	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Aroclor 1254	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Aroclor 1260	µg/L	0.01	Ext-020	<0.01	[NT]	[NT]	[NR]	[NR]
Total PCB's (as above)	µg/L	0.010	Ext-020	<0.01	[NT]	[NT]	LCS-W1	102%
QUALITY CONTROL Total Phenolics in Water	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			22/01/2013	[NT]	[NT]	LCS-W1	22/01/2013
Date analysed	-			22/01/2013	[NT]	[NT]	LCS-W1	22/01/2013
Total Phenolics (as Phenol)	mg/L	0.05	Inorg-030	<0.05	[NT]	[NT]	LCS-W1	95%
QUALITY CONTROL HM in water - dissolved	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			21/01/2013	84337-1	21/1/2013 || 21/1/2013	LCS-W2	21/01/2013
Date analysed	-			21/01/2013	84337-1	21/1/2013 || 21/1/2013	LCS-W2	21/01/2013
Arsenic-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	84337-1	5 || 5 || RPD: 0	LCS-W2	88%
Cadmium-Dissolved	µg/L	0.1	Metals-022 ICP-MS	<0.1	84337-1	<0.1 || <0.1	LCS-W2	91%
Chromium-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	84337-1	3 || 3 || RPD: 0	LCS-W2	91%
Copper-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	84337-1	<1 || <1	LCS-W2	85%
Lead-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	84337-1	<1 || <1	LCS-W2	95%
Mercury-Dissolved	µg/L	0.05	Metals-021 CV-AAS	<0.05	84337-1	<0.05 || <0.05	LCS-W2	92%
Nickel-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	84337-1	<1 || <1	LCS-W2	87%
Zinc-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	84337-1	7 || 7 || RPD: 0	LCS-W2	87%

QUALITY CONTROL Miscellaneous Inorganics	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			21/01/2013	84337-1	22/01/2012 || 22/01/2012	LCS-W1	22/01/2013
Date analysed	-			21/01/2013	84337-1	22/01/2012 || 22/01/2012	LCS-W1	22/01/2013
Ammonia as N in water	mg/L	0.005	Inorg-057	<0.005	84337-1	2.5 || 2.4 || RPD: 4	LCS-W1	108%
Hardness	mgCaCO3/L	3		[NT]	84337-1	87 || [N/T]	[NR]	[NR]
Calcium - Dissolved	mg/L	0.5	Metals-020 ICP-AES	<0.5	84337-1	27 || [N/T]	LCS-W1	95%
Magnesium - Dissolved	mg/L	0.5	Metals-020 ICP-AES	<0.5	84337-1	4.9 || [N/T]	LCS-W1	93%

QUALITY CONTROL HM in water - dissolved	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date prepared	-	[NT]	[NT]	84337-2	21/01/2013
Date analysed	-	[NT]	[NT]	84337-2	21/01/2013
Arsenic-Dissolved	µg/L	[NT]	[NT]	84337-2	90%
Cadmium-Dissolved	µg/L	[NT]	[NT]	84337-2	94%
Chromium-Dissolved	µg/L	[NT]	[NT]	84337-2	90%
Copper-Dissolved	µg/L	[NT]	[NT]	84337-2	82%
Lead-Dissolved	µg/L	[NT]	[NT]	84337-2	90%
Mercury-Dissolved	µg/L	[NT]	[NT]	84337-2	79%
Nickel-Dissolved	µg/L	[NT]	[NT]	84337-2	82%
Zinc-Dissolved	µg/L	[NT]	[NT]	84337-2	86%

Report Comments:

PAH's IN WATER (LOW LEVEL): # Percent recovery is not possible to report due to interference from analytes (other than those being tested) in the sample/s.

OC/OP/PCB's in water analysed by NMI. Report No.RN954679.

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 batched of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

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 and 10-140% for SVOC and speciated phenols is acceptable.

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:

Douglas Partners
96 Hermitage Rd
West Ryde NSW 2114

ph: 02 9809 0666
Fax: 02 9809 4095

Attention: Nerilee Edwards

Sample log in details:

Your reference:	**37278.05, Banksmeadow**
Envirolab Reference:	**84337**
Date received:	18/01/13
Date results expected to be reported:	**25/01/13**

Samples received in appropriate condition for analysis:	YES
No. of samples provided	6 waters
Turnaround time requested:	Standard
Temperature on receipt	Cool
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.

Contact details:

Please direct any queries to Aileen Hie or Jacinta Hurst
ph: 02 9910 6200 fax: 02 9910 6201
email: ahie@envirolabservices.com.au or jhurst@envirolabservices.com.au

83246.

Douglas Partners
Geotechnics · Environment · Groundwater

CHAIN OF CUSTODY

Project Name: Banksmeadow - PN
Project No: 37278.05 Sampler: NLE/MW
Project Mgr: NLE Mob. Phone: 0414 769 011
Email: nerilee.edwards@douglaspartners.com.au
Date Required: STD; ESdat Format Lab Quote No.

To: SGS Environmental Services
Unit 16/33 Maddox St Alexandria 2015
Attn: Angela Mamalicos
Phone: (02) 8594 0400 Fax: (02) 8594 0499
Email: au.samplereceipt.sydney@sgs.com

	Sample ID	Lab ID	Sampling Date	Sample Type (S - soil W – water)	Container type (G – glass P - plastic)	Analytes: HM8	TRH/BTEX MTBE	PAH	OCP OPP PCB	phenol	VOC	asbestos	pH	ammonia	Notes/preservation
1	BD1B/111212	123	11/12	S	G	✓	✓	✓	✓	✓		✓	✓	✓	
2	BD3/131212	126	13/12			✓									
3	BD4/131212	128	13/12			✓	✓	✓	✓	✓		✓	+C	N	

SGS
Received 18/12/12
By SS
Time 2:55 am/pm
Samples intact yes/no
Ice/Cooler Pack yes/no
Temperature on Receipt 2.9 °C
Storage Location S 279
SGS REF No SE114379

Lab Report No.
Send Results to: Douglas Partners Address: 96 Hermitage Road West Ryde NSW 2114
Phone: (02) 4271 1836
Fax: (02) 4271 1897

Relinquished by: R. McAlpine Signed: Date & Time: 17/12 Transported to laboratory by: Runder
Received By: Date & Time: 18/12/12

Relinquished: Sophie ES

SGS

AUSTRALIA – ENVIRONMENTAL SERVICES SYDNEY – PROFORMA FORM

SAMPLE INFORMATION

Approved: D. Liang

JOB No. SE114379

Sample No.	P 100ml UP	P 250ml UP	P 500ml UP	P 1L UP	G 100 Amber UP	G 200 Amber UP	G 500 Amber UP	G 1L Amber UP	G 40ml vial Up	G 40ml Vial HCl	P 100ml HCl	G 40ml Vial H2SO4	P 100ml H2SO4	P 250ml H2SO4	G 500ml Amber H2SO4	G 1L H2SO4	P 100/250ml HN03 Total	P 100ml HN03 Filtered	P 250ml NaOH	P 250ml Zn Acetate	Plastic Bag	G 250ml Soil Jar				Sample Matrix	Lab Bottles Supplied By	Comments
1-3																						1				Soil	Envirolab	Full

ANALYTICAL REPORT

CLIENT DETAILS		LABORATORY DETAILS	
Contact	Nerilee Edwards	Manager	Huong Crawford
Client	DOUGLAS PARTNERS PTY LTD	Laboratory	SGS Alexandria Environmental
Address		Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	02 9809 0666	Telephone	+61 2 8594 0400
Facsimile	02 9809 4095	Facsimile	+61 2 8594 0499
Email	nerilee.edwards@douglaspartners.com.au	Email	au.environmental.sydney@sgs.com
Project	**37278-05 - Banksmeadow - PN**	SGS Reference	**SE114379 R0**
Order Number	(Not specified)	Report Number	0000048072
Samples	3	Date Reported	08 Jan 2013
		Date Received	18 Dec 2012

COMMENTS

Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(4354).

No respirable fibres detected in all samples using trace analysis technique.

A portion of the sample supplied has been sub-sampled for asbestos according to SGS In-house procedures. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied.
SGS Environmental Services recommends supplying approximately 50-100g of sample in a separate container.
Asbestos analysed by Approved Identifier Ravee Sivasubramaniam.

SIGNATORIES

Andy Sutton
Organics Chemist

Dong Liang
Inorganics Metals Team Leader

Huong Crawford
Laboratory Manager

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Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE114379.001 Soil 11 Dec 2012 BD1B/111212	SE114379.002 Soil 13 Dec 2012 BD3/131212	SE114379.003 Soil 13 Dec 2012 BD4/131212
VOC's in Soil Method: AN433/AN434					
Monocyclic Aromatic Hydrocarbons					
Benzene	mg/kg	0.1	**0.7**	-	<0.1
Toluene	mg/kg	0.1	**2.2**	-	<0.1
Ethylbenzene	mg/kg	0.1	**0.3**	-	<0.1
m/p-xylene	mg/kg	0.2	**3.6**	-	<0.2
o-xylene	mg/kg	0.1	**1.1**	-	<0.1
Oxygenated Compounds					
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	-	-	-
Polycyclic VOCs					
Naphthalene	mg/kg	0.1	<0.1	-	<0.1
Surrogates					
Dibromofluoromethane (Surrogate)	%	-	**95**	-	**112**
d4-1,2-dichloroethane (Surrogate)	%	-	**81**	-	**96**
d8-toluene (Surrogate)	%	-	**78**	-	**95**
Bromofluorobenzene (Surrogate)	%	-	**81**	-	**80**
Totals					
Total Xylenes*	mg/kg	0.3	**4.7**	-	<0.3
Total BTEX*	mg/kg	-	**8**	-	**0**
Volatile Petroleum Hydrocarbons in Soil Method: AN433/AN434/AN410					
TRH C6-C9	mg/kg	20	<20	-	<20
Surrogates					
Dibromofluoromethane (Surrogate)	%	-	**95**	-	**112**
d4-1,2-dichloroethane (Surrogate)	%	-	**81**	-	**96**
d8-toluene (Surrogate)	%	-	**78**	-	**95**
Bromofluorobenzene (Surrogate)	%	-	**81**	-	**80**
VPH F Bands					
Benzene (F0)	mg/kg	0.1	**0.7**	-	<0.1
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	-	<25
TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403					
TRH C10-C14	mg/kg	20	**21**	-	<20
TRH C15-C28	mg/kg	45	<45	-	<45
TRH C29-C36	mg/kg	45	<45	-	<45
TRH C37-C40	mg/kg	100	<100	-	<100
TRH C10-C36 Total	mg/kg	110	<110	-	<110
TRH C10-C40 Total	mg/kg	210	<210	-	<210

Parameter	Units	LOR	Sample Number: SE114379.001 Sample Matrix: Soil Sample Date: 11 Dec 2012 Sample Name: BD1B/111212	SE114379.002 Soil 13 Dec 2012 BD3/131212	SE114379.003 Soil 13 Dec 2012 BD4/131212
TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403 (continued)					
TRH F Bands					
TRH >C10-C16 (F2)	mg/kg	25	**25**	-	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	-	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	-	<120
PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420					
Naphthalene	mg/kg	0.1	**0.2**	-	<0.1
2-methylnaphthalene	mg/kg	0.1	**0.2**	-	<0.1
1-methylnaphthalene	mg/kg	0.1	**0.2**	-	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	-	<0.1
Acenaphthene	mg/kg	0.1	<0.1	-	<0.1
Fluorene	mg/kg	0.1	<0.1	-	<0.1
Phenanthrene	mg/kg	0.1	**0.2**	-	<0.1
Anthracene	mg/kg	0.1	<0.1	-	<0.1
Fluoranthene	mg/kg	0.1	<0.1	-	<0.1
Pyrene	mg/kg	0.1	<0.1	-	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	-	<0.1
Chrysene	mg/kg	0.1	<0.1	-	<0.1
Benzo(b)fluoranthene	mg/kg	0.1	<0.1	-	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	-	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	-	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	-	<0.1
Dibenzo(a&h)anthracene	mg/kg	0.1	<0.1	-	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	-	<0.1
Total PAH	mg/kg	0.8	<0.8	-	<0.8
Surrogates					
d5-nitrobenzene (Surrogate)	%	-	**96**	-	**84**
2-fluorobiphenyl (Surrogate)	%	-	**83**	-	**91**
d14-p-terphenyl (Surrogate)	%	-	**80**	-	**72**
OC Pesticides in Soil Method: AN400/AN420					
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	-	<0.1
Alpha BHC	mg/kg	0.1	<0.1	-	<0.1
Lindane	mg/kg	0.1	<0.1	-	<0.1
Heptachlor	mg/kg	0.1	<0.1	-	<0.1
Aldrin	mg/kg	0.1	<0.1	-	<0.1
Beta BHC	mg/kg	0.1	<0.1	-	<0.1
Delta BHC	mg/kg	0.1	<0.1	-	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	-	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	-	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	-	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	-	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	-	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	-	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	-	<0.1
Dieldrin	mg/kg	0.2	<0.2	-	<0.2
Endrin	mg/kg	0.2	<0.2	-	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	-	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	-	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	-	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	-	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	-	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	-	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	-	<0.1
Methoxychlor	mg/kg	0.1	<0.1	-	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	-	<0.1
Surrogates					

Parameter	Units	LOR	Sample Number: SE114379.001 Sample Matrix: Soil Sample Date: 11 Dec 2012 Sample Name: BD1B/111212	SE114379.002 Soil 13 Dec 2012 BD3/131212	SE114379.003 Soil 13 Dec 2012 BD4/131212
OC Pesticides in Soil Method: AN400/AN420 (continued)					
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	**108**	-	**109**
OP Pesticides in Soil Method: AN400/AN420					
Dichlorvos	mg/kg	0.5	<0.5	-	<0.5
Dimethoate	mg/kg	0.5	<0.5	-	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	-	<0.5
Fenitrothion	mg/kg	0.2	<0.2	-	<0.2
Malathion	mg/kg	0.2	<0.2	-	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	-	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	-	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	-	<0.2
Methidathion	mg/kg	0.5	<0.5	-	<0.5
Ethion	mg/kg	0.2	<0.2	-	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	-	<0.2
Surrogates					
2-fluorobiphenyl (Surrogate)	%	-	**83**	-	**91**
d14-p-terphenyl (Surrogate)	%	-	**80**	-	**72**
PCBs in Soil Method: AN400/AN420					
Arochlor 1016	mg/kg	0.2	<0.2	-	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	-	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	-	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	-	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	-	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	-	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	-	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	-	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	-	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	-	<1
Surrogates					
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	**108**	-	**109**
Total Phenolics in Soil Method: AN289					
Total Phenols	mg/kg	0.1	**0.1**	-	<0.1
Total Cyanide in soil by Discrete Analyser (Aquakem) Method: AN077/AN287					
Total Cyanide	mg/kg	0.1	-	-	<0.1
Ammonia Nitrogen (soluble) in Soil Method: AN291					
Ammonia Nitrogen, NH_3 as N*	mg/kg	0.15	**6.2**	-	-
pH in soil (1:5) Method: AN101					
pH	No unit	-	**8.6**	-	-

Parameter	Units	LOR	Sample Number: SE114379.001 Sample Matrix: Soil Sample Date: 11 Dec 2012 Sample Name: BD1B/111212	SE114379.002 Soil 13 Dec 2012 BD3/131212	SE114379.003 Soil 13 Dec 2012 BD4/131212
Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest Method: AN040/AN320					
Arsenic, As	mg/kg	3	<3	**170**	<3
Cadmium, Cd	mg/kg	0.3	<0.3	**2.2**	<0.3
Chromium, Cr	mg/kg	0.3	**8.9**	**25**	**3.7**
Copper, Cu	mg/kg	0.5	**40**	**350**	**11**
Lead, Pb	mg/kg	1	**42**	**460**	**12**
Nickel, Ni	mg/kg	0.5	**8.1**	**30**	**10**
Zinc, Zn	mg/kg	0.5	**190**	**410**	**30**
Mercury in Soil Method: AN312					
Mercury	mg/kg	0.05	**1.2**	**0.16**	**0.07**
Fibre Identification in soil Method: AN602					
FibreID					
Asbestos Detected	No unit	-	No	-	No
SemiQuant					
Estimated Fibres	%w/w	0.01	<0.01	-	<0.01
Moisture Content Method: AN002					
% Moisture	%	0.5	**28**	**5.1**	**2.4**

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Ammonia Nitrogen (soluble) in Soil **Method: ME-(AU)-[ENV]AN291**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Ammonia Nitrogen, NH_3 as N*	LB031659	mg/kg	0.15	<0.15	1%	104%

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

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Mercury	LB031732	mg/kg	0.05	<0.05	2%	97%	85%

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

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Hexachlorobenzene (HCB)	LB031626	mg/kg	0.1	<0.1	0%	NA
Alpha BHC	LB031626	mg/kg	0.1	<0.1	0%	NA
Lindane	LB031626	mg/kg	0.1	<0.1	0%	NA
Heptachlor	LB031626	mg/kg	0.1	<0.1	0%	130%
Aldrin	LB031626	mg/kg	0.1	<0.1	0%	125%
Beta BHC	LB031626	mg/kg	0.1	<0.1	0%	NA
Delta BHC	LB031626	mg/kg	0.1	<0.1	0%	115%
Heptachlor epoxide	LB031626	mg/kg	0.1	<0.1	0%	NA
o,p'-DDE	LB031626	mg/kg	0.1	<0.1	0%	NA
Alpha Endosulfan	LB031626	mg/kg	0.2	<0.2	0%	NA
Gamma Chlordane	LB031626	mg/kg	0.1	<0.1	0%	NA
Alpha Chlordane	LB031626	mg/kg	0.1	<0.1	0%	NA
trans-Nonachlor	LB031626	mg/kg	0.1	<0.1	0%	NA
p,p'-DDE	LB031626	mg/kg	0.1	<0.1	0%	NA
Dieldrin	LB031626	mg/kg	0.2	<0.2	0%	120%
Endrin	LB031626	mg/kg	0.2	<0.2	0%	130%
o,p'-DDD	LB031626	mg/kg	0.1	<0.1	0%	NA
o,p'-DDT	LB031626	mg/kg	0.1	<0.1	0%	NA
Beta Endosulfan	LB031626	mg/kg	0.2	<0.2	0%	NA
p,p'-DDD	LB031626	mg/kg	0.1	<0.1	0%	NA
p,p'-DDT	LB031626	mg/kg	0.1	<0.1	0%	130%
Endosulfan sulphate	LB031626	mg/kg	0.1	<0.1	0%	NA
Endrin Aldehyde	LB031626	mg/kg	0.1	<0.1	0%	NA
Methoxychlor	LB031626	mg/kg	0.1	<0.1	0%	NA
Endrin Ketone	LB031626	mg/kg	0.1	<0.1	0%	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Tetrachloro-m-xylene (TCMX) (Surrogate)	LB031626	%	-	101%	3%	97%

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

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

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Dichlorvos	LB031626	mg/kg	0.5	<0.5	118%
Dimethoate	LB031626	mg/kg	0.5	<0.5	NA
Diazinon (Dimpylate)	LB031626	mg/kg	0.5	<0.5	92%
Fenitrothion	LB031626	mg/kg	0.2	<0.2	NA
Malathion	LB031626	mg/kg	0.2	<0.2	NA
Chlorpyrifos (Chlorpyrifos Ethyl)	LB031626	mg/kg	0.2	<0.2	105%
Parathion-ethyl (Parathion)	LB031626	mg/kg	0.2	<0.2	NA
Bromophos Ethyl	LB031626	mg/kg	0.2	<0.2	NA
Methidathion	LB031626	mg/kg	0.5	<0.5	NA
Ethion	LB031626	mg/kg	0.2	<0.2	90%
Azinphos-methyl (Guthion)	LB031626	mg/kg	0.2	<0.2	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
2-fluorobiphenyl (Surrogate)	LB031626	%	-	92%	92%
d14-p-terphenyl (Surrogate)	LB031626	%	-	97%	97%

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

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Naphthalene	LB031626	mg/kg	0.1	<0.1	0%	96%
2-methylnaphthalene	LB031626	mg/kg	0.1	<0.1	0%	NA
1-methylnaphthalene	LB031626	mg/kg	0.1	<0.1	0%	NA
Acenaphthylene	LB031626	mg/kg	0.1	<0.1	0%	98%
Acenaphthene	LB031626	mg/kg	0.1	<0.1	0%	109%
Fluorene	LB031626	mg/kg	0.1	<0.1	0%	NA
Phenanthrene	LB031626	mg/kg	0.1	<0.1	0%	98%
Anthracene	LB031626	mg/kg	0.1	<0.1	0%	102%
Fluoranthene	LB031626	mg/kg	0.1	<0.1	0%	101%
Pyrene	LB031626	mg/kg	0.1	<0.1	0%	96%
Benzo(a)anthracene	LB031626	mg/kg	0.1	<0.1	0%	NA
Chrysene	LB031626	mg/kg	0.1	<0.1	0%	NA
Benzo(b)fluoranthene	LB031626	mg/kg	0.1	<0.1	0%	NA
Benzo(k)fluoranthene	LB031626	mg/kg	0.1	<0.1	0%	NA
Benzo(a)pyrene	LB031626	mg/kg	0.1	<0.1	0%	104%
Indeno(1,2,3-cd)pyrene	LB031626	mg/kg	0.1	<0.1	0%	NA
Dibenzo(a&h)anthracene	LB031626	mg/kg	0.1	<0.1	0%	NA
Benzo(ghi)perylene	LB031626	mg/kg	0.1	<0.1	0%	NA
Total PAH	LB031626	mg/kg	0.8	<0.8	0%	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
d5-nitrobenzene (Surrogate)	LB031626	%	-	100%	3%	107%
2-fluorobiphenyl (Surrogate)	LB031626	%	-	87%	2%	93%
d14-p-terphenyl (Surrogate)	LB031626	%	-	85%	4%	91%

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

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

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Arochlor 1016	LB031626	mg/kg	0.2	<0.2	0%	NA
Arochlor 1221	LB031626	mg/kg	0.2	<0.2	0%	NA
Arochlor 1232	LB031626	mg/kg	0.2	<0.2	0%	NA
Arochlor 1242	LB031626	mg/kg	0.2	<0.2	0%	NA
Arochlor 1248	LB031626	mg/kg	0.2	<0.2	0%	NA
Arochlor 1254	LB031626	mg/kg	0.2	<0.2	0%	NA
Arochlor 1260	LB031626	mg/kg	0.2	<0.2	0%	120%
Arochlor 1262	LB031626	mg/kg	0.2	<0.2	0%	NA
Arochlor 1268	LB031626	mg/kg	0.2	<0.2	0%	NA
Total PCBs (Arochlors)	LB031626	mg/kg	1	<1	0%	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Tetrachloro-m-xylene (TCMX) (Surrogate)	LB031626	%	-	101%	3%	105%

pH in soil (1:5) **Method: ME-(AU)-[ENV]AN101**

Parameter	QC Reference	Units	LOR	DUP %RPD	LCS %Recovery
pH	LB031718	No unit	-	0%	101%

