

**Appendix B: Analytical Results - Soil and  
Groundwater Results Compared Against  
Stage 3 Site Specific Target Levels  
(SSTLs), High Density Residential (with  
basement)**



Table 1  
 ABB - Priority Service Station, Hattayamam, Dubai  
 Stage 3 - Analytical Results - Soil TPH

Field Identification	Depth (m)
Date	
Sample Type	
Sample Media	
Above or Below Water Table	
Sample State	
Land Use - High Density Residential	
Basement/Vacant Pathways (only)	

PHO1 TP01	PHO1 TP02	PHO1 TP02	PHO1 TP03	PHO1 TP03	PHO1 TP04	PHO1 TP04	PHO1 TP05	PHO1 TP05	PHO1 TP06	PHO1 TP06	PHO1 TP07	PHO1 TP07
24-Jan-08	24-Jan-08	24-Jan-08	24-Jan-08	24-Jan-08	24-Jan-08	24-Jan-08	24-Jan-08	24-Jan-08	24-Jan-08	24-Jan-08	24-Jan-08	24-Jan-08
3.4	0.5	1.5	1.5	2.5	0.3	2.4	1.6	3.1	0.5	3.6	0.5	3.1
Primary	Primary	Primary	Natural	Natural	Primary	Primary	Primary	Natural	Primary	Primary	Primary	Primary
Natural	Make Ground	Make Ground	Natural	Natural	Make Ground	Natural	Natural	Natural	Make Ground	Natural	Make Ground	Natural
Below	Above	Below	Below	Below	Above	Below	Below	Below	Above	Below	Above	Below
In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ

Chemical	Method Detection Limit	Units	SSTL 1a maximum of Humus Fraction Unsurfacted Soil		Max Concentration	PHO1											
			TPH	TOC		TP01	TP02	TP02	TP03	TP03	TP04	TP04	TP05	TP05	TP06	TP06	TP07
<b>TPH Analyzed by GC-EID</b>																	
TPH is EC10 aromatic	0.01	mg/kg	52.6	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
TPH is EC10 aliphatic	0.01	mg/kg	59.3	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
TPH is EC10 aromatic	0.01	mg/kg	23.3	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
TPH is EC10 aliphatic	0.01	mg/kg	130	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
TPH is EC10 aromatic	0.01	mg/kg	124	nc	<0.1	4.7	<0.1	<0.1	<0.1	2.7	<0.1	0.58	<0.1	0.37	0.34		
TPH is EC10 aliphatic	0.01	mg/kg	581	nc	<0.1	17	<0.1	<0.1	<0.1	9.2	<0.1	0.42	<0.1	0.42	0.18		
Total Aromatics (GC-EIS)	0.1	mg/kg	581	nc	<0.1	71	<0.1	<0.1	<0.1	70	<0.1	3.7	<0.1	3.9	4.1		
Total Aliphatics (GC-EIS)	0.1	mg/kg	nc	nc	<0.1	92	<0.1	<0.1	<0.1	82	<0.1	4.5	<0.1	4.7	4.3		
<b>TPH Analyzed by GC-FID</b>																	
TPH is EC50 aliphatic	0.01	mg/kg	581	nc	0.092	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
TPH is EC50 aromatic	0.01	mg/kg	581	nc	1.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
TPH is EC10 aliphatic	0.01	mg/kg	45.3	nc	0.52	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
TPH is EC10 aromatic	0.01	mg/kg	84.4	nc	0.55	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
TPH is EC10 aliphatic	0.01	mg/kg	581	nc	6.7	<0.1	15	<0.1	<0.1	3.9	6.4	<0.1	4.1	<0.1	<0.1		
TPH is EC10 aromatic	0.01	mg/kg	581	nc	2.50	<0.1	24	<0.1	<0.1	4.7	<0.1	<0.1	1.5	<0.1	<0.1		
Total Aromatics (GC-EIS)	0.1	mg/kg	581	nc	2.90	<0.1	41	<0.1	<0.1	16	<0.1	0.83	2	<0.1	2.8		
Total Aliphatics (GC-EIS)	0.1	mg/kg	nc	nc	5.60	<0.1	80	<0.1	<0.1	25	<0.1	6.4	4.5	<0.1	1.3		
<b>TPH Analyzed by GC-MS</b>																	
TPH is GC121	0.01	mg/kg	nc	nc	26.164	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
TPH is GC251	0.1	mg/kg	1	nc	1000	<0.1	170	<0.1	4.7	1.0	6.4	8.2	<0.1	5.8	<0.01		
TPH Hazard Index	0		1	nc	0.271	0.002	0.032	0.014	0.002	0.017	0.018	0.092	0.012	0.095	0.002		
<b>TOC</b>																	
PH	0.2	%	nc	nc	8.6	0.2	7	0.3	0.7	2.5	0.3	0.7	0.3	1.1	0.3		
PH	1	pH Units	nc	nc	11.73	8.41	8.34	8.52	8.4	8.4	8.41	8.44	8.46	8.38	8.23	8.32	
<b>BTEX by GC-FID</b>																	
Benzene	0.01	mg/kg	0.144	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Ethylbenzene	0.01	mg/kg	35.9	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Methyl tert-butyl ether (MTBE)	0.01	mg/kg	136	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Toluene	0.01	mg/kg	11.2	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
M-Xylene	0.01	mg/kg	16.5	nc	1.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
O-Xylene	0.01	mg/kg	19.9	nc	0.43	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Total Xylenes	0.01	mg/kg	16.5	IR	1.59	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
<b>BTEX by GC-MS</b>																	
Benzene	0.009	mg/kg	0.144	IR	0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Ethylbenzene	0.006	mg/kg	35.9	IR	0.003	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Methyl tert-butyl ether (MTBE)	0.011	mg/kg	136	IR	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Toluene (Methyl Benzene)	0.005	mg/kg	11.2	IR	0.014	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
M-P-Xylene	0.014	mg/kg	16.5	nc	0.008	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
O-Xylene	0.01	mg/kg	19.9	nc	0.002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Total Xylenes	0.014	mg/kg	16.5	IR	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		