Total Cyanide in soil by Discrete Analyser (Aquakem) **Method: ME-(AU)-[ENV]AN077/AN287**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Total Cyanide	LB031653	mg/kg	0.1	<0.1	4%	102%	90%

Total Phenolics in Soil **Method: ME-(AU)-[ENV]AN289**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Total Phenols	LB031737	mg/kg	0.1	<0.1	0%	88%	79%

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

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

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Arsenic, As	LB031731	mg/kg	3	<3	9 - 10%	99%	
Cadmium, Cd	LB031731	mg/kg	0.3	<0.3	0%	99%	
Chromium, Cr	LB031731	mg/kg	0.3	<0.3	1 - 5%	101%	
Copper, Cu	LB031731	mg/kg	0.5	<0.5	0 - 2%	101%	
Lead, Pb	LB031731	mg/kg	1	<1	2%	99%	81%
Nickel, Ni	LB031731	mg/kg	0.5	<0.5	1%	100%	
Zinc, Zn	LB031731	mg/kg	0.5	<0.5	2 - 4%	100%	

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

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
TRH C10-C14	LB031626	mg/kg	20	<20	0%	103%
TRH C15-C28	LB031626	mg/kg	45	<45	0%	100%
TRH C29-C36	LB031626	mg/kg	45	<45	0%	80%
TRH C37-C40	LB031626	mg/kg	100	<100	0%	NA
TRH C10-C36 Total	LB031626	mg/kg	110	<110	0%	NA
TRH C10-C40 Total	LB031626	mg/kg	210	<210	0%	NA

TRH F Bands

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
TRH >C10-C16 (F2)	LB031626	mg/kg	25	<25	0%	103%
TRH >C16-C34 (F3)	LB031626	mg/kg	90	<90	0%	100%
TRH >C34-C40 (F4)	LB031626	mg/kg	120	<120	0%	80%

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

Monocyclic Aromatic Hydrocarbons

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Benzene	LB031564	mg/kg	0.1	<0.1	0%	111%	94%
Toluene	LB031564	mg/kg	0.1	<0.1	0%	91%	82%
Ethylbenzene	LB031564	mg/kg	0.1	<0.1	0%	88%	75%
m/p-xylene	LB031564	mg/kg	0.2	<0.2	0%	93%	78%
o-xylene	LB031564	mg/kg	0.1	<0.1	0%	93%	79%

Polycyclic VOCs

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Naphthalene	LB031564	mg/kg	0.1	<0.1	0%	NA	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Dibromofluoromethane (Surrogate)	LB031564	%	-	118%	5%	108%	91%
d4-1,2-dichloroethane (Surrogate)	LB031564	%	-	105%	2%	90%	79%
d8-toluene (Surrogate)	LB031564	%	-	98%	5%	88%	75%
Bromofluorobenzene (Surrogate)	LB031564	%	-	90%	3%	103%	86%

Totals

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Total Xylenes*	LB031564	mg/kg	0.3	<0.3	0%	NA	NA
Total BTEX*	LB031564	mg/kg	-	0	0%	NA	NA

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Volatile Petroleum Hydrocarbons in Soil **Method: ME-(AU)-[ENV]AN433/AN434/AN410**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
TRH C6-C9	LB031564	mg/kg	20	<20	0%	93%	82%

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Dibromofluoromethane (Surrogate)	LB031564	%	-	118%	5%	108%	91%
d4-1,2-dichloroethane (Surrogate)	LB031564	%	-	105%	2%	90%	79%
d8-toluene (Surrogate)	LB031564	%	-	98%	5%	88%	75%
Bromofluorobenzene (Surrogate)	LB031564	%	-	90%	3%	103%	86%

VPH F Bands

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Benzene (F0)	LB031564	mg/kg	0.1	<0.1	0%	NA	NA
TRH C6-C10 minus BTEX (F1)	LB031564	mg/kg	25	<25	0%	74%	73%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analsysis by ASS or ICP as per USEPA Method 200.8.
AN077	Hydrogen cyanide is liberated from an acidified alkali soil extract by distillation and purging with air. The hydrogen cyanide gas is then collected by passing it through a sodium hydroxide scrubbing solution. The scrubbing solution will then be analysed for cyanide by the appropriate method.
AN088	Orbital rolling for Organic pollutants are extracted from soil/sediment by transferring an appropriate mass of sample to a clear soil jar and extracting with 1:1 Dichloromethane/Acetone. Orbital Rolling method is intended for the extraction of semi-volatile organic compounds from soil/sediment samples, and is based somewhat on USEPA method 3570 (Micro Organic extraction and sample preparation). Method 3700.
AN101	pH in Soil Sludge Sediment and Water: pH is measured electrometrically using a combination electrode (glass plus reference electrode) and is calibrated against 3 buffers purchased commercially. For soils, an extract with water (or 0.01M CaCl2) is made at a ratio of 1:5 and the pH determined and reported on the extract. Reference APHA 4500-H+.
AN287	A buffered distillate or water sample is treated with chloramine/barbituric acid reagents and the intensity of the colour developed is proportional to the cyanide concentration by Aquakem DA.
AN291	From the soil extract, ammonia reacts with hypochlorite ions from Sodium Dichloroisocyanuate, and salicylate in the presence of Sodium Nitroprusside to form indophenol blue and measured at 670nm.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN400	OC and OP Pesticides by GC-ECD: The determination of organochlorine (OC) and organophosphorus (OP) pesticides and polychlorinated biphenyls (PCBs) in soils, sludges and groundwater. (Based on USEPA methods 3510, 3550, 8140 and 8080.)
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the Draft NEPM 2011, >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is not corrected for Naphthalene.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Petroleum Hydrocarbons (TPH) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependant on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433/AN434	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN433/AN434/AN410	VOCs and C6-C9/C6-C10 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

FOOTNOTES

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

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

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

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.sgs.com.au.pv.sgsv3/~/media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf

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STATEMENT OF QA/QC PERFORMANCE

SE114379 R0

CLIENT DETAILS

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Project	**37278-05 - Banksmeadow - PN**
Order Number	(Not specified)
Samples	3

LABORATORY DETAILS

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SGS Reference	SE114379 R0
Report Number	0000048073
Date Reported	08 Jan 2013

COMMENTS

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

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

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

Extraction Date	Ammonia Nitrogen (soluble) in Soil	1 item
	pH in soil (1:5)	1 item
Analysis Date	Ammonia Nitrogen (soluble) in Soil	1 item
	pH in soil (1:5)	1 item

SAMPLE SUMMARY

Sample counts by matrix	3 x Soils	Type of documentation received	COC
Date documentation received	18/12/2012	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	2.9°C
Sample container provider	Other Lab	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

HOLDING TIME SUMMARY

SE114379 R0

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

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

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

Ammonia Nitrogen (soluble) in Soil

Method: ME-(AU)-[ENV]AN291

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BD1B/111212	SE114379.001	LB031659	11 Dec 2012	18 Dec 2012	18 Dec 2012	20 Dec 2012†	18 Dec 2012	21 Dec 2012†

Fibre Identification in soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BD1B/111212	SE114379.001	LB031822	11 Dec 2012	18 Dec 2012	11 Dec 2013	27 Dec 2012	11 Dec 2013	27 Dec 2012
BD4/131212	SE114379.003	LB031822	13 Dec 2012	18 Dec 2012	13 Dec 2013	27 Dec 2012	13 Dec 2013	27 Dec 2012

Mercury in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BD1B/111212	SE114379.001	LB031732	11 Dec 2012	18 Dec 2012	08 Jan 2013	21 Dec 2012	08 Jan 2013	24 Dec 2012
BD3/131212	SE114379.002	LB031732	13 Dec 2012	18 Dec 2012	10 Jan 2013	21 Dec 2012	10 Jan 2013	24 Dec 2012
BD4/131212	SE114379.003	LB031732	13 Dec 2012	18 Dec 2012	10 Jan 2013	21 Dec 2012	10 Jan 2013	24 Dec 2012

Moisture Content

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BD1B/111212	SE114379.001	LB031649	11 Dec 2012	18 Dec 2012	25 Dec 2012	20 Dec 2012	25 Dec 2012	24 Dec 2012
BD3/131212	SE114379.002	LB031649	13 Dec 2012	18 Dec 2012	27 Dec 2012	20 Dec 2012	25 Dec 2012	24 Dec 2012
BD4/131212	SE114379.003	LB031649	13 Dec 2012	18 Dec 2012	27 Dec 2012	20 Dec 2012	25 Dec 2012	24 Dec 2012

OC Pesticides in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BD1B/111212	SE114379.001	LB031626	11 Dec 2012	18 Dec 2012	25 Dec 2012	19 Dec 2012	28 Jan 2013	07 Jan 2013
BD4/131212	SE114379.003	LB031626	13 Dec 2012	18 Dec 2012	27 Dec 2012	19 Dec 2012	28 Jan 2013	07 Jan 2013

OP Pesticides in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BD1B/111212	SE114379.001	LB031626	11 Dec 2012	18 Dec 2012	25 Dec 2012	19 Dec 2012	28 Jan 2013	07 Jan 2013
BD4/131212	SE114379.003	LB031626	13 Dec 2012	18 Dec 2012	27 Dec 2012	19 Dec 2012	28 Jan 2013	07 Jan 2013

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BD1B/111212	SE114379.001	LB031626	11 Dec 2012	18 Dec 2012	25 Dec 2012	19 Dec 2012	28 Jan 2013	07 Jan 2013
BD4/131212	SE114379.003	LB031626	13 Dec 2012	18 Dec 2012	27 Dec 2012	19 Dec 2012	28 Jan 2013	07 Jan 2013

PCBs in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BD1B/111212	SE114379.001	LB031626	11 Dec 2012	18 Dec 2012	25 Dec 2012	19 Dec 2012	28 Jan 2013	07 Jan 2013
BD4/131212	SE114379.003	LB031626	13 Dec 2012	18 Dec 2012	27 Dec 2012	19 Dec 2012	28 Jan 2013	07 Jan 2013

pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BD1B/111212	SE114379.001	LB031718	11 Dec 2012	18 Dec 2012	18 Dec 2012	20 Dec 2012†	22 Dec 2012	27 Dec 2012†

Total Cyanide in soil by Discrete Analyser (Aquakem)

Method: ME-(AU)-[ENV]AN077/AN287

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BD4/131212	SE114379.003	LB031653	13 Dec 2012	18 Dec 2012	20 Dec 2012	20 Dec 2012	27 Dec 2012	21 Dec 2012

Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BD1B/111212	SE114379.001	LB031737	11 Dec 2012	18 Dec 2012	25 Dec 2012	21 Dec 2012	25 Dec 2012	21 Dec 2012
BD4/131212	SE114379.003	LB031737	13 Dec 2012	18 Dec 2012	27 Dec 2012	21 Dec 2012	27 Dec 2012	21 Dec 2012

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BD1B/111212	SE114379.001	LB031731	11 Dec 2012	18 Dec 2012	09 Jun 2013	21 Dec 2012	09 Jun 2013	21 Dec 2012
BD3/131212	SE114379.002	LB031731	13 Dec 2012	18 Dec 2012	11 Jun 2013	21 Dec 2012	11 Jun 2013	21 Dec 2012
BD4/131212	SE114379.003	LB031731	13 Dec 2012	18 Dec 2012	11 Jun 2013	21 Dec 2012	11 Jun 2013	21 Dec 2012

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BD1B/111212	SE114379.001	LB031626	11 Dec 2012	18 Dec 2012	25 Dec 2012	19 Dec 2012	28 Jan 2013	27 Dec 2012
BD4/131212	SE114379.003	LB031626	13 Dec 2012	18 Dec 2012	27 Dec 2012	19 Dec 2012	28 Jan 2013	27 Dec 2012

HOLDING TIME SUMMARY

SE114379 R0

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

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

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

VOC's in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BD1B/111212	SE114379.001	LB031564	11 Dec 2012	18 Dec 2012	25 Dec 2012	19 Dec 2012	28 Jan 2013	21 Dec 2012
BD4/131212	SE114379.003	LB031564	13 Dec 2012	18 Dec 2012	27 Dec 2012	19 Dec 2012	28 Jan 2013	21 Dec 2012

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434/AN410

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BD1B/111212	SE114379.001	LB031564	11 Dec 2012	18 Dec 2012	25 Dec 2012	19 Dec 2012	28 Jan 2013	21 Dec 2012
BD4/131212	SE114379.003	LB031564	13 Dec 2012	18 Dec 2012	27 Dec 2012	19 Dec 2012	28 Jan 2013	21 Dec 2012

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

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

OC Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BD1B/111212	SE114379.001	%	60 - 130%	108
	BD4/131212	SE114379.003	%	60 - 130%	109

OP Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BD1B/111212	SE114379.001	%	60 - 130%	83
	BD4/131212	SE114379.003	%	60 - 130%	91
d14-p-terphenyl (Surrogate)	BD1B/111212	SE114379.001	%	60 - 130%	80
	BD4/131212	SE114379.003	%	60 - 130%	72

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BD1B/111212	SE114379.001	%	60 - 130%	83
	BD4/131212	SE114379.003	%	60 - 130%	91
d14-p-terphenyl (Surrogate)	BD1B/111212	SE114379.001	%	60 - 130%	80
	BD4/131212	SE114379.003	%	60 - 130%	72
d5-nitrobenzene (Surrogate)	BD1B/111212	SE114379.001	%	60 - 130%	96
	BD4/131212	SE114379.003	%	60 - 130%	84

PCBs in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BD1B/111212	SE114379.001	%	60 - 130%	108
	BD4/131212	SE114379.003	%	60 - 130%	109

VOC's in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BD1B/111212	SE114379.001	%	60 - 130%	81
	BD4/131212	SE114379.003	%	60 - 130%	80
d4-1,2-dichloroethane (Surrogate)	BD1B/111212	SE114379.001	%	60 - 130%	81
	BD4/131212	SE114379.003	%	60 - 130%	96
d8-toluene (Surrogate)	BD1B/111212	SE114379.001	%	60 - 130%	78
	BD4/131212	SE114379.003	%	60 - 130%	95
Dibromofluoromethane (Surrogate)	BD1B/111212	SE114379.001	%	60 - 130%	95
	BD4/131212	SE114379.003	%	60 - 130%	112

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434/AN410

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BD1B/111212	SE114379.001	%	60 - 130%	81
	BD4/131212	SE114379.003	%	60 - 130%	80
d4-1,2-dichloroethane (Surrogate)	BD1B/111212	SE114379.001	%	60 - 130%	81
	BD4/131212	SE114379.003	%	60 - 130%	96
d8-toluene (Surrogate)	BD1B/111212	SE114379.001	%	60 - 130%	78
	BD4/131212	SE114379.003	%	60 - 130%	95
Dibromofluoromethane (Surrogate)	BD1B/111212	SE114379.001	%	60 - 130%	95
	BD4/131212	SE114379.003	%	60 - 130%	112

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

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

Ammonia Nitrogen (soluble) in Soil

Method: ME-(AU)-[ENV]AN291

Sample Number	Parameter	Units	LOR	Result
LB031659.001	Ammonia Nitrogen, NH_3 as N*	mg/kg	0.15	<0.15

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB031732.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB031626.001		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Alpha BHC	mg/kg	0.1	<0.1
		Lindane	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		Endrin Aldehyde	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Endrin Ketone	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	101

OP Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB031626.001		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	92
		d14-p-terphenyl (Surrogate)	%	-	97

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB031626.001	Naphthalene	mg/kg	0.1	<0.1
	2-methylnaphthalene	mg/kg	0.1	<0.1
	1-methylnaphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1
	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result
LB031626.001		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1
		Benzo(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(a&h)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	100
		2-fluorobiphenyl (Surrogate)	%	-	87
		d14-p-terphenyl (Surrogate)	%	-	85

PCBs in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB031626.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	101

Total Cyanide in soil by Discrete Analyser (Aquakem)

Method: ME-(AU)-[ENV]AN077/AN287

Sample Number	Parameter	Units	LOR	Result
LB031653.001	Total Cyanide	mg/kg	0.1	<0.1

Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR	Result
LB031737.001	Total Phenols	mg/kg	0.1	<0.1

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

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

Sample Number	Parameter	Units	LOR	Result
LB031731.001	Arsenic, As	mg/kg	3	<3
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.3	<0.3
	Copper, Cu	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Nickel, Ni	mg/kg	0.5	<0.5
	Zinc, Zn	mg/kg	0.5	<0.5

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB031626.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB031564.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	118

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

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

VOC's in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result
LB031564.001	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	105
		d8-toluene (Surrogate)	%	-	98
		Bromofluorobenzene (Surrogate)	%	-	90
	Totals	Total BTEX*	mg/kg	-	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434/AN410

Sample Number		Parameter	Units	LOR	Result
LB031564.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	118
		d4-1,2-dichloroethane (Surrogate)	%	-	105
		d8-toluene (Surrogate)	%	-	98
		Bromofluorobenzene (Surrogate)	%	-	90

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

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

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

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

Ammonia Nitrogen (soluble) in Soil

Method: ME-(AU)-[ENV]AN291

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE114379.001	LB031659.004	Ammonia Nitrogen, NH_3 as N*	mg/kg	0.15	6.2	6.2	32	1

Mercury in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE114380.001	LB031732.012	Mercury	mg/kg	0.05	<0.05	<0.05	72	2

OC Pesticides in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE114379.003	LB031626.005		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	30	3

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE114401.004	LB031626.014		Naphthalene	mg/kg	0.1	0	0	200	0
			2-methylnaphthalene	mg/kg	0.1	0	0	200	0
			1-methylnaphthalene	mg/kg	0.1	0	0	200	0
			Acenaphthylene	mg/kg	0.1	0	0	200	0
			Acenaphthene	mg/kg	0.1	0	0	200	0
			Fluorene	mg/kg	0.1	0	0	200	0
			Phenanthrene	mg/kg	0.1	0	0	200	0
			Anthracene	mg/kg	0.1	0	0	200	0
			Fluoranthene	mg/kg	0.1	0	0	200	0
			Pyrene	mg/kg	0.1	0	0	200	0
			Benzo(a)anthracene	mg/kg	0.1	0	0	200	0
			Chrysene	mg/kg	0.1	0	0	200	0
			Benzo(b)fluoranthene	mg/kg	0.1	0	0	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	0	0	200	0
			Benzo(a)pyrene	mg/kg	0.1	0	0	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0	0	200	0
			Dibenzo(a&h)anthracene	mg/kg	0.1	0	0	200	0
			Benzo(ghi)perylene	mg/kg	0.1	0	0	200	0
			Total PAH	mg/kg	0.8	0	0	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.478	0.464	30	3

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

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

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE114401.004	LB031626.014	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.432	0.424	30	2
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.427	0.41	30	4

PCBs in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE114379.003	LB031626.005		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	30	3

pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE114406.036	LB031718.026	pH	pH Units	-	7.9	7.9	31	0

Total Cyanide in soil by Discrete Analyser (Aquakem)

Method: ME-(AU)-[ENV]AN077/AN287

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE114373.003	LB031653.007	Total Cyanide	mg/kg	0.1	0.1	0.1	112	4

Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE114424.008	LB031737.013	Total Phenols	mg/kg	0.1	<0.1	<0.1	178	0

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE114367.002	LB031731.014	Arsenic, As	mg/kg	3	1.97917382782	.1811157410	78	10
		Cadmium, Cd	mg/kg	0.3	0.22828240960	.2191969104	164	0
		Chromium, Cr	mg/kg	0.3	7.09469507657	.1806472541	37	1
		Copper, Cu	mg/kg	0.5	10.249733657	10.233656445	35	0
		Lead, Pb	mg/kg	1	8.09919627118	.3027033289	42	2
		Nickel, Ni	mg/kg	0.5	4.86129607144	.8924341546	40	1
		Zinc, Zn	mg/kg	0.5	34.02839685083	.380555341(	36	2
SE114380.001	LB031731.021	Arsenic, As	mg/kg	3	6	6	47	9
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.3	3.0	3.2	46	5
		Copper, Cu	mg/kg	0.5	1.8	1.8	58	2
		Lead, Pb	mg/kg	1	18	18	35	2
		Nickel, Ni	mg/kg	0.5	1.8	1.8	58	1
		Zinc, Zn	mg/kg	0.5	94	91	32	4

TRH (Total Recoverable Hydrocarbons) in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE114401.004	LB031626.014		TRH C10-C14	mg/kg	20	0	0	200	0
			TRH C15-C28	mg/kg	45	0	0	200	0
			TRH C29-C36	mg/kg	45	0	0	200	0
			TRH C37-C40	mg/kg	100	0	0	200	0
			TRH C10-C36 Total	mg/kg	110	0	0	200	0
			TRH C10-C40 Total	mg/kg	210	0	0	200	0
		TRH F Bands	TRH >C10-C16 (F2)	mg/kg	25	0	0	200	0
			TRH >C16-C34 (F3)	mg/kg	90	0	0	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

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

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

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

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE114401.004	LB031626.014	TRH F Bands	TRH >C34-C40 (F4)	mg/kg	120	0	0	200	0

VOC's in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE114370.002	LB031564.015	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	5.7	6.0	50	5
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.8	4.9	50	2
			d8-toluene (Surrogate)	mg/kg	-	4.6	4.8	50	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.1	4.2	50	3
		Totals	Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX*	mg/kg	-	0	0	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434/AN410

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE114370.002	LB031564.015		TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	5.7	6.0	30	5
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.8	4.9	30	2
			d8-toluene (Surrogate)	mg/kg	-	4.6	4.8	30	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.1	4.2	30	3
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

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

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

Ammonia Nitrogen (soluble) in Soil

Method: ME-(AU)-[ENV]AN291

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB031659.002	Ammonia Nitrogen, NH_3 as N*	mg/kg	0.15	5.2	5	80 - 120	104

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB031732.002	Mercury	mg/kg	0.05	0.19	0.2	70 - 130	97

OC Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB031626.002		Heptachlor	mg/kg	0.1	0.3	0.2	60 - 140	130
		Aldrin	mg/kg	0.1	0.3	0.2	60 - 140	125
		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	115
		Dieldrin	mg/kg	0.2	0.2	0.2	60 - 140	120
		Endrin	mg/kg	0.2	0.3	0.2	60 - 140	130
		p,p'-DDT	mg/kg	0.1	0.3	0.2	60 - 140	130

OP Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB031626.002		Dichlorvos	mg/kg	0.5	2.4	2	60 - 140	118
		Diazinon (Dimpylate)	mg/kg	0.5	1.8	2	60 - 140	92
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.1	2	60 - 140	105
		Ethion	mg/kg	0.2	1.8	2	60 - 140	90
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 140	92
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 140	97

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB031626.002		Naphthalene	mg/kg	0.1	3.9	4	60 - 140	96
		Acenaphthylene	mg/kg	0.1	3.9	4	60 - 140	98
		Acenaphthene	mg/kg	0.1	4.3	4	60 - 140	109
		Phenanthrene	mg/kg	0.1	3.9	4	60 - 140	98
		Anthracene	mg/kg	0.1	4.1	4	60 - 140	102
		Fluoranthene	mg/kg	0.1	4.0	4	60 - 140	101
		Pyrene	mg/kg	0.1	3.8	4	60 - 140	96
		Benzo(a)pyrene	mg/kg	0.1	4.2	4	60 - 140	104
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	60 - 140	107
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	60 - 140	93
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	60 - 140	91

PCBs in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB031626.002	Arochlor 1260	mg/kg	0.2	0.5	0.4	60 - 140	120

pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB031718.001	pH	No unit	-	7.5	7.42	98 - 102	101
LB031718.011	pH	No unit	-	7.5	7.42	98 - 102	101

Total Cyanide in soil by Discrete Analyser (Aquakem)

Method: ME-(AU)-[ENV]AN077/AN287

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB031653.002	Total Cyanide	mg/kg	0.1	0.3	0.25	70 - 130	102

Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB031737.002	Total Phenols	mg/kg	0.1	2.2	2.5	70 - 130	88

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

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

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB031731.002		Arsenic, As	mg/kg	3	49	50	80 - 120	99
		Cadmium, Cd	mg/kg	0.3	50	50	80 - 120	99
		Chromium, Cr	mg/kg	0.3	50	50	80 - 120	101
		Copper, Cu	mg/kg	0.5	51	50	80 - 120	101
		Lead, Pb	mg/kg	1	50	50	80 - 120	99
		Nickel, Ni	mg/kg	0.5	50	50	80 - 120	100
		Zinc, Zn	mg/kg	0.5	50	50	80 - 120	100

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB031626.002		TRH C10-C14	mg/kg	20	41	40	60 - 140	103
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	100
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	80
	TRH F Bands	TRH >C10-C16 (F2)	mg/kg	25	41	40	60 - 140	103
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	100
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	80

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB031564.002	Monocyclic	Benzene	mg/kg	0.1	3.0	2.69	60 - 140	111
	Aromatic	Toluene	mg/kg	0.1	2.4	2.66	60 - 140	91
		Ethylbenzene	mg/kg	0.1	2.3	2.66	60 - 140	88
		m/p-xylene	mg/kg	0.2	4.9	5.28	60 - 140	93
		o-xylene	mg/kg	0.1	2.5	2.7	60 - 140	93
	Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	5.4	5	60 - 140	108
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.5	5	60 - 140	90
		d8-toluene (Surrogate)	mg/kg	-	4.4	5	60 - 140	88
		Bromofluorobenzene (Surrogate)	mg/kg	-	5.1	5	60 - 140	103

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434/AN410

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB031564.002		TRH C6-C9	mg/kg	20	<20	20.21	60 - 140	93
	Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	5.4	5	60 - 140	108
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.5	5	60 - 140	90
		d8-toluene (Surrogate)	mg/kg	-	4.4	5	60 - 140	88
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	6.5	60 - 140	74

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

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

Mercury in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE114367.001	LB031732.004	Mercury	mg/kg	0.05	0.19	0.01615643564	0.2	85

Total Cyanide in soil by Discrete Analyser (Aquakem)

Method: ME-(AU)-[ENV]AN077/AN287

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE114373.001	LB031653.004	Total Cyanide	mg/kg	0.1	0.3	0.1	0.25	90

Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE114424.009	LB031737.015	Total Phenols	mg/kg	0.1	2.1	<0.1	2.5	79

Total Recoverable Metals in Soil by ICPOES from EPA 200.8 Digest

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE114358.001	LB031731.004	Lead, Pb	mg/kg	1	54	14	50	81

VOC's in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE114358.001	LB031564.004	Monocyclic Aromatic	Benzene	mg/kg	0.1	2.5	<0.1	2.69	94
			Toluene	mg/kg	0.1	2.2	<0.1	2.66	82
			Ethylbenzene	mg/kg	0.1	2.0	<0.1	2.66	75
			m/p-xylene	mg/kg	0.2	4.1	<0.2	5.28	78
			o-xylene	mg/kg	0.1	2.1	<0.1	2.7	79
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.6	4.6	5	91
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.0	4.2	5	79
			d8-toluene (Surrogate)	mg/kg	-	3.7	3.7	5	75
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.3	3.6	5	86
		Totals	Total Xylenes*	mg/kg	0.3	<0.3	7.4	-	-
			Total BTEX*	mg/kg	-	13	0	-	-

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433/AN434/AN410

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE114358.001	LB031564.005		TRH C6-C9	mg/kg	20	<20	<20	20.21	82
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.6	4.6	5	91
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.0	4.2	5	79
			d8-toluene (Surrogate)	mg/kg	-	3.7	3.7	5	75
			Bromofluorobenzene (Surrogate)	%	-	4.3	3.6	-	86
		VPH F Bands	Benzene (F0)	mg/kg	0.1	2.5	<0.1	-	-
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	6.5	73

MATRIX SPIKE DUPLICATES

SE114379 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

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

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

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

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

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

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

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

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

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

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ANALYTICAL REPORT

WORLD RECOGNISED ACCREDITATION

CLIENT DETAILS

Contact	Nerilee Edwards
Client	DOUGLAS PARTNERS PTY LTD
Address	
Telephone	02 9809 0666
Facsimile	02 9809 4095
Email	nerilee.edwards@douglaspartners.com.au
Project	**37278-05 - Banksmeadow - PN**
Order Number	(Not specified)
Samples	3

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	SE114379 R0
Report Number	0000048074
Date Reported	08/01/2013 10:50:44
Date Received	18 Dec 2012

COMMENTS

Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(4354).

No respirable fibres detected in all samples using trace analysis technique.

A portion of the sample supplied has been sub-sampled for asbestos according to SGS In-house procedures. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied.
SGS Environmental Services recommends supplying approximately 50-100g of sample in a separate container.
Asbestos analysed by Approved Identifier Ravee Sivasubramaniam.

SIGNATORIES

Andy Sutton
Organics Chemist

Dong Liang
Inorganics Metals Team Leader

Huong Crawford
Laboratory Manager

Kamrul Ahsan
Metals Chemist

Ly Kim Ha
Organics Supervisor

Ravee Sivasubramaniam
Hygienist

ANALYTICAL REPORT

RESULTS

Fibre Identification in soil — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w
SE114379.001	BD1B/111212	Soil	37g Soil,rocks	11 Dec 2012	No Asbestos Found Organic Fibres Detected	<0.01
SE114379.003	BD4/131212	Soil	50g Soil,sand,rocks	13 Dec 2012	No Asbestos Found Organic Fibres Detected	<0.01

METHOD SUMMARY

SE114379 R0

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

FOOTNOTES

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

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

Sampled by the client.

Where reported: 'Asbestos Detected': Asbestos detected by polarized light microscopy, including dispersion staining.
Where reported: 'No Asbestos Found': No Asbestos Found by polarized light microscopy, including dispersion staining.
Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarized light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

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

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : http://www.sgs.com.au.pv.sgsv3/~/media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf

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SAMPLE RECEIPT ADVICE

SE114379

CLIENT DETAILS

Contact	Nerilee Edwards
Client	DOUGLAS PARTNERS PTY LTD
Address	96 Hermitage Road West Ryde NSW 2114
Telephone	02 9809 0666
Facsimile	02 9809 4095
Email	nerilee.edwards@douglaspartners.com.au
Project	**37278-05 - Banksmeadow - PN**
Order Number	(Not specified)
Samples	3

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Tue 18/12/2012
Report Due	Thu 27/12/2012
SGS Reference	**SE114379**

SUBMISSION DETAILS

This is to confirm that 3 samples were received on Tuesday 18/12/2012. Results are expected to be ready by Thursday 27/12/2012. Please quote SGS reference SE114379 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	3 x Soils	Type of documentation received	COC
Date documentation received	18/12/2012	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	2.9°C
Sample container provider	Other Lab	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

Samples will be held for one month for water samples and two months for soil samples from date of report, unless otherwise instructed.

COMMENTS

SGS Environmental closed for business 25/12/2012 ->26/12/2012 and 31/12/2012 ->04/01/2013.

A separate portion was not supplied for Asbestos analysis. A subsample will be used from the jar provided.

Phenol on COC = Allocated for Total Phenolics (Method APHA5530BD)

To the extent not inconsistent with the other provisions of this document and unless specifically agreed otherwise in writing by SGS, all SGS services are rendered in accordance with the applicable SGS General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm as at the date of this document. Attention is drawn to the limitations of liability and to the clauses of indemnification.

SAMPLE RECEIPT ADVICE

SE114379

CLIENT DETAILS

Client	DOUGLAS PARTNERS PTY LTD	Project	37278-05 - Banksmeadow - PN

SUMMARY OF ANALYSIS

No.	Sample ID	Ammonia Nitrogen (soluble) in Soil	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in	PCBs in Soil	Total Cyanide in soil by Discrete Analyser	Total Phenolics in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	BD1B/111212	1	26	13	22	11	-	1	9	13	7
003	BD4/131212	-	26	13	22	11	1	1	9	13	7

CONTINUED OVERLEAF

The above table represents SGS Environmental Services' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details.
Testing as per this table shall commence immediately unless the client intervenes with a correction.

SAMPLE RECEIPT ADVICE

SE114379

CLIENT DETAILS

Client	DOUGLAS PARTNERS PTY LTD	Project	37278-05 - Banksmeadow - PN

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content	pH in soil (1:5)	Total Recoverable Metals in Soil by ICPOES from
001	BD1B/111212	2	1	1	1	7
002	BD3/131212	-	1	1	-	7
003	BD4/131212	2	1	1	-	7

The above table represents SGS Environmental Services' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details.
Testing as per this table shall commence immediately unless the client intervenes with a correction.

Douglas Partners
Geotechnics · Environment · Groundwater

CHAIN OF CUSTODY

Project Name: Banksmeadow – PW
Project No: 37278.05 .... Sampler: ...NLE.....
Project Mgr: NLE..... Mob. Phone: 0414 769 011 .....
Email: nerilee.edwards@douglaspartners.com.au .....
Date Required: STD; .....Lab Quote No. .....

To: SGS Environmental Services
Unit 16/33 Maddox St Alexandria 2015
Attn: Angela Mamalicos
Phone: (02) 8594 0400 Fax: (02) 8594 0499
Email: au.samplereceipt.sydney@sgs.com

Sample ID	Lab ID	Sampling Date	Sample Type S - soil W – water	Container type G – glass P - plastic	Analytes: HM8 ANZECC	TRH/ BTEX MTBE	PAH (low level)	phenol	OCP/OPP PCB (trace level)	VOC	hardness	ammonia		Notes/preservation
(1) GWRD1B/17-0113	1	17/1	W	G,P	✓	✓	✓	✓	✓	✓	✓	✓		

SGS
Received 18/1/13
By 07
Time 3.30 am/pm
Samples intact Yes/no
Ice/Cooler Pack Yes/no
Temperature on Receipt 3.3 °C
Storage Location W052
SGS REF No SE147774

Lab Report No. .....
Send Results to: Douglas Partners Address: 96 Hermitage Road West Ryde NSW 2114
Phone: (02) 4271 1836
Fax: (02) 4271 1897

Relinquished by: Signed: Date & Time: Transported to laboratory by: Direct couriers
Received By: Date & Time: 18/1/13 3.30pm

Form COC

SGS

AUSTRALIA – ENVIRONMENTAL SERVICES SYDNEY – PROFORMA FORM

SAMPLE INFORMATION

Approved: D. Liang

JOB No. SE114724

Sample No.	P 100ml UP	P 250ml UP	P 500ml UP	P 1L UP	G 100 Amber UP	G 200 Amber UP	G 500 Amber UP	G 1L Amber UP	G 40ml vial Up	G 40ml Vial HCl	P 100ml HCl	G 40ml Vial H2SO4	P 100ml H2SO4	P 250ml H2SO4	G 500ml Amber H2SO4	G 1L H2SO4	P 100/250ml HN03 Total	P 100ml HN03 Filtered	P 250ml NaOH	P 250ml Zn Acetate	Plastic Bag	G 250ml Soil Jar				Sample Matrix	Lab Bottles Supplied By	Comments
1				1				1		2			1					1								Water	Envirolab	

ANALYTICAL REPORT

CLIENT DETAILS		LABORATORY DETAILS	
Contact	Nerilee Edwards	Manager	Huong Crawford
Client	DOUGLAS PARTNERS PTY LTD	Laboratory	SGS Alexandria Environmental
Address	96 Hermitage Road West Ryde NSW 2114	Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	02 9809 0666	Telephone	+61 2 8594 0400
Facsimile	02 9809 4095	Facsimile	+61 2 8594 0499
Email	nerilee.edwards@douglaspartners.com.au	Email	au.environmental.sydney@sgs.com
Project	**37278.05 - Banksmeadow - P.N**	SGS Reference	**SE114774 R0**
Order Number	(Not specified)	Report Number	0000049562
Samples	1	Date Reported	05 Feb 2013
		Date Received	18 Jan 2013

COMMENTS

Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(4354).

SIGNATORIES

Andy Sutton
Organics Chemist

Dong Liang
Inorganics Metals Team Leader

Huong Crawford
Laboratory Manager

Kamrul Ahsan
Metals Chemist

Ly Kim Ha
Organics Supervisor

Parameter	Units	LOR	Sample Number SE114774.001 Sample Matrix Water Sample Date 17 Jan 2013 Sample Name GWBD1B/170113
VOCs in Water Method: AN433/AN434			
Fumigants			
2,2-dichloropropane	µg/L	0.5	<0.5
1,2-dichloropropane	µg/L	0.5	<0.5
cis-1,3-dichloropropene	µg/L	0.5	<0.5
trans-1,3-dichloropropene	µg/L	0.5	<0.5
1,2-dibromoethane (EDB)	µg/L	0.5	<0.5
Halogenated Aliphatics			
Dichlorodifluoromethane (CFC-12)	µg/L	5	<5
Chloromethane	µg/L	5	<5
Vinyl chloride (Chloroethene)	µg/L	0.3	**0.4**
Bromomethane	µg/L	10	<10
Chloroethane	µg/L	5	<5
Trichlorofluoromethane	µg/L	1	<1
Iodomethane	µg/L	5	<5
1,1-dichloroethene	µg/L	0.5	<0.5
Dichloromethane (Methylene chloride)	µg/L	5	<5
Allyl chloride	µg/L	2	<2
trans-1,2-dichloroethene	µg/L	0.5	<0.5
1,1-dichloroethane	µg/L	0.5	**0.7**
cis-1,2-dichloroethene	µg/L	0.5	**2.4**
Bromochloromethane	µg/L	0.5	<0.5
1,2-dichloroethane	µg/L	0.5	<0.5
1,1,1-trichloroethane	µg/L	0.5	<0.5
1,1-dichloropropene	µg/L	0.5	<0.5
Carbon tetrachloride	µg/L	0.5	<0.5
Dibromomethane	µg/L	0.5	<0.5
Trichloroethene (Trichloroethylene,TCE)	µg/L	0.5	**4.4**
1,1,2-trichloroethane	µg/L	0.5	<0.5
1,3-dichloropropane	µg/L	0.5	<0.5
Tetrachloroethene (Perchloroethylene,PCE)	µg/L	0.5	**6.0**
1,1,1,2-tetrachloroethane	µg/L	0.5	<0.5
cis-1,4-dichloro-2-butene	µg/L	1	<1
1,1,2,2-tetrachloroethane	µg/L	0.5	<0.5
1,2,3-trichloropropane	µg/L	0.5	<0.5
trans-1,4-dichloro-2-butene	µg/L	1	<1
1,2-dibromo-3-chloropropane	µg/L	0.5	<0.5
Hexachlorobutadiene	µg/L	0.5	<0.5

Parameter	Units	LOR	Sample Number SE114774.001 Sample Matrix Water Sample Date 17 Jan 2013 Sample Name GWBD1B/170113
VOCs in Water Method: AN433/AN434 (continued)			
Halogenated Aromatics			
Chlorobenzene	µg/L	0.5	<0.5
Bromobenzene	µg/L	0.5	<0.5
2-chlorotoluene	µg/L	0.5	<0.5
4-chlorotoluene	µg/L	0.5	<0.5
1,3-dichlorobenzene	µg/L	0.5	<0.5
1,4-dichlorobenzene	µg/L	0.3	<0.3
1,2-dichlorobenzene	µg/L	0.5	<0.5
1,2,4-trichlorobenzene	µg/L	0.5	<0.5
1,2,3-trichlorobenzene	µg/L	0.5	<0.5
Monocyclic Aromatic Hydrocarbons			
Benzene	µg/L	0.5	<0.5
Toluene	µg/L	0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5
m/p-xylene	µg/L	1	<1
Styrene (Vinyl benzene)	µg/L	0.5	<0.5
o-xylene	µg/L	0.5	<0.5
Isopropylbenzene (Cumene)	µg/L	0.5	<0.5
n-propylbenzene	µg/L	0.5	<0.5
1,3,5-trimethylbenzene	µg/L	0.5	<0.5
tert-butylbenzene	µg/L	0.5	<0.5
1,2,4-trimethylbenzene	µg/L	0.5	<0.5
sec-butylbenzene	µg/L	0.5	<0.5
p-isopropyltoluene	µg/L	0.5	<0.5
n-butylbenzene	µg/L	0.5	<0.5
Nitrogenous Compounds			
Acrylonitrile	µg/L	0.5	<0.5
2-nitropropane	µg/L	100	<100

Parameter	Units	LOR	Sample Number SE114774.001 Sample Matrix Water Sample Date 17 Jan 2013 Sample Name GWBD1B/170113
VOCs in Water Method: AN433/AN434 (continued)			
Oxygenated Compounds			
Acetone (2-propanone)	µg/L	10	<10
MtBE (Methyl-tert-butyl ether)	µg/L	2	<2
Vinyl acetate	µg/L	10	<10
MEK (2-butanone)	µg/L	10	<10
MIBK (4-methyl-2-pentanone)	µg/L	5	<5
2-hexanone (MBK)	µg/L	5	<5
Polycyclic VOCs			
Naphthalene	µg/L	0.5	<0.5
Sulphonated Compounds			
Carbon disulfide	µg/L	2	<2
Surrogates			
Dibromofluoromethane (Surrogate)	%	-	**114**
d4-1,2-dichloroethane (Surrogate)	%	-	**113**
d8-toluene (Surrogate)	%	-	**125**
Bromofluorobenzene (Surrogate)	%	-	**118**
Totals			
Total Xylenes	µg/L	1.5	<1.5
Total BTEX	µg/L	3	<3
Total VOC	µg/L	10	-
Trihalomethanes			
Chloroform (THM)	µg/L	0.5	<0.5
Bromodichloromethane (THM)	µg/L	0.5	<0.5
Dibromochloromethane (THM)	µg/L	0.5	<0.5
Bromoform (THM)	µg/L	0.5	<0.5

Parameter	Units	LOR	Sample Number SE114774.001 Sample Matrix Water Sample Date 17 Jan 2013 Sample Name GWBD1B/170113
Volatile Petroleum Hydrocarbons in Water Method: AN433/AN434/AN410			
TRH C6-C9	µg/L	40	<40
Surrogates			
Dibromofluoromethane (Surrogate)	%	-	**96**
d4-1,2-dichloroethane (Surrogate)	%	-	**96**
d8-toluene (Surrogate)	%	-	**95**
Bromofluorobenzene (Surrogate)	%	-	**93**
VPH F Bands			
Benzene (F0)	µg/L	0.5	<0.5
TRH C6-C10 minus BTEX (F1)	µg/L	50	<50
TRH (Total Recoverable Hydrocarbons) in Water Method: AN403			
TRH C10-C14	µg/L	50	<50
TRH C15-C28	µg/L	200	<200
TRH C29-C36	µg/L	200	<200
TRH C37-C40	µg/L	200	<200
TRH C10-C36	µg/L	450	<450
TRH C10-C40	µg/L	400	<400
TRH F Bands			
TRH >C10-C16 (F2)	µg/L	60	<60
TRH >C16-C34 (F3)	µg/L	500	<500
TRH >C34-C40 (F4)	µg/L	500	<500
PAH (Polynuclear Aromatic Hydrocarbons) in Water Method: AN420			
Naphthalene	µg/L	0.1	<0.1
2-methylnaphthalene	µg/L	0.1	<0.1
1-methylnaphthalene	µg/L	0.1	<0.1
Acenaphthylene	µg/L	0.1	<0.1
Acenaphthene	µg/L	0.1	**0.1**
Fluorene	µg/L	0.1	**0.3**
Phenanthrene	µg/L	0.1	<0.1
Anthracene	µg/L	0.1	<0.1
Fluoranthene	µg/L	0.1	<0.1
Pyrene	µg/L	0.1	<0.1
Benzo(a)anthracene	µg/L	0.1	<0.1
Chrysene	µg/L	0.1	<0.1
Benzo(b)fluoranthene	µg/L	0.1	<0.1
Benzo(k)fluoranthene	µg/L	0.1	<0.1
Benzo(a)pyrene	µg/L	0.1	<0.1
Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1
Dibenzo(a&h)anthracene	µg/L	0.1	<0.1
Benzo(ghi)perylene	µg/L	0.1	<0.1
Total PAH (18)	µg/L	1	<1

Parameter	Units	LOR	Sample Number SE114774.001 Sample Matrix Water Sample Date 17 Jan 2013 Sample Name GWBD1B/170113
PAH (Polynuclear Aromatic Hydrocarbons) in Water Method: AN420 (continued)			
Surrogates			
d5-nitrobenzene (Surrogate)	%	-	**81**
2-fluorobiphenyl (Surrogate)	%	-	**68**
d14-p-terphenyl (Surrogate)	%	-	**120**
Low Level OC Pesticides in Water Method: AN400/AN420			
Hexachlorobenzene	µg/L	0.01	<0.01
Alpha BHC	µg/L	0.05	<0.05
Lindane (gamma BHC)	µg/L	0.05	<0.05
Heptachlor	µg/L	0.02	<0.02
Aldrin	µg/L	0.01	<0.01
Beta BHC	µg/L	0.05	<0.05
Delta BHC	µg/L	0.05	<0.05
Heptachlor epoxide	µg/L	0.02	<0.02
Alpha Endosulfan	µg/L	0.02	<0.02
Gamma Chlordane	µg/L	0.01	<0.01
Alpha Chlordane	µg/L	0.01	<0.01
p,p'-DDE	µg/L	0.01	<0.01
Dieldrin	µg/L	0.01	<0.01
Endrin	µg/L	0.02	<0.02
Beta Endosulfan	µg/L	0.02	<0.02
p,p'-DDD	µg/L	0.01	<0.01
p,p'-DDT	µg/L	0.01	<0.01
Endosulfan sulphate	µg/L	0.02	<0.02
Endrin Aldehyde	µg/L	0.02	<0.02
Methoxychlor	µg/L	0.1	<0.1
Endrin Ketone	µg/L	0.05	<0.05
Isodrin	µg/L	0.02	<0.02
Mirex	µg/L	0.01	<0.01
Oxychlordane	µg/L	0.01	<0.01
Total OC	µg/L	1	<1