**LEGEND**  
 BH = Borehole  
 TP = Test Pit  
 TK = Tank Pad  
 NA = Not Analyzed  
 IR = Insignificant Risk  
 SP = Significant Risk  
 X = Suspect  
 X-X = Suspect

SSTL = Site specific target level  
 nc = No Stage 3 SSTL available  
 Made 1 Total Xylene calculated as a total of M-P-Xylene and O-Xylene  
 cat = unacceptable risk to receptor cannot be achieved due to cat  
 Indicates results in excess of adopted Human Health guideline  
 Indicates results in excess of adopted Controlled Waters guideline









Table 1  
 ABB - Propyl Service Station, Rathfriland, Dublin  
 Stage 3 Analytical Results - Soil TPH

Field Identification	PH10-TP8
Location	1.5
Depth	25-Jan-08
Soil Type	Primary
Soil Use	Made Ground
Above or Below Yield 1.4m	Natural
Soil No.	Below
Soil No.	In situ
Land Use	High Density Residential
Reference	EN 15763 (EN 15763:2007)

SS11 - Site Specific or Unseasonal

PH10-TP8	PH10-TP9	PH10-TP9	PH10-TP9	PH10-TP10	PH10-TP10	PH10-TP11	PH10-TP11	PH10-TP12	PH10-TP12	PH10-TP13	PH10-TP13
1.5	2.7	1.9	3.5	0.4	2.8	0.5	2.5	0.5	2.0	0.7	2.5
25-Jan-08	25-Jan-08	25-Jan-08	25-Jan-08	25-Jan-08	25-Jan-08	25-Jan-08	25-Jan-08	25-Jan-08	25-Jan-08	25-Jan-08	25-Jan-08
Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground
Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural
Below	Below	Below	Below	Above	Below	Below	Below	Above	Below	Above	Below
In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ

Chemical	Method Description	Units	SS11 - Site Specific or Unseasonal		Max Concentration	PH10-TP8 to PH10-TP13											
			Human Health	Ecotoxicity		PH10-TP8	PH10-TP9	PH10-TP9	PH10-TP10	PH10-TP10	PH10-TP11	PH10-TP11	PH10-TP12	PH10-TP12	PH10-TP13	PH10-TP13	
<b>TPH Aromatics by GC-FID</b>																	
TPH > EC1:7 aromatic	0.01	mg/kg	52.6	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH > EC7:8 aromatic	0.01	mg/kg	59.3	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH > EC7:9 aromatic	0.01	mg/kg	23.5	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH > EC10:12 aromatic	0.01	mg/kg	23.5	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH > EC12:16 aromatic	0.01	mg/kg	724	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH > EC16:21 aromatic	0.01	mg/kg	581	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH > EC21:35 aromatic	0.01	mg/kg	581	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Total Aromatics (C6-C35)	0.1	mg/kg	581	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
<b>TPH Aliphatics by GC-FID</b>																	
TPH > C6:6 aliphatic	0.01	mg/kg	341	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH > C6:8 aliphatic	0.01	mg/kg	341	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH > C6:10 aliphatic	0.01	mg/kg	45.3	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH > EC10:12 aliphatic	0.01	mg/kg	84.4	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH > EC12:16 aliphatic	0.01	mg/kg	341	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH > EC16:21 aliphatic	0.01	mg/kg	341	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH > EC21:35 aliphatic	0.01	mg/kg	341	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Total Aliphatics (C6-C35)	0.1	mg/kg	341	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH PHO (C4-C12)	0.01	mg/kg	NC	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH (C6-C35)	0.1	mg/kg	NC	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH Hazard Index	0		1	IR	1000	39	39	0.002	0.074	110	8.4	9.2	190	3.5			
TOC	0.2	%	NC	NC	8.6	6.5	1.1	1.8	0.6	2.3	2.3	0.8	1	0.7			
PH	1	pH Units	NC	NC	11.73	7.92	7.96	7.59	8.08	7.94	7.45	8.32	7.87	8.02			
<b>BTEX by GC-FID</b>																	
Benzene	0.01	mg/kg	0.144	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Ethylbenzene	0.01	mg/kg	35.9	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Methyl tert butyle ether (MTBE)	0.01	mg/kg	136	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Toluene	0.01	mg/kg	11.2	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
m,p-Xylene	0.01	mg/kg	16.5	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
o-Xylene	0.01	mg/kg	19.9	NC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Total Xylene	0.01	mg/kg	16.5	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
<b>BTEX by GC-MS</b>																	
Benzene	0.009	mg/kg	0.144	IR	0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Ethylbenzene	0.004	mg/kg	35.9	IR	0.003	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Methyl tert butyle ether (MTBE)	0.011	mg/kg	136	IR	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Toluene (Methyl Benzene)	0.005	mg/kg	11.2	IR	0.014	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
m,p-Xylene	0.014	mg/kg	16.5	NC	0.008	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
o-Xylene	0.01	mg/kg	19.9	NC	0.002	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Total Xylene	0.014	mg/kg	16.5	IR	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			

LEGEND  
 BH = Benzene  
 TP = Total Pk  
 TK = Total Kk  
 - = Not Analysed  
 IR = Insignificant Risk  
 SP = Significant Risk

SS11 - Site specific  
 Unseasonal

IR - Indicates results in excess of adopted Human Health guideline  
 IR - Indicates results in excess of adopted Controlled Waters guideline



Table 1  
 AGU - Priority Service Station, Rathfriland, Dublin  
 Stage 3 Analytical Results - Soil TPH

Field Identification	
Depth (m)	
Date	
Sample Type	
Sample Media	
Above or Below Water Table	
Sample Code	
Land Use - High Density Residential	
Classroom, vapour pathways (if any)	

Chemical	Method Detection Limit	Units	SSTL - 4.0 mg/kg (active) 0.1		Max Concentration	Priority Service Station											
			Human Health Uncontaminated Soil	Corrected Values		PRIO1 TP27	PRIO1 TP27	PRIO1 TP28	PRIO1 TP28	PRIO1 TP29	PRIO1 TP29	PRIO1 TP30	PRIO1 TP30	PRIO1 TP31	PRIO1 TP31	PRIO1 TP32	
<b>TPH Aromatics by GC-FID</b>																	
TPH >E01.01 aromatic	0.01	mg/kg	52.6	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
TPH >E07.01 aromatic	0.01	mg/kg	59.3	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH >E08.01 aromatic	0.01	mg/kg	23.3	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH >E01.02 aromatic	0.01	mg/kg	73.9	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH >E01.16 aromatic	0.1	mg/kg	724	nc	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
TPH >E01.21 aromatic	0.1	mg/kg	36	nc	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
TPH >E02.35 aromatic	0.1	mg/kg	84	nc	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
Total Aromatics (05-C35)	0.1	mg/kg	470	nc	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
<b>TPH Aliphatics by GC-FID</b>																	
TPH >E05.01 aliphatic	0.01	mg/kg	381	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH >E05.08 aliphatic	0.01	mg/kg	281	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH >E09.10 aliphatic	0.01	mg/kg	43.3	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH >E01.12 aliphatic	0.01	mg/kg	84.4	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH >E01.16 aliphatic	0.1	mg/kg	381	nc	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
TPH >E01.21 aliphatic	0.1	mg/kg	381	nc	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
TPH >E02.35 aliphatic	0.1	mg/kg	381	nc	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
Total Aliphatics (05-C35)	0.1	mg/kg	381	nc	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
<b>TPHBO CAC/CI2</b>																	
TPH (C5-C9)	0.01	mg/kg	nc	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
TPH (C10-C15)	0.1	mg/kg	nc	nc	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
TPH Total Index	0	mg/kg	1	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
<b>TOC</b>																	
TOC	0.2	%	nc	nc	8.6	0.4	0.4	0.3	0.3	0.7	1.6	0.7	0.4	0.4			
PH	1	PH Units	nc	nc	11.73	11.54	8.55	11.73	8.55	8.29	8.51	7.88	8.11	8.57			
<b>BTEX by GC-FID</b>																	
<b>Benzene</b>																	
Benzene	0.01	mg/kg	0.144	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Ethylbenzene	0.01	mg/kg	35.9	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Methyl tert-butyl ether (MTBE)	0.01	mg/kg	196	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
<b>Toluene</b>																	
Toluene	0.01	mg/kg	11.2	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
<b>m,p-Xylene</b>																	
m,p-Xylene	0.01	mg/kg	16.5	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
<b>O-Xylene</b>																	
O-Xylene	0.01	mg/kg	19.9	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Total Xylene	0.01	mg/kg	16.5	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
<b>BTEX by GC/MS</b>																	
<b>Benzene</b>																	
Benzene	0.005	mg/kg	0.144	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Ethylbenzene	0.004	mg/kg	35.9	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Methyl tert-butyl ether (MTBE)	0.011	mg/kg	196	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
<b>Toluene (Neatly Benzene)</b>																	
Toluene (Neatly Benzene)	0.005	mg/kg	11.2	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
<b>m,p-Xylene</b>																	
m,p-Xylene	0.014	mg/kg	16.5	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
<b>O-Xylene</b>																	
O-Xylene	0.01	mg/kg	19.9	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Total Xylene	0.014	mg/kg	16.5	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			