Parameter	Units	LOR	Sample Number SE114774.001 Sample Matrix Water Sample Date 17 Jan 2013 Sample Name GWBD1B/170113
Low Level OC Pesticides in Water Method: AN400/AN420 (continued)			
Surrogates			
d14-p-terphenyl (Surrogate)	%	-	-
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	**75**
Low Level OP Pesticides in Water Method: AN400/AN420			
Dichlorvos	µg/L	0.5	<0.5
Dimethoate	µg/L	0.15	<0.15
Diazinon (Dimpylate)	µg/L	0.01	<0.01
Fenitrothion	µg/L	0.2	<0.2
Malathion	µg/L	0.05	<0.05
Chlorpyrifos (Chlorpyrifos Ethyl)	µg/L	0.01	<0.01
Parathion-ethyl (Parathion)	µg/L	0.01	<0.01
Bromophos Ethyl	µg/L	0.05	<0.05
Methidathion	µg/L	0.05	<0.05
Ethion	µg/L	0.05	<0.05
Azinphos-methyl (Guthion)	µg/L	0.05	<0.05
Surrogates			
2-fluorobiphenyl (Surrogate)	%	-	**80**
d14-p-terphenyl (Surrogate)	%	-	**90**
Low Level Full 8270 SVOC in Water Method: AN420			
OPs			
Carbophenothion	µg/L	0.01	<0.01
Chlorfenvinphos-cis (Chlofenvinphos-cis)	µg/L	0.05	<0.05
Chlorfenvinphos-trans (Chlofenvinphos-trans)	µg/L	0.01	<0.01
Co-Ral (Coumaphos)	µg/L	0.01	<0.01
Demeton-S-methyl	µg/L	0.1	<0.1
Dicofol	µg/L	0.1	<0.1
Disulfoton (Di-syston)	µg/L	0.01	<0.01
EPN*	µg/L	0.01	<0.01
Ethoprophos (Ethoprop or Prophos)	µg/L	0.01	<0.01
Famphur (Famophos)	µg/L	0.01	<0.01
Fenamiphos (Phenamiphos)	µg/L	0.1	<0.1
Fenchlorophos (Ronnel)	µg/L	0.01	<0.01
Monocrotophos	µg/L	0.1	<0.1
Fenthion	µg/L	0.01	<0.01
Mevinphos-cis/trans	µg/L	0.1	<0.1
o,o,o-triethyl phosphorothioate	µg/L	0.1	<0.1
Parathion methyl	µg/L	0.01	<0.01
Phorate	µg/L	0.01	<0.01
Pirimiphos-ethyl	µg/L	0.01	<0.01
Pirimiphos-methyl	µg/L	0.01	<0.01
Profenofos	µg/L	0.1	<0.1
Prothiophos (Tokuthion)*	µg/L	0.01	<0.01
Tetrachlorvinphos (Stirophos)*	µg/L	0.01	<0.01

Parameter	Units	LOR	Sample Number SE114774.001 Sample Matrix Water Sample Date 17 Jan 2013 Sample Name GWBD1B/170113
Low Level Full 8270 SVOC in Water Method: AN420 (continued)			
Surrogates			
d5-phenol (Surrogate)	%	-	-
2,4,6-Tribromophenol (Surrogate)	%	-	-
d5-nitrobenzene (Surrogate)	%	-	**70**
2-fluorobiphenyl (Surrogate)	%	-	**80**
d14-p-terphenyl (Surrogate)	%	-	**90**
Low Level PCBs in Water Method: AN400/AN420			
PCB Congener C28	µg/L	0.02	<0.02
PCB Congener C52	µg/L	0.01	<0.01
PCB Congener C101	µg/L	0.004	<0.004
PCB Congener C118	µg/L	0.004	<0.004
PCB Congener C153	µg/L	0.004	<0.004
PCB Congener C138	µg/L	0.004	<0.004
PCB Congener C180	µg/L	0.004	<0.004
Arochlor 1254	µg/L	0.01	<0.01
Surrogates			
d14-p-terphenyl (Surrogate)	%	-	**90**
Total Phenolics in Water Method: AN289			
Total Phenols	mg/L	0.01	**0.02**
Ammonia Nitrogen by Discrete Analyser (Aquakem) Method: AN291			
Ammonia Nitrogen, NH_3 as N*	mg/L	0.01	**0.87**
Metals in Water (Dissolved) by ICPOES Method: AN320/AN321			
Calcium, Ca	mg/L	0.1	**63**
Magnesium, Mg	mg/L	0.1	**12**
Total Hardness by Calculation	mg CaCO3/L	1	**200**

Parameter	Units	LOR	Sample Number SE114774.001 Sample Matrix Water Sample Date 17 Jan 2013 Sample Name GWBD1B/170113
Trace Metals (Dissolved) in Water by ICPMS Method: AN318			
Arsenic, As	µg/L	1	**2**
Cadmium, Cd	µg/L	0.1	<0.1
Chromium, Cr	µg/L	1	**1**
Copper, Cu	µg/L	1	<1
Lead, Pb	µg/L	1	<1
Nickel, Ni	µg/L	1	**2**
Zinc, Zn	µg/L	1	**32**
Mercury (dissolved) in Water Method: AN311/AN312			
Mercury	mg/L	0.0001	<0.0001

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Ammonia Nitrogen by Discrete Analyser (Aquakem) **Method: ME-(AU)-[ENV]AN291**

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Ammonia Nitrogen, NH_3 as N*	LB032552	mg/L	0.01	<0.01	103%

Low Level Full 8270 SVOC in Water **Method: ME-(AU)-[ENV]AN420**

OPs

Parameter	QC Reference	Units	LOR	MB
Carbophenothion	LB032623	µg/L	0.01	<0.01
Chlorfenvinphos-cis (Chlofenvinphos-cis)	LB032623	µg/L	0.05	<0.05
Chlorfenvinphos-trans (Chlofenvinphos-trans)	LB032623	µg/L	0.01	<0.01
Co-Ral (Coumaphos)	LB032623	µg/L	0.01	<0.01
Demeton-S-methyl	LB032623	µg/L	0.1	<0.1
Dicofol	LB032623	µg/L	0.1	<0.1
Disulfoton (Di-syston)	LB032623	µg/L	0.01	<0.01
EPN*	LB032623	µg/L	0.01	<0.01
Ethoprophos (Ethoprop or Prophos)	LB032623	µg/L	0.01	<0.01
Famphur (Famophos)	LB032623	µg/L	0.01	<0.01
Fenamiphos (Phenamiphos)	LB032623	µg/L	0.1	<0.1
Fenchlorophos (Ronnel)	LB032623	µg/L	0.01	<0.01
Monocrotophos	LB032623	µg/L	0.1	<0.1
Fenthion	LB032623	µg/L	0.01	<0.01
Mevinphos-cis/trans	LB032623	µg/L	0.1	<0.1
o,o,o-triethyl phosphorothioate	LB032623	µg/L	0.1	<0.1
Parathion methyl	LB032623	µg/L	0.01	<0.01
Phorate	LB032623	µg/L	0.01	<0.01
Pirimiphos-ethyl	LB032623	µg/L	0.01	<0.01
Pirimiphos-methyl	LB032623	µg/L	0.01	<0.01
Profenofos	LB032623	µg/L	0.1	<0.1
Prothiophos (Tokuthion)*	LB032623	µg/L	0.01	<0.01
Tetrachlorvinphos (Stirophos)*	LB032623	µg/L	0.01	<0.01

Surrogates

Parameter	QC Reference	Units	LOR	MB
d5-nitrobenzene (Surrogate)	LB032623	%	-	70%
2-fluorobiphenyl (Surrogate)	LB032623	%	-	70%
d14-p-terphenyl (Surrogate)	LB032623	%	-	90%

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Low Level OC Pesticides in Water **Method: ME-(AU)-[ENV]AN400/AN420**

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Hexachlorobenzene	LB032623	µg/L	0.01	<0.01	NA
Alpha BHC	LB032623	µg/L	0.05	<0.05	NA
Lindane (gamma BHC)	LB032623	µg/L	0.05	<0.05	NA
Heptachlor	LB032623	µg/L	0.02	<0.02	110%
Aldrin	LB032623	µg/L	0.01	<0.01	110%
Beta BHC	LB032623	µg/L	0.05	<0.05	NA
Delta BHC	LB032623	µg/L	0.05	<0.05	105%
Heptachlor epoxide	LB032623	µg/L	0.02	<0.02	NA
Alpha Endosulfan	LB032623	µg/L	0.02	<0.02	NA
Gamma Chlordane	LB032623	µg/L	0.01	<0.01	NA
Alpha Chlordane	LB032623	µg/L	0.01	<0.01	NA
p,p'-DDE	LB032623	µg/L	0.01	<0.01	NA
Dieldrin	LB032623	µg/L	0.01	<0.01	100%
Endrin	LB032623	µg/L	0.02	<0.02	110%
Beta Endosulfan	LB032623	µg/L	0.02	<0.02	NA
p,p'-DDD	LB032623	µg/L	0.01	<0.01	NA
p,p'-DDT	LB032623	µg/L	0.01	<0.01	95%
Endosulfan sulphate	LB032623	µg/L	0.02	<0.02	NA
Endrin Aldehyde	LB032623	µg/L	0.02	<0.02	NA
Methoxychlor	LB032623	µg/L	0.1	<0.1	NA
Endrin Ketone	LB032623	µg/L	0.05	<0.05	NA
Isodrin	LB032623	µg/L	0.02	<0.02	NA
Mirex	LB032623	µg/L	0.01	<0.01	NA
Oxychlordane	LB032623	µg/L	0.01	<0.01	NA
Total OC	LB032623	µg/L	1	<1	

Surrogates

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Tetrachloro-m-xylene (TCMX) (Surrogate)	LB032623	%	-	111%	111%

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Low Level OP Pesticides in Water **Method: ME-(AU)-[ENV]AN400/AN420**

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Dichlorvos	LB032623	µg/L	0.5	<0.5	NA
Dimethoate	LB032623	µg/L	0.15	<0.15	NA
Diazinon (Dimpylate)	LB032623	µg/L	0.01	<0.01	87%
Fenitrothion	LB032623	µg/L	0.2	<0.2	NA
Malathion	LB032623	µg/L	0.05	<0.05	NA
Chlorpyrifos (Chlorpyrifos Ethyl)	LB032623	µg/L	0.01	<0.01	85%
Parathion-ethyl (Parathion)	LB032623	µg/L	0.01	<0.01	
Bromophos Ethyl	LB032623	µg/L	0.05	<0.05	NA
Methidathion	LB032623	µg/L	0.05	<0.05	NA
Ethion	LB032623	µg/L	0.05	<0.05	NA
Azinphos-methyl (Guthion)	LB032623	µg/L	0.05	<0.05	

Surrogates

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
2-fluorobiphenyl (Surrogate)	LB032623	%	-	70%	95%
d14-p-terphenyl (Surrogate)	LB032623	%	-	90%	98%

Low Level PCBs in Water **Method: ME-(AU)-[ENV]AN400/AN420**

Parameter	QC Reference	Units	LOR	MB
PCB Congener C28	LB032623	µg/L	0.02	<0.02
PCB Congener C52	LB032623	µg/L	0.01	<0.01
PCB Congener C101	LB032623	µg/L	0.004	<0.004
PCB Congener C118	LB032623	µg/L	0.004	<0.004
PCB Congener C153	LB032623	µg/L	0.004	<0.004
PCB Congener C138	LB032623	µg/L	0.004	<0.004
PCB Congener C180	LB032623	µg/L	0.004	<0.004
Arochlor 1254	LB032623	µg/L	0.01	<0.01

Surrogates

Parameter	QC Reference	Units	LOR	MB
d14-p-terphenyl (Surrogate)	LB032623	%	-	90%

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Mercury (dissolved) in Water **Method: ME-(AU)-[ENV]AN311/AN312**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Mercury	LB032582	mg/L	0.0001	<0.0001	5%	100%

Metals in Water (Dissolved) by ICPOES **Method: ME-(AU)-[ENV]AN320/AN321**

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Calcium, Ca	LB032755	mg/L	0.1	<0.1	105%
Magnesium, Mg	LB032755	mg/L	0.1	<0.1	99%
Total Hardness by Calculation	LB032755	mg CaCO3/L	1	<1	

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

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Naphthalene	LB032623	µg/L	0.1	<0.1	92%
2-methylnaphthalene	LB032623	µg/L	0.1	<0.1	NA
1-methylnaphthalene	LB032623	µg/L	0.1	<0.1	NA
Acenaphthylene	LB032623	µg/L	0.1	<0.1	94%
Acenaphthene	LB032623	µg/L	0.1	<0.1	96%
Fluorene	LB032623	µg/L	0.1	<0.1	NA
Phenanthrene	LB032623	µg/L	0.1	<0.1	97%
Anthracene	LB032623	µg/L	0.1	<0.1	99%
Fluoranthene	LB032623	µg/L	0.1	<0.1	95%
Pyrene	LB032623	µg/L	0.1	<0.1	94%
Benzo(a)anthracene	LB032623	µg/L	0.1	<0.1	NA
Chrysene	LB032623	µg/L	0.1	<0.1	NA
Benzo(b)fluoranthene	LB032623	µg/L	0.1	<0.1	NA
Benzo(k)fluoranthene	LB032623	µg/L	0.1	<0.1	NA
Benzo(a)pyrene	LB032623	µg/L	0.1	<0.1	88%
Indeno(1,2,3-cd)pyrene	LB032623	µg/L	0.1	<0.1	NA
Dibenzo(a&h)anthracene	LB032623	µg/L	0.1	<0.1	NA
Benzo(ghi)perylene	LB032623	µg/L	0.1	<0.1	NA
Total PAH (18)	LB032623	µg/L	1	<1	

Surrogates

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
d5-nitrobenzene (Surrogate)	LB032623	%	-	73%	100%
2-fluorobiphenyl (Surrogate)	LB032623	%	-	71%	98%
d14-p-terphenyl (Surrogate)	LB032623	%	-	84%	114%

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Total Phenolics in Water **Method: ME-(AU)-[ENV]AN289**

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Total Phenols	LB032557	mg/L	0.01	<0.01	97%

Trace Metals (Dissolved) in Water by ICPMS **Method: ME-(AU)-[ENV]AN318**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Arsenic, As	LB032685	µg/L	1	<1	0%	103%	103%
Cadmium, Cd	LB032685	µg/L	0.1	<0.1	0%	108%	112%
Chromium, Cr	LB032685	µg/L	1	<1	0%	109%	109%
Copper, Cu	LB032685	µg/L	1	<1	0 - 5%	112%	109%
Lead, Pb	LB032685	µg/L	1	<1	0%	111%	110%
Nickel, Ni	LB032685	µg/L	1	<1	0 - 3%	109%	108%
Zinc, Zn	LB032685	µg/L	1	<1	3 - 4%	104%	113%

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

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
TRH C10-C14	LB032623	µg/L	50	<50	99%
TRH C15-C28	LB032623	µg/L	200	<200	99%
TRH C29-C36	LB032623	µg/L	200	<200	98%
TRH C37-C40	LB032623	µg/L	200	<200	NA
TRH C10-C36	LB032623	µg/L	450	<450	NA
TRH C10-C40	LB032623	µg/L	400	<400	NA

TRH F Bands

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
TRH >C10-C16 (F2)	LB032623	µg/L	60	<60	100%
TRH >C16-C34 (F3)	LB032623	µg/L	500	<500	99%
TRH >C34-C40 (F4)	LB032623	µg/L	500	<500	99%

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

VOCs in Water **Method: ME-(AU)-[ENV]AN433/AN434**

Fumigants

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
2,2-dichloropropane	LB032603	µg/L	0.5	<0.5	NA
1,2-dichloropropane	LB032603	µg/L	0.5	<0.5	NA
cis-1,3-dichloropropene	LB032603	µg/L	0.5	<0.5	NA
trans-1,3-dichloropropene	LB032603	µg/L	0.5	<0.5	NA
1,2-dibromoethane (EDB)	LB032603	µg/L	0.5	<0.5	NA

Halogenated Aliphatics

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Dichlorodifluoromethane (CFC-12)	LB032603	µg/L	5	<5	NA
Chloromethane	LB032603	µg/L	5	<5	NA
Vinyl chloride (Chloroethene)	LB032603	µg/L	0.3	<0.3	NA
Bromomethane	LB032603	µg/L	10	<10	NA
Chloroethane	LB032603	µg/L	5	<5	NA
Trichlorofluoromethane	LB032603	µg/L	1	<1	NA
Iodomethane	LB032603	µg/L	5	<5	NA
1,1-dichloroethene	LB032603	µg/L	0.5	<0.5	108%
Dichloromethane (Methylene chloride)	LB032603	µg/L	5	<5	NA
Allyl chloride	LB032603	µg/L	2	<2	NA
trans-1,2-dichloroethene	LB032603	µg/L	0.5	<0.5	NA
1,1-dichloroethane	LB032603	µg/L	0.5	<0.5	NA
cis-1,2-dichloroethene	LB032603	µg/L	0.5	<0.5	NA
Bromochloromethane	LB032603	µg/L	0.5	<0.5	NA
1,2-dichloroethane	LB032603	µg/L	0.5	<0.5	116%
1,1,1-trichloroethane	LB032603	µg/L	0.5	<0.5	NA
1,1-dichloropropene	LB032603	µg/L	0.5	<0.5	NA
Carbon tetrachloride	LB032603	µg/L	0.5	<0.5	NA
Dibromomethane	LB032603	µg/L	0.5	<0.5	NA
Trichloroethene (Trichloroethylene,TCE)	LB032603	µg/L	0.5	<0.5	98%
1,1,2-trichloroethane	LB032603	µg/L	0.5	<0.5	NA
1,3-dichloropropane	LB032603	µg/L	0.5	<0.5	NA
Tetrachloroethene (Perchloroethylene,PCE)	LB032603	µg/L	0.5	<0.5	NA
1,1,1,2-tetrachloroethane	LB032603	µg/L	0.5	<0.5	NA
cis-1,4-dichloro-2-butene	LB032603	µg/L	1	<1	NA
1,1,2,2-tetrachloroethane	LB032603	µg/L	0.5	<0.5	NA
1,2,3-trichloropropane	LB032603	µg/L	0.5	<0.5	NA
trans-1,4-dichloro-2-butene	LB032603	µg/L	1	<1	NA
1,2-dibromo-3-chloropropane	LB032603	µg/L	0.5	<0.5	NA
Hexachlorobutadiene	LB032603	µg/L	0.5	<0.5	NA

Halogenated Aromatics

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Chlorobenzene	LB032603	µg/L	0.5	<0.5	96%
Bromobenzene	LB032603	µg/L	0.5	<0.5	NA
2-chlorotoluene	LB032603	µg/L	0.5	<0.5	NA
4-chlorotoluene	LB032603	µg/L	0.5	<0.5	NA
1,3-dichlorobenzene	LB032603	µg/L	0.5	<0.5	NA
1,4-dichlorobenzene	LB032603	µg/L	0.3	<0.3	NA
1,2-dichlorobenzene	LB032603	µg/L	0.5	<0.5	NA
1,2,4-trichlorobenzene	LB032603	µg/L	0.5	<0.5	NA
1,2,3-trichlorobenzene	LB032603	µg/L	0.5	<0.5	NA

Monocyclic Aromatic Hydrocarbons

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

VOCs in Water Method: ME-(AU)-[ENV]AN433/AN434 (continued)

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Benzene	LB032603	µg/L	0.5	<0.5	124%
Toluene	LB032603	µg/L	0.5	<0.5	87%
Ethylbenzene	LB032603	µg/L	0.5	<0.5	109%
m/p-xylene	LB032603	µg/L	1	<1	108%
Styrene (Vinyl benzene)	LB032603	µg/L	0.5	<0.5	NA
o-xylene	LB032603	µg/L	0.5	<0.5	107%
Isopropylbenzene (Cumene)	LB032603	µg/L	0.5	<0.5	NA
n-propylbenzene	LB032603	µg/L	0.5	<0.5	NA
1,3,5-trimethylbenzene	LB032603	µg/L	0.5	<0.5	NA
tert-butylbenzene	LB032603	µg/L	0.5	<0.5	NA
1,2,4-trimethylbenzene	LB032603	µg/L	0.5	<0.5	NA
sec-butylbenzene	LB032603	µg/L	0.5	<0.5	NA
p-isopropyltoluene	LB032603	µg/L	0.5	<0.5	NA
n-butylbenzene	LB032603	µg/L	0.5	<0.5	NA

Nitrogenous Compounds

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Acrylonitrile	LB032603	µg/L	0.5	<0.5	NA

Oxygenated Compounds

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Acetone (2-propanone)	LB032603	µg/L	10	<10	NA
MtBE (Methyl-tert-butyl ether)	LB032603	µg/L	2	<2	NA
Vinyl acetate	LB032603	µg/L	10	<10	NA
MEK (2-butanone)	LB032603	µg/L	10	<10	NA
MIBK (4-methyl-2-pentanone)	LB032603	µg/L	5	<5	NA
2-hexanone (MBK)	LB032603	µg/L	5	<5	NA

Polycyclic VOCs

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Naphthalene	LB032603	µg/L	0.5	<0.5	NA

Sulphonated Compounds

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Carbon disulfide	LB032603	µg/L	2	<2	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Dibromofluoromethane (Surrogate)	LB032603	%	-	101%	103%
d4-1,2-dichloroethane (Surrogate)	LB032603	%	-	97%	88%
d8-toluene (Surrogate)	LB032603	%	-	103%	75%
Bromofluorobenzene (Surrogate)	LB032603	%	-	105%	99%

Trihalomethanes

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Chloroform (THM)	LB032603	µg/L	0.5	<0.5	107%
Bromodichloromethane (THM)	LB032603	µg/L	0.5	<0.5	NA
Dibromochloromethane (THM)	LB032603	µg/L	0.5	<0.5	NA
Bromoform (THM)	LB032603	µg/L	0.5	<0.5	NA

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Volatile Petroleum Hydrocarbons in Water **Method: ME-(AU)-[ENV]AN433/AN434/AN410**

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
TRH C6-C9	LB032603	µg/L	40	<40	91%

Surrogates

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Dibromofluoromethane (Surrogate)	LB032603	%	-	96%	108%
d4-1,2-dichloroethane (Surrogate)	LB032603	%	-	94%	121%
d8-toluene (Surrogate)	LB032603	%	-	95%	105%
Bromofluorobenzene (Surrogate)	LB032603	%	-	96%	95%

VPH F Bands

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Benzene (F0)	LB032603	µg/L	0.5	<0.5	NA
TRH C6-C10 minus BTEX (F1)	LB032603	µg/L	50	<50	98%

METHOD	METHODOLOGY SUMMARY
AN020	Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
AN083	Separatory funnels are used for aqueous samples and extracted by transferring an appropriate volume (mass) of liquid into a separatory funnel and adding 3 serial aliquots of dichloromethane. Samples receive a single extraction at pH 7 to recover base / neutral analytes and two extractions at pH < 2 to recover acidic analytes. QC samples are prepared by spiking organic free water with target analytes and extracting as per samples.
AN289	Analysis of Total Phenols in Soil Sediment and Water: Steam distillable phenols react with 4-aminoantipyrine at pH 7.9±0.1 in the presence of potassium ferricyanide to form a coloured antipyrine dye analysed by Discrete Analyser. Reference APHA 5530 B/D.
AN291	Ammonia in solution reacts with hypochlorite ions from Sodium Dichloroisocyanuate, and salicylate in the presence of Sodium Nitroprusside to form indophenol blue and measured at 670nm by Discrete Analyser.
AN311/AN312	Mercury by Cold Vapour AAS in Waters: Mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500.
AN318	Determination of elements at trace level in waters by ICP-MS technique, in accordance with USEPA 6020A.
AN320/AN321	Metals by ICP-OES: Samples are preserved with 10% nitric acid for a wide range of metals and some non-metals. This solution is measured by Inductively Coupled Plasma. Solutions are aspirated into an argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components.
AN320/AN321	Photomultipliers or CCDs are used to measure the light intensity at specific wavelengths. This intensity is directly proportional to concentration. Corrections are required to compensate for spectral overlap between elements. Reference APHA 3120 B.
AN400	OC and OP Pesticides by GC-ECD: The determination of organochlorine (OC) and organophosphorus (OP) pesticides and polychlorinated biphenyls (PCBs) in soils, sludges and groundwater. (Based on USEPA methods 3510, 3550, 8140 and 8080.)
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the Draft NEPM 2011, >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is not corrected for Naphthalene.
AN403	Additionally, the volatile C6-C9/C6-C10 fractions may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Petroleum Hydrocarbons (TPH) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependant on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433/AN434	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN433/AN434/AN410	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

FOOTNOTES

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

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

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

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.sgs.com.au.pv.sgsv3/~/media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf

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STATEMENT OF QA/QC PERFORMANCE

SE114774 R0

CLIENT DETAILS

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Project	**37278.05 - Banksmeadow - P.N**
Order Number	(Not specified)
Samples	1

LABORATORY DETAILS

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SGS Reference	SE114774 R0
Report Number	0000049563
Date Reported	05 Feb 2013

COMMENTS

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

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

All Data Quality Objectives were met.

SAMPLE SUMMARY

Sample counts by matrix	1 Water	Type of documentation received	COC
Date documentation received	18/1/2013	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	3.0°C
Sample container provider	Other Lab	Turnaround time requested	Standard
Samples received in correct containers	Yes-see comments	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

HOLDING TIME SUMMARY

SE114774 R0

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

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

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

Ammonia Nitrogen by Discrete Analyser (Aquakem)

Method: ME-(AU)-[ENV]AN291

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWBD1B/170113	SE114774.001	LB032552	17 Jan 2013	18 Jan 2013	14 Feb 2013	23 Jan 2013	14 Feb 2013	23 Jan 2013

Low Level Full 8270 SVOC in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWBD1B/170113	SE114774.001	LB032623	17 Jan 2013	18 Jan 2013	24 Jan 2013	24 Jan 2013	05 Mar 2013	05 Feb 2013

Low Level OC Pesticides in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWBD1B/170113	SE114774.001	LB032623	17 Jan 2013	18 Jan 2013	24 Jan 2013	24 Jan 2013	05 Mar 2013	05 Feb 2013

Low Level OP Pesticides in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWBD1B/170113	SE114774.001	LB032623	17 Jan 2013	18 Jan 2013	24 Jan 2013	24 Jan 2013	05 Mar 2013	05 Feb 2013

Low Level PCBs in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWBD1B/170113	SE114774.001	LB032623	17 Jan 2013	18 Jan 2013	24 Jan 2013	24 Jan 2013	05 Mar 2013	05 Feb 2013

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311/AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWBD1B/170113	SE114774.001	LB032582	17 Jan 2013	18 Jan 2013	14 Feb 2013	23 Jan 2013	14 Feb 2013	24 Jan 2013

Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320/AN321

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWBD1B/170113	SE114774.001	LB032755	17 Jan 2013	18 Jan 2013	16 Jul 2013	29 Jan 2013	16 Jul 2013	30 Jan 2013

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWBD1B/170113	SE114774.001	LB032623	17 Jan 2013	18 Jan 2013	24 Jan 2013	24 Jan 2013	05 Mar 2013	04 Feb 2013

Total Phenolics in Water

Method: ME-(AU)-[ENV]AN289

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWBD1B/170113	SE114774.001	LB032557	17 Jan 2013	18 Jan 2013	14 Feb 2013	23 Jan 2013	14 Feb 2013	23 Jan 2013

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWBD1B/170113	SE114774.001	LB032685	17 Jan 2013	18 Jan 2013	16 Jul 2013	25 Jan 2013	16 Jul 2013	29 Jan 2013

TRH (Total Recoverable Hydrocarbons) in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWBD1B/170113	SE114774.001	LB032623	17 Jan 2013	18 Jan 2013	24 Jan 2013	24 Jan 2013	05 Mar 2013	04 Feb 2013

VOCs in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWBD1B/170113	SE114774.001	LB032603	17 Jan 2013	18 Jan 2013	24 Jan 2013	23 Jan 2013	04 Mar 2013	30 Jan 2013

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433/AN434/AN410

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWBD1B/170113	SE114774.001	LB032603	17 Jan 2013	18 Jan 2013	24 Jan 2013	23 Jan 2013	04 Mar 2013	30 Jan 2013

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

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

Low Level Full 8270 SVOC in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	GWBD1B/170113	SE114774.001	%	40 - 130%	80
d14-p-terphenyl (Surrogate)	GWBD1B/170113	SE114774.001	%	40 - 130%	90
d5-nitrobenzene (Surrogate)	GWBD1B/170113	SE114774.001	%	40 - 130%	70

Low Level OC Pesticides in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	GWBD1B/170113	SE114774.001	%	40 - 130%	75

Low Level OP Pesticides in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	GWBD1B/170113	SE114774.001	%	40 - 130%	80
d14-p-terphenyl (Surrogate)	GWBD1B/170113	SE114774.001	%	40 - 130%	90

Low Level PCBs in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d14-p-terphenyl (Surrogate)	GWBD1B/170113	SE114774.001	%	40 - 130%	90

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	GWBD1B/170113	SE114774.001	%	40 - 130%	68
d14-p-terphenyl (Surrogate)	GWBD1B/170113	SE114774.001	%	40 - 130%	120
d5-nitrobenzene (Surrogate)	GWBD1B/170113	SE114774.001	%	40 - 130%	81

VOCs in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	GWBD1B/170113	SE114774.001	%	60 - 130%	118
d4-1,2-dichloroethane (Surrogate)	GWBD1B/170113	SE114774.001	%	40 - 130%	113
d8-toluene (Surrogate)	GWBD1B/170113	SE114774.001	%	60 - 130%	125
Dibromofluoromethane (Surrogate)	GWBD1B/170113	SE114774.001	%	60 - 130%	114

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433/AN434/AN410

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	GWBD1B/170113	SE114774.001	%	60 - 130%	93
d4-1,2-dichloroethane (Surrogate)	GWBD1B/170113	SE114774.001	%	60 - 130%	96
d8-toluene (Surrogate)	GWBD1B/170113	SE114774.001	%	60 - 130%	95
Dibromofluoromethane (Surrogate)	GWBD1B/170113	SE114774.001	%	60 - 130%	96

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

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

Ammonia Nitrogen by Discrete Analyser (Aquakem)

Method: ME-(AU)-[ENV]AN291

Sample Number	Parameter	Units	LOR	Result
LB032552.001	Ammonia Nitrogen, NH_3 as N*	mg/L	0.01	<0.01

Low Level Full 8270 SVOC in Water

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

Sample Number		Parameter	Units	LOR	Result
LB032623.001	03-OPs	Carbophenothion	µg/L	0.01	<0.01
		Chlorfenvinphos-cis (Chlofenvinphos-cis)	µg/L	0.05	<0.05
		Chlorfenvinphos-trans (Chlofenvinphos-trans)	µg/L	0.01	<0.01
		Co-Ral (Coumaphos)	µg/L	0.01	<0.01
		Demeton-S-methyl	µg/L	0.1	<0.1
		Disulfoton (Di-syston)	µg/L	0.01	<0.01
		EPN*	µg/L	0.01	<0.01
		Ethoprophos (Ethoprop or Prophos)	µg/L	0.01	<0.01
		Famphur (Famophos)	µg/L	0.01	<0.01
		Fenamiphos (Phenamiphos)	µg/L	0.1	<0.1
		Fenchlorophos (Ronnel)	µg/L	0.01	<0.01
		Monocrotophos	µg/L	0.1	<0.1
		Fenthion	µg/L	0.01	<0.01
		Mevinphos-cis/trans	µg/L	0.1	<0.1
		o,o,o-triethyl phosphorothioate	µg/L	0.1	<0.1
		Parathion methyl	µg/L	0.01	<0.01
		Phorate	µg/L	0.01	<0.01
		Pirimiphos-ethyl	µg/L	0.01	<0.01
		Pirimiphos-methyl	µg/L	0.01	<0.01
		Profenofos	µg/L	0.1	<0.1
		Prothiophos (Tokuthion)*	µg/L	0.01	<0.01
		Tetrachlorvinphos (Stirophos)*	µg/L	0.01	<0.01
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	70
		2-fluorobiphenyl (Surrogate)	%	-	70
		d14-p-terphenyl (Surrogate)	%	-	90

Low Level OC Pesticides in Water

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

Sample Number		Parameter	Units	LOR	Result
LB032623.001		Hexachlorobenzene	µg/L	0.01	<0.01
		Alpha BHC	µg/L	0.05	<0.05
		Lindane (gamma BHC)	µg/L	0.05	<0.05
		Heptachlor	µg/L	0.02	<0.02
		Aldrin	µg/L	0.01	<0.01
		Beta BHC	µg/L	0.05	<0.05
		Delta BHC	µg/L	0.05	<0.05
		Heptachlor epoxide	µg/L	0.02	<0.02
		Alpha Endosulfan	µg/L	0.02	<0.02
		Gamma Chlordane	µg/L	0.01	<0.01
		Alpha Chlordane	µg/L	0.01	<0.01
		p,p'-DDE	µg/L	0.01	<0.01
		Dieldrin	µg/L	0.01	<0.01
		Endrin	µg/L	0.02	<0.02
		Beta Endosulfan	µg/L	0.02	<0.02
		p,p'-DDD	µg/L	0.01	<0.01
		p,p'-DDT	µg/L	0.01	<0.01
		Endosulfan sulphate	µg/L	0.02	<0.02
		Endrin Aldehyde	µg/L	0.02	<0.02
		Methoxychlor	µg/L	0.1	<0.1
		Endrin Ketone	µg/L	0.05	<0.05
		Mirex	µg/L	0.01	<0.01
		Oxychlordane	µg/L	0.01	<0.01
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	111

Low Level OP Pesticides in Water

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

Sample Number	Parameter	Units	LOR

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

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

Low Level OP Pesticides in Water (continued)

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

Sample Number		Parameter	Units	LOR	Result
LB032623.001		Dichlorvos	µg/L	0.5	<0.5
		Dimethoate	µg/L	0.15	<0.15
		Diazinon (Dimpylate)	µg/L	0.01	<0.01
		Fenitrothion	µg/L	0.2	<0.2
		Malathion	µg/L	0.05	<0.05
		Chlorpyrifos (Chlorpyrifos Ethyl)	µg/L	0.01	<0.01
		Parathion-ethyl (Parathion)	µg/L	0.01	<0.01
		Bromophos Ethyl	µg/L	0.05	<0.05
		Methidathion	µg/L	0.05	<0.05
		Ethion	µg/L	0.05	<0.05
		Azinphos-methyl (Guthion)	µg/L	0.05	<0.05
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	70
		d14-p-terphenyl (Surrogate)	%	-	90

Low Level PCBs in Water

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

Sample Number		Parameter	Units	LOR	Result
LB032623.001		PCB Congener C28	µg/L	0.02	<0.02
		PCB Congener C52	µg/L	0.01	<0.01
		PCB Congener C101	µg/L	0.004	<0.004
		PCB Congener C118	µg/L	0.004	<0.004
		PCB Congener C153	µg/L	0.004	<0.004
		PCB Congener C138	µg/L	0.004	<0.004
		PCB Congener C180	µg/L	0.004	<0.004
	Surrogates	d14-p-terphenyl (Surrogate)	%	-	90

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311/AN312

Sample Number	Parameter	Units	LOR	Result
LB032582.001	Mercury	mg/L	0.0001	<0.0001

Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320/AN321

Sample Number	Parameter	Units	LOR	Result
LB032755.001	Calcium, Ca	mg/L	0.1	<0.1
	Magnesium, Mg	mg/L	0.1	<0.1

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Sample Number		Parameter	Units	LOR	Result
LB032623.001		Naphthalene	µg/L	0.1	<0.1
		2-methylnaphthalene	µg/L	0.1	<0.1
		1-methylnaphthalene	µg/L	0.1	<0.1
		Acenaphthylene	µg/L	0.1	<0.1
		Acenaphthene	µg/L	0.1	<0.1
		Fluorene	µg/L	0.1	<0.1
		Phenanthrene	µg/L	0.1	<0.1
		Anthracene	µg/L	0.1	<0.1
		Fluoranthene	µg/L	0.1	<0.1
		Pyrene	µg/L	0.1	<0.1
		Benzo(a)anthracene	µg/L	0.1	<0.1
		Chrysene	µg/L	0.1	<0.1
		Benzo(a)pyrene	µg/L	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1
		Dibenzo(a&h)anthracene	µg/L	0.1	<0.1
		Benzo(ghi)perylene	µg/L	0.1	<0.1
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	73
		2-fluorobiphenyl (Surrogate)	%	-	71
		d14-p-terphenyl (Surrogate)	%	-	84

Total Phenolics in Water

Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR

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

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

Total Phenolics in Water (continued)

Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR	Result
LB032557.001	Total Phenols	mg/L	0.01	<0.01

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result
LB032685.001	Arsenic, As	µg/L	1	<1
	Cadmium, Cd	µg/L	0.1	<0.1
	Chromium, Cr	µg/L	1	<1
	Copper, Cu	µg/L	1	<1
	Lead, Pb	µg/L	1	<1
	Nickel, Ni	µg/L	1	<1
	Zinc, Zn	µg/L	1	<1

TRH (Total Recoverable Hydrocarbons) in Water

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

Sample Number	Parameter	Units	LOR	Result
LB032623.001	TRH C10-C14	µg/L	50	<50
	TRH C15-C28	µg/L	200	<200
	TRH C29-C36	µg/L	200	<200
	TRH C37-C40	µg/L	200	<200

VOCs in Water

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

Sample Number		Parameter	Units	LOR	Result
LB032603.001	Fumigants	2,2-dichloropropane	µg/L	0.5	<0.5
		1,2-dichloropropane	µg/L	0.5	<0.5
		cis-1,3-dichloropropene	µg/L	0.5	<0.5
		trans-1,3-dichloropropene	µg/L	0.5	<0.5
		1,2-dibromoethane (EDB)	µg/L	0.5	<0.5
	Halogenated Aliphatics	Dichlorodifluoromethane (CFC-12)	µg/L	5	<5
		Chloromethane	µg/L	5	<5
		Vinyl chloride (Chloroethene)	µg/L	0.3	<0.3
		Bromomethane	µg/L	10	<10
		Chloroethane	µg/L	5	<5
		Trichlorofluoromethane	µg/L	1	<1
		Iodomethane	µg/L	5	<5
		1,1-dichloroethene	µg/L	0.5	<0.5
		Dichloromethane (Methylene chloride)	µg/L	5	<5
		Allyl chloride	µg/L	2	<2
		trans-1,2-dichloroethene	µg/L	0.5	<0.5
		1,1-dichloroethane	µg/L	0.5	<0.5
		cis-1,2-dichloroethene	µg/L	0.5	<0.5
		Bromochloromethane	µg/L	0.5	<0.5
		1,2-dichloroethane	µg/L	0.5	<0.5
		1,1,1-trichloroethane	µg/L	0.5	<0.5
		1,1-dichloropropene	µg/L	0.5	<0.5
		Carbon tetrachloride	µg/L	0.5	<0.5
		Dibromomethane	µg/L	0.5	<0.5
		Trichloroethene (Trichloroethylene,TCE)	µg/L	0.5	<0.5
		1,1,2-trichloroethane	µg/L	0.5	<0.5
		1,3-dichloropropane	µg/L	0.5	<0.5
		Tetrachloroethene (Perchloroethylene,PCE)	µg/L	0.5	<0.5
		1,1,1,2-tetrachloroethane	µg/L	0.5	<0.5
		cis-1,4-dichloro-2-butene	µg/L	1	<1
		1,1,2,2-tetrachloroethane	µg/L	0.5	<0.5
		1,2,3-trichloropropane	µg/L	0.5	<0.5
		trans-1,4-dichloro-2-butene	µg/L	1	<1
		1,2-dibromo-3-chloropropane	µg/L	0.5	<0.5
		Hexachlorobutadiene	µg/L	0.5	<0.5
	Halogenated Aromatics	Chlorobenzene	µg/L	0.5	<0.5
		Bromobenzene	µg/L	0.5	<0.5
		2-chlorotoluene	µg/L	0.5	<0.5
		4-chlorotoluene	µg/L	0.5	<0.5

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

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

VOCs in Water (continued)

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

Sample Number		Parameter	Units	LOR	Result
LB032603.001	Halogenated Aromatics	1,3-dichlorobenzene	µg/L	0.5	<0.5
		1,4-dichlorobenzene	µg/L	0.3	<0.3
		1,2-dichlorobenzene	µg/L	0.5	<0.5
		1,2,4-trichlorobenzene	µg/L	0.5	<0.5
		1,2,3-trichlorobenzene	µg/L	0.5	<0.5
	Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	0.5	<0.5
		Toluene	µg/L	0.5	<0.5
		Ethylbenzene	µg/L	0.5	<0.5
		m/p-xylene	µg/L	1	<1
		Styrene (Vinyl benzene)	µg/L	0.5	<0.5
		o-xylene	µg/L	0.5	<0.5
		Isopropylbenzene (Cumene)	µg/L	0.5	<0.5
		n-propylbenzene	µg/L	0.5	<0.5
		1,3,5-trimethylbenzene	µg/L	0.5	<0.5
		tert-butylbenzene	µg/L	0.5	<0.5
		1,2,4-trimethylbenzene	µg/L	0.5	<0.5
		sec-butylbenzene	µg/L	0.5	<0.5
		p-isopropyltoluene	µg/L	0.5	<0.5
		n-butylbenzene	µg/L	0.5	<0.5
	Nitrogenous Compounds	Acrylonitrile	µg/L	0.5	<0.5
	Oxygenated Compounds	Acetone (2-propanone)	µg/L	10	<10
		MtBE (Methyl-tert-butyl ether)	µg/L	2	<2
		Vinyl acetate	µg/L	10	<10
		MEK (2-butanone)	µg/L	10	<10
		MIBK (4-methyl-2-pentanone)	µg/L	5	<5
		2-hexanone (MBK)	µg/L	5	<5
	Polycyclic VOCs	Naphthalene	µg/L	0.5	<0.5
	Sulphonated	Carbon disulfide	µg/L	2	<2
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	101
		d4-1,2-dichloroethane (Surrogate)	%	-	97
		d8-toluene (Surrogate)	%	-	103
		Bromofluorobenzene (Surrogate)	%	-	105
	Trihalomethanes	Chloroform (THM)	µg/L	0.5	<0.5
		Bromodichloromethane (THM)	µg/L	0.5	<0.5
		Dibromochloromethane (THM)	µg/L	0.5	<0.5
		Bromoform (THM)	µg/L	0.5	<0.5

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433/AN434/AN410

Sample Number		Parameter	Units	LOR	Result
LB032603.001		TRH C6-C9	µg/L	40	<40
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	96
		d4-1,2-dichloroethane (Surrogate)	%	-	94
		d8-toluene (Surrogate)	%	-	95
		Bromofluorobenzene (Surrogate)	%	-	96

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

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

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

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

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311/AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE114814.013	LB032582.018	Mercury	µg/L	0.0001	<0.0001	<0.0001	165	5

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE114855.006	LB032685.014	Cadmium, Cd	µg/L	0.1	<0.0001	<0.0001	200	0
		Copper, Cu	µg/L	1	0.001	0.001	96	5
		Lead, Pb	µg/L	1	<0.001	<0.001	200	0
		Nickel, Ni	µg/L	1	0.002	0.002	78	3
		Zinc, Zn	µg/L	1	0.003	0.003	50	4
SE114867.015	LB032685.017	Arsenic, As	µg/L	1	<1	<1	200	0
		Cadmium, Cd	µg/L	0.1	<0.1	<0.1	200	0
		Chromium, Cr	µg/L	1	<1	<1	200	0
		Copper, Cu	µg/L	1	<1	<1	200	0
		Lead, Pb	µg/L	1	<1	<1	200	0
		Nickel, Ni	µg/L	1	<1	<1	200	0
		Zinc, Zn	µg/L	1	2	2	68	3

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

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

Ammonia Nitrogen by Discrete Analyser (Aquakem)

Method: ME-(AU)-[ENV]AN291

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB032552.002	Ammonia Nitrogen, NH_3 as N*	mg/L	0.01	2.6	2.5	80 - 120	103

Low Level OC Pesticides in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB032623.002		Heptachlor	µg/L	0.02	0.22	0.2	60 - 140	110
		Aldrin	µg/L	0.01	0.22	0.2	60 - 140	110
		Delta BHC	µg/L	0.05	0.21	0.2	60 - 140	105
		Dieldrin	µg/L	0.01	0.20	0.2	60 - 140	100
		Endrin	µg/L	0.02	0.22	0.2	60 - 140	110
		p,p'-DDT	µg/L	0.01	0.19	0.2	60 - 140	95
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	110	100	60 - 140	111