**LEGEND**  
 BH = Benzene  
 TP = Total PH  
 TX = Total Xyl  
 \* = Not Analyzed  
 IR = Indistinguishable Risk  
 SPT = Spill Test

SSTL = Site specific target level  
 nc = No Stage 3 SSTL available  
 Note 1 Total Xylene calculated as a total of m,p-Xylene and O-Xylene  
 SPT = unacceptable risk to receptor cannot be achieved due to calcu  
 indicates results in excess of adopted Human Health guideline  
 indicates results in excess of adopted Controlled Waters guideline

PRIO1 TP27	PRIO1 TP27	PRIO1 TP28	PRIO1 TP28	PRIO1 TP29	PRIO1 TP29	PRIO1 TP30	PRIO1 TP30	PRIO1 TP31	PRIO1 TP31	PRIO1 TP32
0.5	2.5	0.5	2.5	1.5	3.0	0.5	1.5	0.5	3.8	0.5
19-Feb-08	19-Feb-08	19-Feb-08	19-Feb-08	19-Feb-08	19-Feb-08	19-Feb-08	19-Feb-08	19-Feb-08	19-Feb-08	19-Feb-08
Primary	Primary	Primary	Natural	Primary	Primary	Primary	Natural	Primary	Primary	Primary
Made Ground	Made Ground	Made Ground	Natural	Made Ground	Made Ground	Made Ground	Natural	Made Ground	Natural	Made Ground
Above	Below	Above	In situ	Below	Below	Above	In situ	Above	Below	Above
In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ

Table 1  
 Stage 3 - Analytical Results - Soil TPH

Field Identification  
 Date  
 Sample Type  
 Sample Media  
 Above or Below Water Table  
 Sample Point  
 Land Use : High Density Residential  
 Basement, Vapour Pathways only

PR10-TP20	PR10-TP21	PR10-TP21	PR10-TP22	PR10-TP22	PR10-TP22	PR10-TP23	PR10-TP23	PR10-TP23	PR10-TP24	PR10-TP24	PR10-TP25	PR10-TP25	PR10-TP25	PR10-TP26	PR10-TP26	PR10-TP26
3.5	1.5	2.5	0.5	3.1	1.5	3.5	1.5	2.5	0.5	1.5	0.5	1.5	0.5	0.5	3.0	3.0
18-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08
Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural
Below	Below	Below	Above	Below	Below	Below	Below	Below	Below	Below	Below	Below	Below	Below	Below	Below
In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ

Chemical	Method Detection Limit	Units	SSSTL 3's protective of		Max Concentration	Human Health															
			Uncontaminated Soil	Contaminated Soils		PR10-TP20	PR10-TP21	PR10-TP22	PR10-TP22	PR10-TP23	PR10-TP23	PR10-TP24	PR10-TP24	PR10-TP25	PR10-TP25	PR10-TP26	PR10-TP26				
<b>TPH Aromatics by GC-FID</b>																					
TPH-SEC7 aromatic	0.01	mg/kg	52.6	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
TPH-SEC7(8) aromatic	0.01	mg/kg	52.3	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
TPH-SEC7(9) aromatic	0.01	mg/kg	2.5	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
TPH-SEC10(12) aromatic	0.01	mg/kg	150	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
TPH-SEC12(16) aromatic	0.1	mg/kg	724	nc	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					
TPH-SEC16(21) aromatic	0.1	mg/kg	240	nc	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					
TPH-SEC21(35) aromatic	0.1	mg/kg	341	nc	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					
Total Aromatics (GC-FID)	0.1	mg/kg	341	nc	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					
<b>TPH Aromatics by GC-MS</b>																					
TPH-SEC5(6) aliphatic	0.01	mg/kg	341	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
TPH-SEC8(10) aliphatic	0.01	mg/kg	341	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
TPH-SEC10(12) aliphatic	0.01	mg/kg	43.3	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
TPH-SEC12(16) aliphatic	0.1	mg/kg	64.4	nc	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					
TPH-SEC16(21) aliphatic	0.1	mg/kg	67	nc	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					
TPH-SEC21(35) aliphatic	0.1	mg/kg	341	nc	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					
Total Aliphatics (GC-MS)	0.1	mg/kg	341	nc	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					
<b>TPH-PHNO (GC-MS)</b>																					
TPH-IC5-C35	0.1	mg/kg	nc	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
TPH Hazard Index	0	mg/kg	1	nc	<0.1	5.3	<0.1	<0.1	5.8	3.1	1000	7.2	<0.1	130	440	<0.1					
TCC	0.2	%	nc	nc	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.002	0.017	0.105	0.054	0.002					
pH	1	pH Units	nc	nc	8.6	0.3	0.5	0.3	0.4	0.4	0.4	0.5	0.3	1	0.4	2.1					
<b>BTEXs by GC-FID</b>																					
Benzene	0.01	mg/kg	0.144	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
Ethylbenzene	0.01	mg/kg	35.9	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
Methyl tert butyl ether (MTBE)	0.01	mg/kg	136	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
Toluene	0.01	mg/kg	11.2	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
m,p-Xylene	0.01	mg/kg	16.5	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
O-Xylene	0.01	mg/kg	19.9	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
Total Xylene	0.01	mg/kg	16.5	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
<b>BTEXs by GC-MS</b>																					
Benzene	0.005	mg/kg	0.144	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
Ethylbenzene	0.004	mg/kg	35.9	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
Methyl tert butyl ether (MTBE)	0.01	mg/kg	136	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
Toluene (Methyl benzene)	0.005	mg/kg	11.2	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
m,p-Xylene	0.01	mg/kg	16.5	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
O-Xylene	0.01	mg/kg	19.9	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					
Total Xylene	0.014	mg/kg	16.5	IR	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01					

LEGEND  
 BH = Borehole  
 TP = Trial Pit  
 TK = Tank Pail  
 NA = Not Analysed  
 IR = Insufficient Risk  
 SP = Significant Risk  
 XX

SSSTL - Site specific target level  
 SNTL = No Stage 3 SSSTL available  
 Note 1: Total Xylene calculated as a total of m,p-Xylene and O-Xylene  
 SNTL = unacceptable risk to receptor cannot be achieved due to calcu  
 Indicates results in excess of adopted Human Health guideline  
 Indicates results in excess of adopted Controlled Waters guideline

Table 2  
 ABB - Priority Service Station, Rathbarney, Dublin  
 Stage 3 - Analytical Results - Soil PAH

Field Identification
Date
Sample Type
Sample Media
Above or Below Water Table
Sample Fate
Land Use: High Density Residential (Basement: Vapour Pathways only)

PRIO_IF01	PRIO_IF03	PRIO_IF04	PRIO_BF01	PRIO_BF03	PRIO_SF01	PRIO_BH01	PRIO_BH02	PRIO_BH03	PRIO_BH04	PRIO_BH05	PRIO_BH06
21-Jan-08	15-Feb-08	18-Feb-08	21-Jan-08	07-Feb-08	25-Jan-08	22-Mar-06	20-Mar-06	21-Mar-06	21-Mar-06	21-Mar-06	22-Mar-06
Primary	Primary	Primary	Primary	Primary	Primary	Primary	Major Ground Below	Natural	Natural	Natural	Major Ground Below
In situ	In situ	In situ	Ex situ	Ex situ	Ex situ	In situ	In situ	In situ	In situ	In situ	In situ