Low Level OP Pesticides in Water

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB032623.002	Diazinon (Dimpylate)	µg/L	0.01	0.11	0.125	50 - 150	87
	Chlorpyrifos (Chlorpyrifos Ethyl)	µg/L	0.01	0.11	0.125	50 - 150	85

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311/AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB032582.002	Mercury	mg/L	0.0001	0.0080	0.008	80 - 120	100

Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320/AN321

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB032755.002	Calcium, Ca	mg/L	0.1	2.1	2	80 - 120	105
	Magnesium, Mg	mg/L	0.1	2.0	2	80 - 120	99

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB032623.002	Naphthalene	µg/L	0.1	37	40	60 - 140	92
	Acenaphthylene	µg/L	0.1	38	40	60 - 140	94
	Acenaphthene	µg/L	0.1	38	40	60 - 140	96
	Phenanthrene	µg/L	0.1	39	40	60 - 140	97
	Anthracene	µg/L	0.1	40	40	60 - 140	99
	Fluoranthene	µg/L	0.1	38	40	60 - 140	95
	Pyrene	µg/L	0.1	38	40	60 - 140	94
	Benzo(a)pyrene	µg/L	0.1	35	40	60 - 140	88

Total Phenolics in Water

Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB032557.002	Total Phenols	mg/L	0.01	0.24	0.25	80 - 120	97

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB032685.002	Arsenic, As	µg/L	1	21	20	80 - 120	103
	Cadmium, Cd	µg/L	0.1	22	20	80 - 120	108
	Chromium, Cr	µg/L	1	22	20	80 - 120	109
	Copper, Cu	µg/L	1	22	20	80 - 120	112
	Lead, Pb	µg/L	1	22	20	80 - 120	111
	Nickel, Ni	µg/L	1	22	20	80 - 120	109
	Zinc, Zn	µg/L	1	21	20	80 - 120	104

TRH (Total Recoverable Hydrocarbons) in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB032623.002		TRH C10-C14	µg/L	50	1200	1200	60 - 140	99
		TRH C15-C28	µg/L	200	1200	1200	60 - 140	99
		TRH C29-C36	µg/L	200	1200	1200	60 - 140	98
	TRH F Bands	TRH >C10-C16 (F2)	µg/L	60	1200	1200	60 - 140	100

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

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

TRH (Total Recoverable Hydrocarbons) in Water (continued)

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB032623.002	TRH F Bands	TRH >C16-C34 (F3)	µg/L	500	1200	1200	60 - 140	99
		TRH >C34-C40 (F4)	µg/L	500	590	600	60 - 140	99

VOCs in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB032603.002	Halogenated	1,1-dichloroethene	µg/L	0.5	49	45.45	60 - 140	108
	Aliphatics	1,2-dichloroethane	µg/L	0.5	53	45.45	60 - 140	116
		Trichloroethene (Trichloroethylene,TCE)	µg/L	0.5	44	45.45	60 - 140	98
	Halogenated	Chlorobenzene	µg/L	0.5	44	45.45	60 - 140	96
	Monocyclic	Benzene	µg/L	0.5	57	45.45	60 - 140	124
	Aromatic	Toluene	µg/L	0.5	39	45.45	60 - 140	87
		Ethylbenzene	µg/L	0.5	50	45.45	60 - 140	109
		m/p-xylene	µg/L	1	98	90.9	60 - 140	108
		o-xylene	µg/L	0.5	49	45.45	60 - 140	107
	Surrogates	Dibromofluoromethane (Surrogate)	µg/L	-	5.1	5	60 - 140	103
		d4-1,2-dichloroethane (Surrogate)	µg/L	-	4.4	5	60 - 140	88
		d8-toluene (Surrogate)	µg/L	-	3.8	5	60 - 140	75
		Bromofluorobenzene (Surrogate)	µg/L	-	5.0	5	60 - 140	99
	Trihalomethan	Chloroform (THM)	µg/L	0.5	49	45.45	60 - 140	107

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433/AN434/AN410

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB032603.002		TRH C6-C9	µg/L	40	740	818.71	60 - 140	91
	Surrogates	Dibromofluoromethane (Surrogate)	µg/L	-	5.4	5	60 - 140	108
		d4-1,2-dichloroethane (Surrogate)	µg/L	-	6.1	5	60 - 140	121
		d8-toluene (Surrogate)	µg/L	-	5.3	5	60 - 140	105
		Bromofluorobenzene (Surrogate)	µg/L	-	4.8	5	60 - 140	95
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	630	639.67	60 - 140	98

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

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

Trace Metals (Dissolved) in Water by ICPMS — **Method: ME-(AU)-[ENV]AN318**

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE114773.001	LB032685.004	Arsenic, As	µg/L	1	21	<1	20	103
		Cadmium, Cd	µg/L	0.1	22	<0.1	20	112
		Chromium, Cr	µg/L	1	22	<1	20	109
		Copper, Cu	µg/L	1	22	<1	20	109
		Lead, Pb	µg/L	1	22	<1	20	110
		Nickel, Ni	µg/L	1	22	<1	20	108
		Zinc, Zn	µg/L	1	24	1	20	113

MATRIX SPIKE DUPLICATES

SE114774 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

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

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

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

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

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

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

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

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

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

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

Any other holder of this document is advised that information contained herein reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents.

This test report shall not be reproduced, except in full.

SAMPLE RECEIPT ADVICE

SE114774

CLIENT DETAILS

Contact	Nerilee Edwards
Client	DOUGLAS PARTNERS PTY LTD
Address	96 Hermitage Road West Ryde NSW 2114
Telephone	02 9809 0666
Facsimile	02 9809 4095
Email	nerilee.edwards@douglaspartners.com.au
Project	**37278.05 - Banksmeadow - P.N**
Order Number	(Not specified)
Samples	1

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Fri 18/1/2013
Report Due	Mon 4/2/2013
SGS Reference	**SE114774**

SUBMISSION DETAILS

This is to confirm that 1 sample was received on Friday 18/1/2013. Results are expected to be ready by Monday 4/2/2013. Please quote SGS reference SE114774 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	1 Water	Type of documentation received	COC
Date documentation received	18/1/2013	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	3.0°C
Sample container provider	Other Lab	Turnaround time requested	Standard
Samples received in correct containers	Yes-see comments	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

Samples will be held for one month for water samples and two months for soil samples from date of report, unless otherwise instructed.

COMMENTS

Phenols = Allocated for Total Phenols
Client confirmed 95% ANZECC trigger levels applicable: SGS has assigned:-
PAHs = Allocated for individual LOR 0.1µg/L, Total PAHs <1.0µg/L.
OCPs = Allocated for individual LOR 0.01µg/L to 0.1µg/L, Total OCs <1.0µg/L.
OPs = Allocated for individual LOR 0.01µg/L to 0.5µg/L
PCBs = Expressed as Congeners, individual LOR 0.004µg/L to 0.02µg/L

Due to trace analysis associated to workorder the due date has been extended for report finalisation scheduled

between 7 to 10 working days.

Sample received was not appropriately preserved according to the recommended preservation guidelines. Total Phenols- analysis requirement is glass container preserved with Sulfuric Acid, client has supplied plastic.
SGS has taken a portion from one of the two 1L glass unpeserved portions supplied and acidified at laboratory for Total Phenols analysis.

28/01/2013 = Public Holiday, SGS closed for business.

To the extent not inconsistent with the other provisions of this document and unless specifically agreed otherwise in writing by SGS, all SGS services are rendered in accordance with the applicable SGS General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm as at the date of this document. Attention is drawn to the limitations of liability and to the clauses of indemnification.

SAMPLE RECEIPT ADVICE

SE114774

CLIENT DETAILS

Client	DOUGLAS PARTNERS PTY LTD	Project	37278.05 - Banksmeadow - P.N

SUMMARY OF ANALYSIS

No.	Sample ID	Ammonia Nitrogen by Discrete Analyser	Low Level Full 8270 SVOC in Water	Low Level OC Pesticides in Water	Low Level OP Pesticides in Water	Low Level PCBs in Water	PAH (Polynuclear Aromatic Hydrocarbons) in	Total Phenolics in Water	TRH (Total Recoverable Hydrocarbons) in Water	VOCs in Water	Volatile Petroleum Hydrocarbons in Water
001	GWBD1B/170113	1	28	27	13	9	22	1	9	79	7

CONTINUED OVERLEAF

The above table represents SGS Environmental Services' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details.
Testing as per this table shall commence immediately unless the client intervenes with a correction.

SAMPLE RECEIPT ADVICE

SE114774

CLIENT DETAILS

Client	DOUGLAS PARTNERS PTY LTD	Project	37278.05 - Banksmeadow - P.N

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water	Metals in Water (Dissolved) by ICPOES	Trace Metals (Dissolved) in Water by ICPMS
001	GWBD1B/170113	1	3	7

The above table represents SGS Environmental Services' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details.
Testing as per this table shall commence immediately unless the client intervenes with a correction.

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **ES1316903**	Page	: 1 of 5
Client	: **VEOLIA ENVIRONMENTAL SERVICES PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: ELENA IVANOVA	Contact	: Client Services
Address	: PO BOX 4574 MILPERRA DC NSW, AUSTRALIA 1891	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: elena.ivanova@veolia.com.au	E-mail	: sydney@alsglobal.com
Telephone	: +61 0419 283 780	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 9709 5138	Facsimile	: +61-2-8784 8500
Project	: BTT 713 REBATCH OF ES1316165	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Order number	: 4502516930		
C-O-C number	: ----	Date Samples Received	: 29-JUL-2013
Sampler	: ----	Issue Date	: 01-AUG-2013
Site	: ----		
		No. of samples received	: 4
Quote number	: SY/498/12	No. of samples analysed	: 4

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

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

Signatories	*Position*	*Accreditation Category*
Pabi Subba	Senior Organic Chemist	Sydney Organics

General Comments

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

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

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

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

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

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

Analytical Results

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

Compound	CAS Number	LOR	Unit	Client sample ID	BTT-MW20	BTT-MW CTP4	BTT-MW3	BTT-MW001	----
				Client sampling date / time	17-JUL-2013 04:20	17-JUL-2013 03:50	17-JUL-2013 03:35	17-JUL-2013 04:25	----
					ES1316903-001	ES1316903-002	ES1316903-003	ES1316903-004	----
EP125A: Monocyclic Aromatic Hydrocarbons									
Benzene	71-43-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
Toluene	108-88-3	0.5	µg/L		<0.5	**12.0**	<0.5	<0.5	----
Ethylbenzene	100-41-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
meta- & para-Xylene	108-38-3 106-42-3	0.05	µg/L		<0.05	**0.06**	<0.05	<0.05	----
Styrene	100-42-5	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
ortho-Xylene	95-47-6	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
1.3.5-Trimethylbenzene	108-67-8	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
1.2.4-Trimethylbenzene	95-63-6	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
EP125D: Fumigants									
1.2-Dichloropropane	78-87-5	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
cis-1.3-Dichloropropylene	10061-01-5	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
trans-1.3-Dichloropropylene	10061-02-6	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
1.2-Dibromoethane (EDB)	106-93-4	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
EP125E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	----
Vinyl chloride	75-01-4	0.3	µg/L		<0.3	<0.3	<0.3	<0.3	----
Bromomethane	74-83-9	2	µg/L		<2	<2	<2	<2	----
Chloroethane	75-00-3	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	----
Trichlorofluoromethane	75-69-4	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	----
1.1-Dichloroethene	75-35-4	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
Dichloromethane	75-09-2	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
trans-1.2-Dichloroethene	156-60-5	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
1.1-Dichloroethane	75-34-3	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
cis-1.2-Dichloroethene	156-59-2	0.1	µg/L		**0.2**	<0.1	<0.1	**0.2**	----
Bromochloromethane	74-97-5	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	----
1.2-Dichloroethane	107-06-2	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
1.1.1-Trichloroethane	71-55-6	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
Carbon Tetrachloride	56-23-5	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
Trichloroethene	79-01-6	0.05	µg/L		**0.58**	<0.05	**0.19**	**0.43**	----
Tetrachloroethene	127-18-4	0.05	µg/L		**0.50**	<0.05	**0.08**	**0.37**	----
Hexachlorobutadiene	87-68-3	0.04	µg/L		<0.04	<0.04	<0.04	<0.04	----
EP125F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	0.10	µg/L		<0.10	<0.10	<0.10	<0.10	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	BTT-MW20	BTT-MW CTP4	BTT-MW3	BTT-MW001	----
			Client sampling date / time	17-JUL-2013 04:20	17-JUL-2013 03:50	17-JUL-2013 03:35	17-JUL-2013 04:25	----
Compound	CAS Number	LOR	Unit	ES1316903-001	ES1316903-002	ES1316903-003	ES1316903-004	----
EP125F: Halogenated Aromatic Compounds - Continued								
Bromobenzene	108-86-1	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Benzylchloride	100-44-7	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	----
1.3-Dichlorobenzene	541-73-1	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
1.4-Dichlorobenzene	106-46-7	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
1.2-Dichlorobenzene	95-50-1	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
2-Chlorotoluene	95-49-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
4-Chlorotoluene	106-43-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
1.2.4-Trichlorobenzene	120-82-1	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
1.2.3-Trichlorobenzene	87-61-6	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
^ **Trichlorobenzenes (Sum)**	----	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
EP125G: Trihalomethanes								
Chloroform	67-66-3	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Bromodichloromethane	75-27-4	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Dibromochloromethane	124-48-1	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Bromoform	75-25-2	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
^ **Total Trihalomethanes**	----	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
EP125H: Naphthalene								
Naphthalene	91-20-3	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
EP125L: Methyl t-butyl ether								
Methyl tert-butyl ether (MTBE)	1634-04-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
EP125S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**113**	**93.5**	**116**	**113**	----
Toluene-D8	2037-26-5	0.1	%	**109**	**92.2**	**113**	**106**	----
4-Bromofluorobenzene	460-00-4	0.1	%	**109**	**91.6**	**112**	**107**	----

Surrogate Control Limits

Sub-Matrix: **WATER**

Compound	CAS Number	Recovery Limits (%) Low	High
EP125S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	129
Toluene-D8	2037-26-5	65	127
4-Bromofluorobenzene	460-00-4	68	124

Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **ES1316165**	Page	: 1 of 6
Client	: VEOLIA ENVIRONMENTAL SERVICES PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: ELENA IVANOVA	Contact	: Client Services
Address	: PO BOX 4574 MILPERRA DC NSW, AUSTRALIA 1891	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: elena.ivanova@veolia.com.au	E-mail	: sydney@alsglobal.com
Telephone	: +61 0419 283 780	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 9709 5138	Facsimile	: +61-2-8784 8500
Project	: BTT 713	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 17-JUL-2013
Sampler	: EI	Issue Date	: 23-JUL-2013
Order number	: 4502516930		
		No. of samples received	: 4
Quote number	: SY/498/12	No. of samples analysed	: 4

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

This Interpretive Quality Control Report contains the following information:

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

Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

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
EA005P: pH by PC Titrator							
Clear Plastic Bottle - Natural (EA005-P)							
BTT-MW20, BTT-MW3, BTT-MW CTP4, BTT-MW001	**17-JUL-2013**	---	17-JUL-2013	----	**18-JUL-2013**	17-JUL-2013	×
EA075: Redox Potential							
Clear Plastic Bottle - Natural (EA075)							
BTT-MW20, BTT-MW3, BTT-MW CTP4, BTT-MW001	**17-JUL-2013**	----	----	----	**18-JUL-2013**	17-JUL-2013	×
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)							
BTT-MW20, BTT-MW3, BTT-MW CTP4, BTT-MW001	**17-JUL-2013**	---	13-JAN-2014	----	**22-JUL-2013**	13-JAN-2014	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)							
BTT-MW20, BTT-MW3, BTT-MW CTP4, BTT-MW001	**17-JUL-2013**	---	14-AUG-2013	----	**23-JUL-2013**	14-AUG-2013	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft							
Amber Glass Bottle - Unpreserved (EP071)							
BTT-MW20, BTT-MW3, BTT-MW CTP4, BTT-MW001	**17-JUL-2013**	**18-JUL-2013**	24-JUL-2013	✓	**19-JUL-2013**	27-AUG-2013	✓
EP074D: Fumigants							
Amber VOC Vial - Sulfuric Acid (EP074)							
BTT-MW20, BTT-MW3, BTT-MW CTP4, BTT-MW001	**17-JUL-2013**	**18-JUL-2013**	31-JUL-2013	✓	**18-JUL-2013**	31-JUL-2013	✓
EP074E: Halogenated Aliphatic Compounds							
Amber VOC Vial - Sulfuric Acid (EP074)							
BTT-MW20, BTT-MW3, BTT-MW CTP4, BTT-MW001	**17-JUL-2013**	**18-JUL-2013**	31-JUL-2013	✓	**18-JUL-2013**	31-JUL-2013	✓

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
EP074F: Halogenated Aromatic Compounds							
Amber VOC Vial - Sulfuric Acid (EP074)							
BTT-MW20, BTT-MW CTP4, BTT-MW3, BTT-MW001	**17-JUL-2013**	**18-JUL-2013**	31-JUL-2013	✓	**18-JUL-2013**	31-JUL-2013	✓
EP074A: Monocyclic Aromatic Hydrocarbons							
Amber VOC Vial - Sulfuric Acid (EP074)							
BTT-MW20, BTT-MW CTP4, BTT-MW3, BTT-MW001	**17-JUL-2013**	**18-JUL-2013**	31-JUL-2013	✓	**18-JUL-2013**	31-JUL-2013	✓
EP074B: Oxygenated Compounds							
Amber VOC Vial - Sulfuric Acid (EP074)							
BTT-MW20, BTT-MW CTP4, BTT-MW3, BTT-MW001	**17-JUL-2013**	**18-JUL-2013**	31-JUL-2013	✓	**18-JUL-2013**	31-JUL-2013	✓
EP074C: Sulfonated Compounds							
Amber VOC Vial - Sulfuric Acid (EP074)							
BTT-MW20, BTT-MW CTP4, BTT-MW3, BTT-MW001	**17-JUL-2013**	**18-JUL-2013**	31-JUL-2013	✓	**18-JUL-2013**	31-JUL-2013	✓
EP074G: Trihalomethanes							
Amber VOC Vial - Sulfuric Acid (EP074)							
BTT-MW20, BTT-MW CTP4, BTT-MW3, BTT-MW001	**17-JUL-2013**	**18-JUL-2013**	31-JUL-2013	✓	**18-JUL-2013**	31-JUL-2013	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM))							
BTT-MW20, BTT-MW CTP4, BTT-MW3, BTT-MW001	**17-JUL-2013**	**18-JUL-2013**	24-JUL-2013	✓	**19-JUL-2013**	27-AUG-2013	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080)							
BTT-MW20, BTT-MW CTP4, BTT-MW3, BTT-MW001	**17-JUL-2013**	**18-JUL-2013**	31-JUL-2013	✓	**18-JUL-2013**	31-JUL-2013	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber VOC Vial - Sulfuric Acid (EP080)							
BTT-MW20, BTT-MW CTP4, BTT-MW3, BTT-MW001	**17-JUL-2013**	**18-JUL-2013**	31-JUL-2013	✓	**18-JUL-2013**	31-JUL-2013	✓

Quality Control Parameter Frequency Compliance

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

Matrix: **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)							
Dissolved Mercury by FIMS	EG035F	2	19	**10.5**	**10.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	20	**10.0**	**10.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	4	**25.0**	**10.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
pH by PC Titrator	EA005-P	2	16	**12.5**	**10.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Redox Potential	EA075	1	4	**25.0**	**10.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	4	**25.0**	**10.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	12	**16.7**	**10.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	10	**10.0**	**10.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	1	19	**5.3**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	**5.0**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	4	**25.0**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Redox Potential	EA075	3	4	**75.0**	**15.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	4	**25.0**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	12	**8.3**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	10	**10.0**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Dissolved Mercury by FIMS	EG035F	1	19	**5.3**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	**5.0**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	4	**25.0**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	4	**25.0**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	12	**8.3**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	10	**10.0**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	1	19	**5.3**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	**5.0**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	4	**25.0**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	4	**25.0**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	12	**8.3**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	10	**10.0**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
pH by PC Titrator	EA005-P	WATER	APHA 21st ed. 4500 H+ B. This procedure determines pH of water samples by automated ISE. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Redox Potential	EA075	WATER	In House (Ion selective electrode)
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	(APHA 21st ed., 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020): Samples are 0.45 um filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45 um filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. 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 (1999) Schedule B(3) (Appdx. 2)
TPH - Semivolatile Fraction	EP071	WATER	USEPA SW 846 - 8015A The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Volatile Organic Compounds	EP074	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	USEPA SW 846 - 8270D Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
TPH Volatiles/BTEX	EP080	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)

Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	USEPA SW 846 - 3510B 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using 60mL DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2). ALS default excludes sediment which may be resident in the container.

Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW 846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

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

Regular Sample Surrogates

Sub-Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP074S: VOC Surrogates	ES1316165-001	BTT-MW20	**Toluene-D8**	2037-26-5	130 %	79.1-128.9 %	**Recovery greater than upper data quality objective**

Outliers : Analysis Holding Time Compliance

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

Matrix: **WATER**

Method / Container / Client Sample ID(s)		Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA005P: pH by PC Titrator							
Clear Plastic Bottle - Natural							
BTT-MW20,	BTT-MW CTP4,	----	----	----	18-JUL-2013	17-JUL-2013	**1**
BTT-MW3,	BTT-MW001						
EA075: Redox Potential							
Clear Plastic Bottle - Natural							
BTT-MW20,	BTT-MW CTP4,	----	----	----	18-JUL-2013	17-JUL-2013	**1**
BTT-MW3,	BTT-MW001						

Outliers : Frequency of Quality Control Samples

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

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

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **ES1316165**	Page	: 1 of 8
Client	: **VEOLIA ENVIRONMENTAL SERVICES PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: ELENA IVANOVA	Contact	: Client Services
Address	: PO BOX 4574 MILPERRA DC NSW, AUSTRALIA 1891	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: elena.ivanova@veolia.com.au	E-mail	: sydney@alsglobal.com
Telephone	: +61 0419 283 780	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 9709 5138	Facsimile	: +61-2-8784 8500
Project	: BTT 713	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Order number	: 4502516930		
C-O-C number	: ----	Date Samples Received	: 17-JUL-2013
Sampler	: EI	Issue Date	: 23-JUL-2013
Site	: ----		
		No. of samples received	: 4
Quote number	: SY/498/12	No. of samples analysed	: 4

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

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

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Inorganic Chemist	Sydney Inorganics
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Hoa Nguyen	Senior Inorganic Chemist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Organics
Pabi Subba	Senior Organic Chemist	Sydney Organics

General Comments

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

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

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

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

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

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	BTT-MW20	BTT-MW CTP4	BTT-MW3	BTT-MW001	----
				Client sampling date / time	17-JUL-2013 04:20	17-JUL-2013 03:50	17-JUL-2013 03:35	17-JUL-2013 04:25	----
Compound	CAS Number	LOR	Unit		ES1316165-001	ES1316165-002	ES1316165-003	ES1316165-004	----
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**7.40**	**6.72**	**7.22**	**7.44**	----
EA075: Redox Potential									
Redox Potential	----	0.1	mV		**38.5**	**20.7**	**104**	**91.9**	----
pH Redox	----	0.01	pH Unit		**6.8**	**6.1**	**6.4**	**6.6**	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		**0.001**	**0.057**	**0.002**	<0.001	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	**0.0002**	<0.0001	----
Chromium	7440-47-3	0.001	mg/L		<0.001	**0.004**	<0.001	<0.001	----
Copper	7440-50-8	0.001	mg/L		**0.002**	**0.011**	<0.001	**0.002**	----
Nickel	7440-02-0	0.001	mg/L		<0.001	**0.011**	<0.001	<0.001	----
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	----
Zinc	7440-66-6	0.005	mg/L		<0.005	**0.157**	**0.050**	**0.008**	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	----
EP074A: Monocyclic Aromatic Hydrocarbons									
Styrene	100-42-5	5	µg/L		<5	<5	<5	<5	----
Isopropylbenzene	98-82-8	5	µg/L		<5	<5	<5	<5	----
n-Propylbenzene	103-65-1	5	µg/L		<5	<5	<5	<5	----
1.3.5-Trimethylbenzene	108-67-8	5	µg/L		<5	<5	<5	<5	----
sec-Butylbenzene	135-98-8	5	µg/L		<5	<5	<5	<5	----
1.2.4-Trimethylbenzene	95-63-6	5	µg/L		<5	<5	<5	<5	----
tert-Butylbenzene	98-06-6	5	µg/L		<5	<5	<5	<5	----
p-Isopropyltoluene	99-87-6	5	µg/L		<5	<5	<5	<5	----
n-Butylbenzene	104-51-8	5	µg/L		<5	<5	<5	<5	----
EP074B: Oxygenated Compounds									
Vinyl Acetate	108-05-4	50	µg/L		<50	<50	<50	<50	----
2-Butanone (MEK)	78-93-3	50	µg/L		<50	<50	<50	<50	----
4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L		<50	<50	<50	<50	----
2-Hexanone (MBK)	591-78-6	50	µg/L		<50	<50	<50	<50	----
EP074C: Sulfonated Compounds									
Carbon disulfide	75-15-0	5	µg/L		<5	<5	<5	<5	----
EP074D: Fumigants									
2.2-Dichloropropane	594-20-7	5	µg/L		<5	<5	<5	<5	----

Analytical Results

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

Compound	CAS Number	LOR	Unit	Client sample ID	BTT-MW20	BTT-MW CTP4	BTT-MW3	BTT-MW001	----
				Client sampling date / time	17-JUL-2013 04:20	17-JUL-2013 03:50	17-JUL-2013 03:35	17-JUL-2013 04:25	----
					ES1316165-001	ES1316165-002	ES1316165-003	ES1316165-004	----
EP074D: Fumigants - Continued									
1.2-Dichloropropane	78-87-5	5	µg/L		<5	<5	<5	<5	----
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L		<5	<5	<5	<5	----
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L		<5	<5	<5	<5	----
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L		<5	<5	<5	<5	----
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	50	µg/L		<50	<50	<50	<50	----
Chloromethane	74-87-3	50	µg/L		<50	<50	<50	<50	----
Vinyl chloride	75-01-4	50	µg/L		<50	<50	<50	<50	----
Bromomethane	74-83-9	50	µg/L		<50	<50	<50	<50	----
Chloroethane	75-00-3	50	µg/L		<50	<50	<50	<50	----
Trichlorofluoromethane	75-69-4	50	µg/L		<50	<50	<50	<50	----
1.1-Dichloroethene	75-35-4	5	µg/L		<5	<5	<5	<5	----
Iodomethane	74-88-4	5	µg/L		<5	<5	<5	<5	----
trans-1.2-Dichloroethene	156-60-5	5	µg/L		<5	<5	<5	<5	----
1.1-Dichloroethane	75-34-3	5	µg/L		<5	<5	<5	<5	----
cis-1.2-Dichloroethene	156-59-2	5	µg/L		<5	<5	<5	<5	----
1.1.1-Trichloroethane	71-55-6	5	µg/L		<5	<5	<5	<5	----
1.1-Dichloropropylene	563-58-6	5	µg/L		<5	<5	<5	<5	----
Carbon Tetrachloride	56-23-5	5	µg/L		<5	<5	<5	<5	----
1.2-Dichloroethane	107-06-2	5	µg/L		<5	<5	<5	<5	----
Trichloroethene	79-01-6	5	µg/L		<5	<5	<5	<5	----
Dibromomethane	74-95-3	5	µg/L		<5	<5	<5	<5	----
1.1.2-Trichloroethane	79-00-5	5	µg/L		<5	<5	<5	<5	----
1.3-Dichloropropane	142-28-9	5	µg/L		<5	<5	<5	<5	----
Tetrachloroethene	127-18-4	5	µg/L		<5	<5	<5	<5	----
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L		<5	<5	<5	<5	----
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L		<5	<5	<5	<5	----
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L		<5	<5	<5	<5	----
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L		<5	<5	<5	<5	----
1.2.3-Trichloropropane	96-18-4	5	µg/L		<5	<5	<5	<5	----
Pentachloroethane	76-01-7	5	µg/L		<5	<5	<5	<5	----
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L		<5	<5	<5	<5	----
Hexachlorobutadiene	87-68-3	5	µg/L		<5	<5	<5	<5	----

Analytical Results

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

Compound	CAS Number	LOR	Unit	Client sample ID	BTT-MW20	BTT-MW CTP4	BTT-MW3	BTT-MW001	----
				Client sampling date / time	17-JUL-2013 04:20	17-JUL-2013 03:50	17-JUL-2013 03:35	17-JUL-2013 04:25	----
					ES1316165-001	ES1316165-002	ES1316165-003	ES1316165-004	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	5	µg/L		<5	<5	<5	<5	----
Bromobenzene	108-86-1	5	µg/L		<5	<5	<5	<5	----
2-Chlorotoluene	95-49-8	5	µg/L		<5	<5	<5	<5	----
4-Chlorotoluene	106-43-4	5	µg/L		<5	<5	<5	<5	----
1.3-Dichlorobenzene	541-73-1	5	µg/L		<5	<5	<5	<5	----
1.4-Dichlorobenzene	106-46-7	5	µg/L		<5	<5	<5	<5	----
1.2-Dichlorobenzene	95-50-1	5	µg/L		<5	<5	<5	<5	----
1.2.4-Trichlorobenzene	120-82-1	5	µg/L		<5	<5	<5	<5	----
1.2.3-Trichlorobenzene	87-61-6	5	µg/L		<5	<5	<5	<5	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	5	µg/L		<5	<5	<5	<5	----
Bromodichloromethane	75-27-4	5	µg/L		<5	<5	<5	<5	----
Dibromochloromethane	124-48-1	5	µg/L		<5	<5	<5	<5	----
Bromoform	75-25-2	5	µg/L		<5	<5	<5	<5	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Acenaphthylene	208-96-8	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Acenaphthene	83-32-9	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Fluorene	86-73-7	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Phenanthrene	85-01-8	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Anthracene	120-12-7	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Fluoranthene	206-44-0	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Pyrene	129-00-0	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Benz(a)anthracene	56-55-3	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Chrysene	218-01-9	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Benzo(b)fluoranthene	205-99-2	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Benzo(a)pyrene	50-32-8	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	----
^ **Benzo(a)pyrene TEQ (WHO)**	----	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	----

Analytical Results

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

Compound	CAS Number	LOR	Unit	Client sample ID	BTT-MW20	BTT-MW CTP4	BTT-MW3	BTT-MW001	----
				Client sampling date / time	17-JUL-2013 04:20	17-JUL-2013 03:50	17-JUL-2013 03:35	17-JUL-2013 04:25	----
					ES1316165-001	ES1316165-002	ES1316165-003	ES1316165-004	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		<20	<20	<20	<20	----
C10 - C14 Fraction	----	50	µg/L		<50	<50	<50	<50	----
C15 - C28 Fraction	----	100	µg/L		<100	**3780**	<100	<100	----
C29 - C36 Fraction	----	50	µg/L		<50	**210**	<50	<50	----
^ **C10 - C36 Fraction (sum)**	----	50	µg/L		<50	**3990**	<50	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	20	µg/L		<20	<20	<20	<20	----
^ **C6 - C10 Fraction minus BTEX (F1)**	----	20	µg/L		<20	<20	<20	<20	----
>C10 - C16 Fraction	----	100	µg/L		<100	**260**	<100	<100	----
>C16 - C34 Fraction	----	100	µg/L		<100	**3220**	<100	<100	----
>C34 - C40 Fraction	----	100	µg/L		<100	<100	<100	<100	----
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L		<100	**3480**	<100	<100	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	<1	<1	<1	----
Toluene	108-88-3	2	µg/L		<2	**12**	<2	<2	----
Ethylbenzene	100-41-4	2	µg/L		<2	<2	<2	<2	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	<2	<2	<2	----
ortho-Xylene	95-47-6	2	µg/L		<2	<2	<2	<2	----
^ **Total Xylenes**	1330-20-7	2	µg/L		<2	<2	<2	<2	----
^ **Sum of BTEX**	----	1	µg/L		<1	**12**	<1	<1	----
Naphthalene	91-20-3	5	µg/L		<5	<5	<5	<5	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**121**	**116**	**117**	**115**	----
Toluene-D8	2037-26-5	0.1	%		**130**	**122**	**126**	**122**	----
4-Bromofluorobenzene	460-00-4	0.1	%		**114**	**112**	**111**	**102**	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**20.0**	**19.1**	**17.7**	**19.6**	----
2-Chlorophenol-D4	93951-73-6	0.1	%		**45.6**	**46.1**	**41.5**	**46.8**	----
2.4.6-Tribromophenol	118-79-6	0.1	%		**61.9**	**69.5**	**54.7**	**54.0**	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**48.2**	**42.2**	**40.5**	**46.3**	----
Anthracene-d10	1719-06-8	0.1	%		**64.8**	**60.1**	**69.8**	**77.0**	----
4-Terphenyl-d14	1718-51-0	0.1	%		**65.3**	**64.9**	**55.7**	**66.9**	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	BTT-MW20	BTT-MW CTP4	BTT-MW3	BTT-MW001	----
			Client sampling date / time	17-JUL-2013 04:20	17-JUL-2013 03:50	17-JUL-2013 03:35	17-JUL-2013 04:25	----
Compound	CAS Number	LOR	Unit	ES1316165-001	ES1316165-002	ES1316165-003	ES1316165-004	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	**110**	**98.4**	**105**	**104**	----
Toluene-D8	2037-26-5	0.1	%	**129**	**117**	**125**	**121**	----
4-Bromofluorobenzene	460-00-4	0.1	%	**107**	**97.4**	**99.6**	**97.2**	----

Surrogate Control Limits

Sub-Matrix: **WATER**

Compound	CAS Number	Recovery Limits (%) Low	Recovery Limits (%) High
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	78.3	133.2
Toluene-D8	2037-26-5	79.1	128.9
4-Bromofluorobenzene	460-00-4	80.8	123.7
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10.0	44
2-Chlorophenol-D4	93951-73-6	15.9	102
2.4.6-Tribromophenol	118-79-6	17	125
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	20.4	112
Anthracene-d10	1719-06-8	29.6	118
4-Terphenyl-d14	1718-51-0	21.5	126
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128

Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **ES1316903**	Page	: 1 of 5
Client	: VEOLIA ENVIRONMENTAL SERVICES PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: ELENA IVANOVA	Contact	: Client Services
Address	: PO BOX 4574 MILPERRA DC NSW, AUSTRALIA 1891	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: elena.ivanova@veolia.com.au	E-mail	: sydney@alsglobal.com
Telephone	: +61 0419 283 780	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 9709 5138	Facsimile	: +61-2-8784 8500
Project	: BTT 713 REBATCH OF ES1316165	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 29-JUL-2013
Sampler	: ----	Issue Date	: 01-AUG-2013
Order number	: 4502516930		
		No. of samples received	: 4
Quote number	: SY/498/12	No. of samples analysed	: 4

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

This Interpretive Quality Control Report contains the following information:

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

Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (2013). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

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
EP125D: Fumigants							
Amber VOC Vial - Sulfuric Acid (EP125)							
BTT-MW20, BTT-MW CTP4, BTT-MW3, BTT-MW001	**17-JUL-2013**	**----**	----	----	**30-JUL-2013**	31-JUL-2013	✓
EP125E: Halogenated Aliphatic Compounds							
Amber VOC Vial - Sulfuric Acid (EP125)							
BTT-MW20, BTT-MW CTP4, BTT-MW3, BTT-MW001	**17-JUL-2013**	**----**	----	----	**30-JUL-2013**	31-JUL-2013	✓
EP125F: Halogenated Aromatic Compounds							
Amber VOC Vial - Sulfuric Acid (EP125)							
BTT-MW20, BTT-MW CTP4, BTT-MW3, BTT-MW001	**17-JUL-2013**	**----**	----	----	**30-JUL-2013**	31-JUL-2013	✓
EP125L: Methyl t-butyl ether							
Amber VOC Vial - Sulfuric Acid (EP125)							
BTT-MW20, BTT-MW CTP4, BTT-MW3, BTT-MW001	**17-JUL-2013**	**----**	----	----	**30-JUL-2013**	31-JUL-2013	✓
EP125A: Monocyclic Aromatic Hydrocarbons							
Amber VOC Vial - Sulfuric Acid (EP125)							
BTT-MW20, BTT-MW CTP4, BTT-MW3, BTT-MW001	**17-JUL-2013**	**----**	----	----	**30-JUL-2013**	31-JUL-2013	✓
EP125H: Naphthalene							
Amber VOC Vial - Sulfuric Acid (EP125)							
BTT-MW20, BTT-MW CTP4, BTT-MW3, BTT-MW001	**17-JUL-2013**	**----**	----	----	**30-JUL-2013**	31-JUL-2013	✓
EP125G: Trihalomethanes							
Amber VOC Vial - Sulfuric Acid (EP125)							
BTT-MW20, BTT-MW CTP4, BTT-MW3, BTT-MW001	**17-JUL-2013**	**----**	----	----	**30-JUL-2013**	31-JUL-2013	✓

Quality Control Parameter Frequency Compliance

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

Matrix: **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)							
VOC by HS GCMS in SIM Mode	EP125	1	5	**20.0**	**10.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
VOC by HS GCMS in SIM Mode	EP125	1	5	**20.0**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
VOC by HS GCMS in SIM Mode	EP125	1	5	**20.0**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
VOC by HS GCMS in SIM Mode	EP125	1	5	**20.0**	**5.0**	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
VOC by HS GCMS in SIM Mode	EP125	WATER	In-house: A sample is saturated with sodium chloride and achieving thermodynamic equilibrium between the water and gas phase in a closed thermostatted vessel. A reproducible headspace gas is extracted from the vial and injected into a gas chromatograph and the analyte of interest is seperated by means of gas/liquid partition chromatography and quantified using automated static headspace GCMS in SIM mode.

Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW 846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

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

Regular Sample Surrogates

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

Outliers : Analysis Holding Time Compliance

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

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

Outliers : Frequency of Quality Control Samples

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

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

Appendix H

Quality Control/ Quality Assurance Assessment

QA/QC PROCEDURES AND RESULTS

Q1. FIELD QUALITY ASSURANCE AND QUALITY CONTROL

The field QC procedures for sampling as prescribed in Douglas Partners *Field Procedures Manual* were followed at all times during the assessment.

Q1.1 Sampling Team

Field sampling was undertaken by DP Environmental Scientist Nerilee Edwards and Matthew West.

Q1.2 Sample Collection

Soil sampling was undertaken on 11 to 13 January, 2013 and groundwater development was undertaken on 10 January 2013 and groundwater sampling was undertaken on 17 January 2013.

Sample collection procedures and dispatch are reported in Section 7.

Q1.3 Logs

Logs for each sampling location were recorded in the field. The individual samples were recorded on the field logs along with the sample identity, location, depth, initials of sampler, replicate sample locations and identifications and site observations. Logs and sampling records are presented in Appendix E.

Q1.4 Chain of Custody

Chain of custody information was recorded on the Chain of Custody (COC) sheets and accompanied samples to the analytical laboratory. Signed copies of COCs are presented in Appendix G.

Q1.5 Field Instrument Calibration

All soil samples were screened for the presence of Total Photo-Ionisable Compounds (TOPIC) using a calibrated Photo-Ionisation Detector (PID). The PID was calibrated prior to use with Isobutylene gas. The water quality metre was calibrated for pH, EC and redox prior to sampling

Q1.6 Decontamination Procedures

Disposable sampling equipment Soil samples were collected from the centre of the bucket from soils that had not come into contact with the blade. On this basis, no rinsate samples were collected for soil sampling.

New, disposable tubing was used to sample each groundwater well and as such no contact occurred between the sample and any re-usable equipment. On this basis no rinsate samples were collected for groundwater sampling.

1.7 Trip Spikes

According to the NSW OEH *Contaminated Sites Guidelines for Consultants Reporting on Contaminated Sites* (2011), laboratory prepared trip spikes are to be taken into the field, subjected to the same preservation methods as the field samples, then analysed, for the purposes of determining the losses in volatile organics incurred prior to reaching the laboratory. A trip spikes were taken out into the field and stored in the esky with the collected samples throughout the duration of the fieldwork and submitted for laboratory analysis with the final sample dispatch.

The practicalities of trip spikes are currently being debated and a detailed procedure is yet to be finalised. The laboratory prepared soil and aqueous trip spikes (for soil and water sampling respectively) which were preserved in the standard manner and taken into the field unopened. The volatile organic recovery rates are shown below. At this stage, the laboratory has no standard acceptance limits in recovery rates as results from in-house laboratory controls often vary. Results indicate that the percentage loss for BTEX during the trip was minimal and therefore appropriate preservation techniques were employed. The results are summarised in Table Q1, below with full results provided in the NATA Laboratory Reports, Appendix G.

Table Q1: Summary of Trip Spike Results (% recovery)

Sample ID	Date Sampled	Sample Type	Benzene	Toluene	Ethylbenzene	m+p-xylene	o-Xylene
TS1	12/12/2012	Soil	106%	115%	109%	111%	111%
TS2	12/12/2012	Soil	101%	101%	101%	103%	101%
TS1/170113	1/17/2013	water	103%	116%	122%	127%	125%

Q1.8 Trip Blanks

A Laboratory prepared soil blanks was taken out to the field unopened, subjected to the same preservation methods as the field samples, then analysed for the purposes of determining the transfer of contaminants into the blank sample incurred prior to reaching the laboratory. The results are summarised in Tables Q2 and Q3, below with full results provided in the NATA Laboratory Reports, Appendix G.

Levels of analytes were all below detection limits indicating that cross contamination had not occurred during the course of the round trip from the site to the laboratory.

Table Q2: Summary of Trip Blank Results

Sample ID	Date Sampled	Sample Type	Units	Benzene	Toluene	Ethylbenzene	m+p-xylene	o-xylene
TB1	12/12/2012	Soil	mg/kg	<0.2	<0.5	<1	<2	<1
TB2	12/12/2012	Soil	mg/kg	<0.2	<0.5	<1	<2	<1
TS1/170113	1/17/2013	water	µg/L	<1	<1	<1	<2	<1

Table Q3: Summary of Trip Blank Results

Sample ID	Date Sampled	Sample Type	Units	Naphthalene	MTBE	TRH C6 - C9	TRH C6 - C10	TRH C6 - C10 less
TS1/170113	1/17/2013	water	µg/L	<1	<1	<10	<10	<10

Q1.9 Replicate Sampling and Sample Splitting Technique

Replicate and triplicate samples were collected in the field as a measure of accuracy, precision and repeatability of the results. Field replicate samples for soil were collected from the same location and an identical depth to the primary sample. Equal portions of the primary sample were placed into the sampling jars and sealed. The sample was not homogenised in a bowl and then split to prevent the loss of volatiles from the soil. Replicate samples were labelled with an identification number, recorded on the bore or test pit log, so as to conceal their relationship to their primary sample from the analysing laboratory.

Groundwater replicate sample were collected by decanting equal portions of groundwater into separately and uniquely labelled groundwater bottles. Sample bottles were filled directly from the pump outlet to minimise disturbance. Replicate samples were labelled with a DP identification number, recorded on DP field logs, so as to conceal their relationship to their primary sample from the analysing laboratory.

Field sampling comprised replicate sampling, with replicate samples analysed at a rate of approximately 10%, comprising 5% intra-laboratory replicate samples and 5% inter-laboratory (triplicate) replicate samples.

Q1.10 Relative Percentage Difference

A measure of the consistency of results for field samples is derived by the calculation of relative percentage differences (RPDs) for replicate samples. A RPD of +/- 30% is generally considered typically acceptable for inorganic analytes by EPA, although in general a wider RPD range (50%) may be acceptable for organic analytes.

Q1.10.1 Intra-Laboratory Analysis

Intra-laboratory replicate were conducted as an internal check of the replicability within the primary laboratory (Envirolab Pty Ltd) and as a measure of consistency of sampling techniques. Intra-laboratory replicate samples were analysed at a rate of approximately one replicate sample for every twenty original samples collected.

The comparative results of analysis between original and replicate samples are summarised in Tables Q4 and Q5, below.

Table Q4: Intra-laboratory Replicate RPD Results – Soils

Sample ID			Heavy Metals								PAH		TRH				BTEX				MTBE	phenol	PCB	OCP			OPP	NH3	pH	asbestos
			As	Cd	Cr	Cu	Pb	Hg	Ni	Zn	total [b]	BaP	C_6 - C_9	C_{10} - C_{14}	C_{15} - C_{28}	C_{29} - C_{36}	Benzene	Toluene	Ethylbenzene	xylene				HCB	pp-DDT	other OCP				
2	/	0.5-0.7	<4	<0.5	10	69	40	1.7	12	310	1	<0.05	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	<5	<0.1	<0.1	<0.1	<0.1	<0.1	4.4	8.5	NAD
BD1A	/	111212	<4	<0.5	9	57	45	1.4	11	320	1.2	<0.05	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	<5	<0.1	<0.1	<0.1	<0.1	<0.1	4.5	8.9	NAD
Difference	-	-	0	0	1	12	5	0.3	1	10	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	0
RPD	-	-	**0**	**0**	**11**	**19**	**12**	**19**	**9**	**3**	**18**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**5**	**0**
9	/	0.1-0.3	10	<0.5	11	48	42	0.1	7	49	15.2	1.7	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	NAD
BD1	/	121212	10	<0.5	11	72	45	<0.1	12	53	21	2.5	<25	<50	<100	120	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	NAD
Difference	-	-	0	0	0	24	3	0	5	4	5.8	0.8	0	0	0	20	0	0	0	0	0	-	-	-	-	-	-	-	-	0
RPD	-	-	**0**	**0**	**0**	**40**	**7**	**0**	**53**	**8**	**32**	**38**	**0**	**0**	**0**	**18**	**0**	**0**	**0**	**0**	**0**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0**
15	/	0.1-0.3	<4	<0.5	12	25	51	0.9	11	120	0.45	0.05	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	-
BD5	/	121212	6	<0.5	15	39	100	0.7	8	120	0.1	<0.05	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.5	-	-	-	-	-	-	-	-	-
Difference	-	-	2	0	3	14	49	0.2	3	0	0.35	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-
RPD	-	-	**40**	**0**	**22**	**44**	**65**	**25**	**32**	**0**	**127**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Table Q5: Intra-laboratory Replicate RPD Results – Groundwater

Sample ID	Hardness	Heavy Metals (total dissolved)								NH3	PAH				TRH				BTEX				VOC [b]					phenol	PCB [b]	OCP		OPP [b]
		arsenic	cadmium	chromium	copper	lead	mercury	nickel	zinc		naphthalene	acenaphthene	fluorene	other [b]	C6 - C9	C10 - C14	C15 - C28	C29 - C36	benzene	toluene	ethylbenzene	xylene [c]	vinyl chloride	1,1-dichloroethane	cis-1,2-dichloroethene	trichloroethene	tetrachloroethene			HCB	other [b]	
	mgCaCO3/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L
GW-CPT4	180	2	<0.1	1	<1	<1	<0.05	1	17	0.52	<0.1	0.1	0.2	<0.1	13	<50	210	<100	<1	<1	<1	<3	<10	<1	2	4	6	<0.05	<0.01	0.007	<0.001	<0.010
BD1A/1 70113	170	2	<0.1	<1	<1	<1	<0.05	1	86	0.53	<0.1	0.1	0.2	<0.1	13	<50	170	<100	<1	<1	<1	<3	<10	<1	2	3	6	<0.05	<0.01	0.006	<0.001	<0.010
Difference	10	0	0	0	0	0	0	0	69	0.01	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	1	0	0	0	0.001	0	0
RPD	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**134**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**21**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**29**	**0**	**0**	**0**	**15**	**0**	**0**

Most of calculated RPD values were within the acceptable range of +/- 30 for inorganic analytes or +/-. 50% for organic for the primary sample and its replicate with the exception of those shaded. However, these are generally not considered to be of concern due to:

- Most of the recorded concentrations being at/ close to the practical quantitation limit;
- The low actual differences in the concentrations of most the replicate pairs;
- Replicates, rather than homogenised duplicates were used to avoid volatile loss;
- The duplicate samples being collected in filling material which is heterogeneous in nature, therefore differences are representative of the material and not the result inconsistencies in the sampling technique or laboratory precision; and
- All of the results with an RPD greater than the acceptable limits being within the SAC (with the exception of zinc in the groundwater replicate).

Q1.10.2 Inter-Laboratory Analysis

Inter-laboratory replicate were conducted as a check of the replicability of results between the primary laboratory (Envirolab Pty Ltd) and a secondary laboratory (SGS Australia Pty Ltd) and as a measure of consistency of sampling techniques. Inter-laboratory replicate samples were analysed at a rate of approximately one replicate sample for every twenty original samples collected.

The comparative results of analysis between original and replicate samples are summarised in Table Q6 and Q7, below.

Note that where the laboratory PQL are different and both samples are below PQL (or one sample is below PQL and other has a recorded detection below the other lab PQL) the difference and RPD has been given as zero (0). Where one result is less than the PQL and the second result measured a concentration above that PQL, the sample with a result less than PQL is assumed to have a concentration equal to the PQL.

Most of calculated RPD values were within the acceptable range of +/- 30 for inorganic analytes or +/-. 50% for organic for the primary sample and its replicate with the exception of those shaded. However, these are generally not considered to be of concern due to:

- Most of the recorded concentrations being at/ close to the practical quantitation limit;
- The low actual differences in the concentrations of most the replicate pairs;
- Replicates, rather than homogenised duplicates were used to avoid volatile loss;
- The duplicate samples being collected in filling material which is heterogeneous in nature, therefore differences are representative of the material and not the result inconsistencies in the sampling technique or laboratory precision; and
- Most of the results with an RPD greater than the acceptable limits being within the SAC (with the exception of zinc in the groundwater replicate).

It is therefore considered that the results indicate an acceptable consistency between the samples and their replicates and indicate that suitable field sampling methodology was adopted and laboratory precision was achieved.

Table Q6: Inter-laboratory Replicate RPD Results – Soils (mg/kg)

Sample ID			Heavy Metals								PAH		TRH					BTEX				phenol	CN	PCB	OCP			NH3	pH	asbestos
			As	Cd	Cr	Cu	Pb	Hg	Ni	Zn	total	BaP	C_6 - C_9	C_{10} - C_{14}	C_{15} - C_{28}	C_{29} - C_{36}	Benzene	Toluene	Ethylbenzene	xylene				HCB	DDT	OCP			
2	/	0.5-0.7	<4	<0.5	10	69	40	1.7	12	310	1	<0.05	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<5	-	<0.1	<0.1	<0.1	<0.1	4.4	8.5	NAD
BD1B	/	111212	<3	<0.3	8.9	40	42	1.2	8.1	190	0.8	<0.1	<20	21	<45	<45	0.7	2.2	0.3	4.7	0.1	-	<1	<0.1	<0.1	<0.5	6.2	8.6	NAD
Difference	-	-	0	0	1.1	29	2	0.5	3.9	120	0.2	0	0	0	0	0	0.5	1.7	0	1.7	0	-	0	0	0	0	1.8	0.1	0
RPD	-	-	**0**	**0**	**12**	**53**	**5**	**34**	**39**	**48**	**22**	**0**	**0**	**0**	**0**	**0**	**111**	**126**	**0**	**44**	**0**	-	**0**	**0**	**0**	**0**	**34**	**1**	**0**
13	/	0.3-0.4	150	1.5	19	300	320	0.2	23	280	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BD3	/	131212	170	2.2	25	350	460	0.16	30	410	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Difference	-	-	20	0.7	6	50	140	0.04	7	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD	-	-	**13**	**38**	**27**	**15**	**36**	**22**	**26**	**38**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	/	0.4-0.6	<4	<0.5	3	12	9	<0.1	10	19	<0.1	<0.05	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<5	<0.5	<0.1	<0.1	<0.1	<0.1	-	-	NAD
BD4	/	131212	<3	<0.3	3.7	11	12	0.07	10	30	<0.1	<0.1	<20	<20	<45	<45	<0.1	<0.1	<0.1	<0.3	<0.1	<0.1	<1	<0.1	<0.1	<0.5	-	-	NAD
Difference	-	-	0	0	0.7	1	3	0	0	11	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	-	-	0
RPD	-	-	**0**	**0**	**21**	**9**	**29**	**0**	**0**	**45**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	-	**0**	**0**	**0**	**0**	-	-	**0**

Table Q7: Inter-laboratory Replicate RPD Results - Groundwater

Sample ID	Hardness	Heavy Metals (total dissolved)								NH3	PAH				TRH				BTEX				VOC					phenol	PCB	OCP		OPP
		arsenic	cadmium	chromium	copper	lead	mercury	nickel	zinc		naphthalene	acenaphthene	fluorene	other [b]	C6 - C9	C10 - C14	C15 - C28	C29 - C36	benzene	toluene	ethylbenzene	xylene [c]	vinyl chloride	1,1-dichloroethane	cis-1,2-dichloroethene	trichloroethene	tetrachloroethene			HCB	other	
GW-CPT4	180	2	<0.1	1	<1	<1	<0.05	1	17	0.52	<0.1	0.1	0.2	<0.1	13	<50	210	<100	<1	<1	<1	<3	<10	<1	2	4	6	<0.05	<0.01	0.007	<0.001	<0.010
GWBD1B/ 170113	200	2	<0.1	1	<1	<1	<0.0001	2	32	0.87	<0.1	0.1	0.3	0.1	<40	<50	<200	<200	<0.5	<0.5	<0.5	<1.5	0.4	0.7	2.4	4.4	6	0.02	<0.004	<0.01	<0.01	<0.05
Difference	20	0	0	0	0	0	0	1	15	0.35	0	0	0.1	0	0	0	10	0	0	0	0	0	0	0	0.4	0.4	0	0	0	0	0	0
RPD	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**67**	**61**	**50**	**0**	**0**	**40**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**18**	**10**	**0**	**0**	**0**	**0**	**0**	**0**

Q2. LABORATORY QUALITY ASSURANCE AND QUALITY CONTROL

Q2.1 Chain of Custody

Chain of custody information was recorded on the Chain of Custody (COC) sheets and accompanied samples to the analytical laboratory. COCs contained receipt date and time and the identity of samples. Signed copies of COCs are presented in Appendix G, following the laboratory reports.

Q2.2 Holding Times

A review of the laboratory report sheets and chain-of-custody documentation indicated that holding times were met, as summarised in the Table Q8, below.

Table Q8: Summary of Holding Times

Matrix	Analyte	Recommended Holding Time	Holding Time Met
Soil	As, Cd, Cr, Cu, Pb, Ni, Zn	6 months	Yes
	Mercury (Hg)	28 days	Yes
	PAH	14 days	Yes
	TRH C_6-C_9	14 days	Yes
	TRH C_{10}-C_{36}	14 days	most samples, exceptions detailed below
	BTEX	14 days	most samples, exceptions detailed below
	VOC	14 days	most samples, exceptions detailed below
	Phenols	14 days	most samples, exceptions detailed below
	PCB	14 days	Yes
	OCP	14 days	Yes
	Cyanide	7 days	some samples, exceptions detailed below
	Asbestos	Nil	Yes
	pH	7 day	most samples; exceptions detailed below
	Ammonia	7 day	most samples; exceptions detailed below
Water	As, Cd, Cr, Cu, Pb, Ni, Zn	6 months	Yes
	Mercury (Hg)	28 days	Yes
	Hardness	28 days	Yes
	PAH	7 days	Yes
	TRH C_6-C_9	14 days	Yes
	TRH C_{10}-C_{36}	14 days	Yes
	BTEX	14 days	Yes
	VOC	14 days	Yes
	Phenols	28 days	Yes
	PCB	7 days	Yes
	OCP/OPP	7 days	Yes
	Phenols	28 days	Yes

Matrix	Analyte	Recommended Holding Time	Holding Time Met
	Ammonia	28 days	Yes
	Cyanide	14 days	Yes

The following samples were analysed out of the standard holding times:

- Envirolab Report 83245-A: two samples extracted outside of holding time for BTEX, PAH, TPH, VOC and phenols (1/0.2-0.3, 83246-A-2 and 20/2.5-2.6), extracted after 28 days and two samples extracted for aliphatic/aromatic split outside of recommended holding time (16/0.3-0.5, 83246-A-70 and 20/0.4-0.5 , 83246-A-85). It is noted that these analysis was requested based on the initial test results to further define the degree and extent of contamination present. It is also noted that the TPH concentration in range C16-C34 in sample 16/0.3-0.5 in original test was 16,500 mg/kg compared to a sum of the aliphatic and aromatic spilt C15 to C35 of 19,800 mg/kg, i.e. there does not appear to have been significant loss of product, despite the samples being extracted outside of holding times;
- SGS Report No. SE114379 Replicate soil sample BD1B/111212 extracted after 9 days, outside recommended 7 day holding time for pH and ammonia. This exceedance is not considered significant due to the generally good replication with the primary sample (refer to Section Q1.10.1);

Q2.3 Analytical Laboratory

Samples were submitted to the following laboratories for analysis:

- Primary Laboratory: Envirolab Services Pty Ltd (Chatswood);
- Secondary Laboratory: SGS Australia Pty Ltd (Alexandria).

Both laboratories are NATA accredited. Envirolab's accreditation number is 2901 and is accredited for compliance with ISO/IEC 17025. Envirolab tests comply with NATA and NEPM. In house procedures are employed by Envirolab in the absence of documented standards.

SGS's NATA accreditation number is 2562 and is accredited for compliance with ISO/IEC 17025.

Q2.4 Analytical Methods

The laboratory analytical methods are provided on the laboratory certificates in Appendix G and summarised in Tables Q9 and Q10, below.

Table Q9: Summary of Laboratory Limits of Reporting and Reference Methods - Soils

Analyte	Limit of Reporting (mg/kg)		Reference Method	
	Envirolab	SGS	Envirolab	SGS
Heavy Metals Cd, Cr, Cu, Pb, Ni, Zn	1	0.3-1.0	Metals-020 ICP-AES	AN320
Arsenic (As)	4	3	Metals-020 ICP-AES	AN320
Mercury (Hg)	0.1	0.05	Metals-021 ICP-AAS	AN312
PAH	0.05-0.1	0.1-0.2	Org-012	AN422
TPH C_6-C_9	25	20	Org-016	AN410
TPH C_{10}-C_{36}	250	120	Org-003	AN403
VOC	0.2-1	0.1-10	Org-014	ME-(AU)-[ENV]AN433/AN434
BTEX	0.2-2	0.1-0.3	Org-016	AN410
Phenols	5	0.1	Inorg-030	AN289
PCB	0.1	0.1	Org-006	AN400
OCP	0.1	0.1	Org-005	AN400
Cyanide	0.5	0.1	Inorg-013	ME-(AU)-[ENV]AN077/AN287
Asbestos	0.1g/kg (qualitative identification)	qualitative identification	NA	NA

Table Q10: Summary of Laboratory Limits of Reporting and Reference Methods - Waters

Analyte	Limit of Reporting (µg/L)		Reference Method	
	Envirolab	SGS	Envirolab	SGS
Heavy Metals, As, Cd, Cr, Cu, Pb, Ni, Zn	0.1-1	0.1-1	Metals-022 ICP-MS	AN318
Mercury (Hg)	0.1	0.0001	Metals-021 CV-AAS	AN311/AN312
PAH	0.1-0.2	0.01-0.02	Org-012 subset	AN420
TPH C_{10}-C_{36}	50-100	100-200	Org-003	AN403
TPH C_6-C_9	10	40	Org-016	AN433/AN434
BTEX	1-2	0.5-1	Org-016	AN433/AN434
VOC	1-10	0.3-100	Org-013	AN433/AN434
Phenols	0.05	0.01	Inorg-030	AN289
PCB	0.01	-	Ext-020	-
OCP	0.001	-	Ext-020	-
OPP	0.01	-	Ext-020	-
Cyanide	0.004	-	Inorg-013	-
Ammonia	0.005	-	Inorg-057	-
hardness	0.5 (mg/L)	0.1 (mg/L)	Metals-020 ICP-AES	AN320/AN321

The following QA/QC procedures were conducted by the laboratory. The results are included in the laboratory reports in Appendix G. The discussion of the laboratory QA results is provided in Section Q2.12, Table Q11. Unless otherwise stated the laboratory QA results were within the laboratories (internal) acceptance criteria

Q2.5 Asbestos Sub-Sampling

Envirolab and SGS sub-sampled from the soil jar for asbestos analysis for a number of samples. The laboratories indicated that they could not guarantee that this sub-sample is indicative of the entire sample. For any materials with visible signs of concern for asbestos DP provided a separate sub-sample for targeted asbestos analysis. In samples were no signs of asbestos concern were noted, it is considered that sub-sampling in the laboratory would provide consistent results with sub-sampling in the field.

Q2.6 Surrogate Spike

This sample is prepared by adding a known amount of surrogate, which behaves similarly to the analyte, prior to analysis to each sample. The recovery result indicates the proportion of the known concentration of the surrogate that is detected during analysis. These results are within acceptance limits as specified in Envirolab Services, indicating that the extraction technique was effective.

The laboratory acceptance criteria for surrogate samples is generally 60-140% for organics; and 10-140% for SVOC and speciated phenols.

Q2.7 Practical Quantitation Limits - PQLs

The Practical Quantitation Limit (PQL) or Limit of Reporting (LOR) is the lowest quantity of an analyte which can be detected during the analysis. PQL/LORs at different analytical laboratories can differ based on the analytical techniques. The PQLs/LORs for the laboratory results in the current assessment are provided in Tables Q6 and Q7, Section 2.4.

Q2.8 Reference and Daily Check Sample Results – Laboratory Control Sample (LCS)

This sample comprises spiking either a standard reference material or a control matrix (such as a blank of sand or water) with a known concentration of specific analytes. The LCS is then analysed and results compared against each other to determine how the laboratory has performed with regard to sample preparation and analytical procedure. LCSs are analysed at a frequency of 1 in 20, with a minimum of one analysed per batch.

The laboratory acceptance criteria for LCS samples is generally 70-130% for inorganic/ metals; and 60-140% for organics; and 10-140% for SVOC and speciated phenols.

Q2.9 Laboratory Duplicate Results

These are additional portions of a sample which are analysed in exactly the same manner as all other samples. The laboratory acceptance criteria for duplicate samples is: in cases where the level is <5xPQL – any RPD is acceptable; and in cases where the level is >5xPQL – 0-50% RPD is acceptable.

Q2.10 Laboratory Blank Results

The laboratory blank, sometimes referred to as the method blank or reagent blank is the sample prepared and analysed at the beginning of every analytical run, following calibration of the analytical apparatus. This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, it can be determined by processing solvents and reagents in exactly the same manner as for samples. Laboratory blanks are analysed at a frequency of 1 in 20, with a minimum of one per batch.

Q2.11 Matrix Spike

This is a sample duplicate prepared by adding a known amount of analyte prior to analysis, and then treated exactly the same as all other samples. The recovery result indicates the proportion of the known concentration of the analyte that is detected during analysis. The laboratory acceptance criteria for matrix spike samples is generally 70-130% for inorganic/metals; and 60-140% for organics; and 10-140% for SVOC and speciated phenols.

Q2.12 Results of Laboratory QA

The laboratory QA for surrogate spikes, LCS, laboratory duplicate results, method blanks and matrix spikes were generally within the acceptance standards. There were, however a few comments made in the laboratory reports which are summarised in Table Q11 below.

Table Q11: Review of Laboratory QA/QC Results

Laboratory	Report	Comment	
Envirolab	83246	Chromium	The laboratory RPD acceptance criteria has been exceeded for 83246-22 for Cr. Therefore a triplicate result has been issued as laboratory sample number 83246-134
		Lead and zinc	The laboratory RPD acceptance criteria has been exceeded for 83246-57 for Pb and Zn. Therefore a triplicate result has been issued as laboratory sample number 83246-135
		Heavy metals	Percent of surrogate recovery is not possible (in those marked #) to report due to the high concentration of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

Laboratory	Report	Comment	
		PAH	The RPD for duplicate results is accepted due to the non-homogenous nature of the sample/s.# Percent recovery is not possible to report as the high concentration of analytes in the sample/s have caused interference. PQL has been raised due to interference from analytes(other than those being tested) in the sample/s.
		TPH	Total Recoverable Hydrocarbons in soil:(NEPM). The RPD for duplicate results is accepted due to the non-homogenous nature of the sample/s.# Percent recovery is not possible to report as the high concentration of analytes in the sample/s have caused interference
		PCB	PCB's in soil: PQL has been raised due to interference from analytes (other than those being tested) in the sample/s.
Envirolab	83246-A	Aliphatic/ aromatic split	PQL has been raised due to the high concentration of analytes in the sample/s, resulting in the sample/s requiring dilution
			1-chlorooctadecane surrogate percent recovery is not possible to report as the high concentration of analytes in the sample/s have caused interference
Envirolab	84337	PAH	p terphyl-d14 surrogate percent recovery is not possible to report in sample GW-EU101 due to interference from analytes (other than those being tested) in the sample/s.
SGS	SE114379	-	All DQO met with exception of previously noting holding time exceedances for pH and ammonia
SGS	SE114774	-	All DQO met

Q2.13 Summary

It was considered that an acceptable level of laboratory precision and consistency was achieved and that surrogate spikes, LCS, laboratory duplicate results, method blanks and matrix spike results were generally of an acceptable level, and any exceedances were limited in the number of samples involved and are considered unlikely to have any significant impact on the reliability of the results.

Q3. Review of DQI

Table Q12, below, provides a summary of the data quality indicators (DQI) adopted for the contamination assessment and the methods adopted in ensuring that the data quality indicators were met.

Table Q12: DQI Evaluation

Data Quality Indicator	Method(s) of Achievement
Data Precision and Accuracy	Use of trained and qualified field staff; same samplers used for all recoveries. Appropriate sampling methods used, minimising the opportunity for cross-contamination. Use of analytical laboratories experienced in the analyses undertaken, with appropriate NATA certification. Appropriate and validated laboratory test methods used. Adequate laboratory performance based on results of the blank samples, matrix spike samples, control samples, replicates and surrogate spike samples. Note some exceedances were detected and are discussed in Appendix H. Field replicate, trip blank and trip spike samples analysed. Acceptable RPD for replicate comparison. Note some exceedances were detected and are discussed in Appendix H. Acceptable concentrations in trip blank samples. Acceptable recoveries in trip spike samples.
Data Representativeness	Sampling numbers appropriate for purpose of assessment. Representative coverage of potential contaminants, based on site history, site activities and site features. Adequate replicate sample numbers prepared and analysed, complying with NEPM[1]. Adequate laboratory internal quality control and quality assurance methods, complying with the NEPM.
Documentation Completeness	Preparation of borehole logs, sample location plan and chain of custody records Laboratory sample receipt information received confirming receipt of samples intact and appropriateness of the chain of custody NATA registered laboratory results certificates provided by both laboratories.
Data Completeness	Review of acquired documented information pertaining to site history Sample location appropriate for purpose of assessment Analysis for potential contaminants of concern. Field replicate sample, trip spike and trip blank numbers complying with NEPM
Data Comparability	Using appropriate techniques for sample recovery Experienced samplers used Using appropriate sample storage and transportation methods

Data Quality Indicator	Method(s) of Achievement
	Using the same sampling, storage and transportation methods for each day of sampling Use of NATA registered laboratories Test methods consistent for each sample Acceptable RPD between original samples and field replicates. Adequate laboratory internal quality control and quality assurance results, generally complying with the NEPM and laboratory internal standards.

Notes:
1 NEPC *National Environment Protection Measure (Assessment of Site Contamination)* (1999)