Chemical	Method	Units	SSTL's indicative of:		Max Concentration	Concentration											
			Unsat. Soil	Cont. Water		PRIO_IF01	PRIO_IF03	PRIO_IF04	PRIO_BF01	PRIO_BF03	PRIO_SF01	PRIO_BH01	PRIO_BH02	PRIO_BH03	PRIO_BH04	PRIO_BH05	PRIO_BH06
Acephenanthrene	0.014	mg/kg	7.340	RI	6.6	0.067	<0.014	0.036	0.04	<0.014	6.6	0.066	0.099	0.108	0.056	0.089	0.057
Acenaphthylene	0.005	mg/kg	6.17	RI	0.36	<0.005	<0.005	<0.005	<0.005	<0.005	0.36	0.028	0.022	0.048	0.01	0.046	0.019
Anthracene	0.009	mg/kg	sat	RI	4.5	<0.009	<0.009	0.05	0.012	0.019	4.5	0.009	0.103	<0.009	<0.009	<0.009	0.019
Benzofluoranthene	0.012	mg/kg	3.350	RI	4.1	<0.012	0.014	0.13	0.037	0.087	0.64	<0.012	0.336	<0.012	<0.012	<0.012	<0.012
Benzofluoranthene	0.016	mg/kg	sat	RI	6.4	<0.016	<0.012	0.058	0.028	0.055	6.4	<0.012	0.292	<0.012	<0.012	<0.012	<0.012
Benzofluoranthene	0.01	mg/kg	sat	RI	1.1	<0.016	<0.016	0.14	0.052	0.072	1.1	<0.016	0.251	<0.016	<0.016	<0.016	<0.016
Benzofluoranthene	0.025	mg/kg	sat	RI	3.7	<0.025	<0.025	0.024	0.032	0.032	3.7	<0.01	0.16	<0.01	<0.01	<0.01	<0.025
Chrysene	0.01	mg/kg	sat	RI	7.9	<0.01	<0.01	0.098	0.072	0.055	7.9	<0.025	0.258	<0.025	<0.025	<0.025	<0.025
Dibenz(a,h)anthracene	0.008	mg/kg	sat	RI	<2	<0.008	<0.008	<2	<2	<2	<2	<0.01	0.489	<0.01	0.018	<0.01	<0.01
Fluoranthene	0.025	mg/kg	sat	RI	0.83	<0.025	<0.025	0.009	0.01	0.011	0.64	<0.008	0.055	<0.008	<0.008	<0.008	<0.008
Fluoranthene	0.012	mg/kg	sat	RI	1.8	<0.012	<0.012	0.29	0.089	0.12	1.8	<0.025	0.772	<0.025	<0.025	<0.025	<0.025
Indeno(1,2,3-cd)pyrene	0.011	mg/kg	sat	RI	4.4	<0.011	<0.012	0.046	0.024	<0.012	4.4	0.062	0.066	0.075	0.037	0.045	0.047
Naphthalene	0.01	mg/kg	11.1	RI	3	0.38	0.044	0.061	0.022	0.028	3	<0.011	1.141	<0.011	<0.011	<0.011	<0.011
Phenanthrene	0.021	mg/kg	sat	RI	28	<0.021	<0.021	0.081	0.089	0.019	28	0.851	1.053	1.674	1.358	0.33	0.34
Pyrene	0.022	mg/kg	sat	RI	16	<0.022	<0.022	0.25	0.074	0.06	16	0.044	0.288	0.049	0.034	0.042	0.044
Total PAH (sum of 16)	0.025	mg/kg	sat	RI	130	<0.025	<0.025	1.6	0.7	0.7	130	<0.022	5.012	<0.022	<0.022	<0.022	<0.022

LEGEND  
 BH = Borehole  
 TP = Trial Pit  
 TK = Tank Pail  
 - = Not Analysed  
 SP = Stockpile

RI = Indignificant Risk  
 SSTL = Site specific target level  
 nc = No Stage 3 SSTL available  
 sat = unacceptable risk to receptor cannot be achieved due to calculated saturation of vapour pathway

Indicates results in excess of adopted Human Health guideline  
 Indicates results in excess of adopted Controlled Waters guideline





Table 2  
 ABB - Priority Service Station, Rathbarney, Dublin  
 Stage 3 - Analytical Results - Soil PAH

Field Identification
Depth (m)
Date
Sample Type
Sample Media
Above or Below Water Table
Sample Fate
Land Use : High Density Residential (Basement, vehicular pathways only)

PRIO-BH07	PRIO-BH07	PRIO-BH08	PRIO-BH09	PRIO-TK01	PRIO-TK02	PRIO-TK03	PRIO-TK04	PRIO-TK05	PRIO-TK06	PRIO-TK07	PRIO-TK08
0.5	2.5	0.5	0.5	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0
16-May-08	20-May-06	16-May-06	16-May-06	12-Feb-08	12-Feb-08	12-Feb-08	12-Feb-08	13-Feb-08	13-Feb-08	13-Feb-08	13-Feb-08
Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Made ground	Natural	Made ground	Made ground	Natural	Made ground	Made ground	Made ground	Made ground	Made ground	Made ground	Made ground
Above	Below	Above	Above	Below	Below	Below	Below	Below	Below	Below	Below
In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ

Chemical	Method	Units	SSTLs protective of		Max	Concentration											
			Human Health Unsat. Soil	Controlled Waters		PRIO-BH07	PRIO-BH08	PRIO-BH09	PRIO-TK01	PRIO-TK02	PRIO-TK03	PRIO-TK04	PRIO-TK05	PRIO-TK06	PRIO-TK07	PRIO-TK08	
Acenaphthene	0.014	mg/kg	7.260	IR	6.6	<0.014	0.02	0.029	<0.014	<0.014	0.021	0.024	<0.014	<0.014	<0.014	<0.014	<0.014
Acenaphthylene	0.005	mg/kg	61.7	IR	0.36	0.017	<0.005	0.042	0.013	<0.005	0.017	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Anthracene	0.003	mg/kg	sat	IR	4.5	0.038	0.018	0.068	0.015	<0.009	0.056	0.049	<0.009	<0.009	<0.009	<0.009	<0.009
Benz[a]anthracene	0.012	mg/kg	3.350	IR	4.1	0.075	0.046	0.428	0.032	0.015	0.56	0.11	0.018	0.021	0.017	0.017	0.017
Benz[b]fluoranthene	0.016	mg/kg	sat	IR	6.4	0.055	0.027	0.378	0.022	<0.012	0.074	0.074	<0.012	<0.012	<0.012	<0.012	<0.012
Benz[k]fluoranthene	0.01	mg/kg	sat	nc	11	0.052	0.027	0.378	0.022	<0.012	0.074	0.074	<0.012	<0.012	<0.012	<0.012	<0.012
Benz[a]pyrene	0.025	mg/kg	sat	nc	3	0.048	0.027	0.146	<0.025	<0.025	0.36	0.04	<0.025	<0.025	<0.025	<0.025	<0.025
Chrysene	0.01	mg/kg	sat	IR	7.9	0.093	0.046	0.492	0.033	<0.01	0.57	0.11	<0.025	<0.025	0.033	0.024	0.024
Fluorene	2	mg/kg	sat	nc	<2	0.056	0.01	0.142	0.011	<0.008	0.12	0.008	<0.008	<0.008	<0.008	<0.008	<0.008
Fluoranthene	0.025	mg/kg	sat	IR	1.8	0.073	0.071	0.698	0.051	0.025	0.21	0.21	<0.025	<0.025	<0.025	<0.025	<0.025
Indeno[1,2,3-cd]pyrene	0.012	mg/kg	sat	IR	4.4	0.038	0.02	0.047	0.03	<0.012	0.016	0.029	<0.012	<0.012	<0.012	<0.012	<0.012
Naphthalene	0.011	mg/kg	sat	nc	3	0.061	<0.011	0.306	0.03	<0.011	0.43	0.04	<0.011	<0.011	<0.011	<0.011	<0.011
Phenanthrene	0.021	mg/kg	sat	IR	17	0.075	0.032	0.577	0.185	0.065	0.034	0.02	0.032	0.024	0.042	0.036	0.036
Pyrene	0.022	mg/kg	sat	IR	28	0.064	0.032	0.669	0.046	<0.022	0.25	0.2	<0.022	<0.022	<0.022	<0.022	<0.022
Total PAH (Sum of 16)	0.325	mg/kg	nc	nc	130	1.273	0.526	5.194	0.628	0.27	6.5	1.2	0.034	0.034	0.081	0.14	0.13

LEGEND  
 BH = Borehole  
 TP = Trial Pit  
 TK = Tank Pull  
 - = Not Analysed  
 SP = Stockpile

IR = Insignificant Risk  
 SSTL = Site specific target level  
 nc = No Stage 3 SSTL available  
 sat = unacceptable risk to receptor cannot be achieved due to c

XX indicates results in excess of adopted Human Health guideline  
 XX indicates results in excess of adopted Controlled Waters guideline

Table 2  
 Abb - Priority Service Station, Rathliffham, Dublin  
 Stage 3 - Analytical Results - Soil PAH

Field Identification	
Depth (m)	
Date	
Sample Type	
Sample Media	
Above or Below Water Table	
Sample Fate	
Land Use - High Density Residential (Basement, Vehou, Pathways etc)	

PRIO TP06	PRIO TP07	PRIO TP07	PRIO TP08	PRIO TP08	PRIO TP09	PRIO TP09	PRIO TP10	PRIO TP10	PRIO TP11	PRIO TP11	PRIO TP12
3.6	0.5	3.1	1.5	2.7	1.9	3.5	0.4	2.8	0.5	2.5	0.5
25-Jan-08	25-Jan-08	25-Jan-08	25-Jan-08	25-Jan-08	25-Jan-08	25-Jan-08	25-Jan-08	25-Jan-08	25-Jan-08	25-Jan-08	25-Jan-08
Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Natural	Made Ground	Natural	Made Ground	Natural	Made Ground	Natural	Made Ground	Natural	Made Ground	Natural	Made Ground
Below	Above	Below	Below	Below	Below	Below	Below	Below	Above	Below	Above
In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ

Chemical	Method Limit	Units	SSTL a protective of:		Max Concentration	Human Health												
			Unhindered Soil	Co-Exposed Waters		Concentration												
Acenaphthene	0.014	mg/kg	7.360	IR	6.6	<0.014	0.019	<0.014	0.029	0.017	<0.014	<0.014	0.45	0.71	<0.014	0.024	0.03	
Acenaphthylene	0.005	mg/kg	617	IR	0.36	<0.005	0.04	<0.005	0.071	0.032	0.016	<0.005	0.083	0.017	0.013	<0.005	0.034	
Anthracene	0.009	mg/kg	sat	IR	4.5	<0.009	0.096	0.012	0.14	0.053	0.028	<0.009	0.84	0.77	0.045	<0.009	0.08	
Benz[a]anthracene	0.012	mg/kg	3.350	IR	4.1	0.023	0.49	0.033	0.65	0.23	0.12	0.026	2.6	1.5	0.19	0.026	0.23	
Benzofluoranthene	0.016	mg/kg	sat	IR	6.4	<0.016	0.63	0.037	0.62	0.29	0.12	<0.016	2.5	1.3	0.18	<0.016	0.27	
Benzofluoranthene	0.01	mg/kg	sat	IR	11	<0.016	0.67	0.037	0.79	0.36	0.15	<0.016	2.4	1.4	0.23	<0.016	0.25	
Benzofluoranthene	0.025	mg/kg	sat	IR	3.7	<0.025	0.36	<0.025	0.31	0.13	0.09	<0.025	1.1	0.75	0.11	<0.025	0.16	
Benzofluoranthene	0.01	mg/kg	sat	IR	9	<0.025	0.36	<0.025	0.31	0.16	0.09	<0.025	1.1	0.58	0.11	<0.025	0.16	
Chrysene	0.01	mg/kg	2	IR	7.9	0.021	0.59	0.042	0.7	0.31	0.14	0.016	2.3	1.4	0.2	0.016	0.27	
Dibenz[a,h]anthracene	0.008	mg/kg	sat	IR	0.83	<0.008	0.1	<0.008	0.081	0.036	0.011	<0.008	0.66	0.3	0.019	<0.008	0.035	
Fluorene	0.025	mg/kg	sat	IR	18	<0.025	0.97	0.067	1.2	0.37	0.23	<0.025	5	3.5	0.3	<0.025	0.37	
Indeno[1,2,3-cd]pyrene	0.012	mg/kg	sat	IR	4.4	<0.012	0.024	<0.012	0.037	0.017	<0.012	0.33	0.35	0.3	<0.012	0.032		
Naphthalene	0.011	mg/kg	sat	IR	12	<0.011	0.29	0.016	0.32	0.11	0.056	<0.011	1.3	0.63	0.095	<0.011	0.13	
Phenanthrene	0.021	mg/kg	sat	IR	11	0.011	0.041	0.014	0.1	0.13	0.026	0.011	1.24	0.25	0.038	<0.021	0.12	
Pyrene	0.022	mg/kg	sat	IR	16	<0.022	0.72	0.054	0.95	0.43	0.19	<0.022	3	3.5	0.17	0.024	0.27	
Total PAH (Sum of 16)	0.025	mg/kg	nc	nc	130	0.037	5.7	0.41	6.6	2.8	1.3	0.074	28	20	2	<0.022	0.32	
																		2.8

IR = Indefinite Risk  
 TP = Trail Pit  
 TK = Tank Pull  
 - = Not Analysed  
 SP = Stockpile

Indicates results in excess of adopted Human Health guideline  
 Indicates results in excess of adopted Controlled Waters guideline





Table 2  
 ABB - Priority Service Station, Rathbarney, Dublin  
 Stage 3 - Analytical Results - Soil PAH

Field Identification
Depth (m)
Date
Sample Type
Sample Media
Above or Below Water Table
Sample Fate
Land Use : High Density Residential (Basement, vapour pathways only)

	PRIO TP18	PRIO TP19	PRIO TP19	PRIO TP20	PRIO TP20	PRIO TP21	PRIO TP21	PRIO TP22	PRIO TP22	PRIO TP23	PRIO TP23	PRIO TP24
3.4	0.5	3.0	0.5	3.5	1.5	2.5	0.5	3.1	1.5	3.5	1.5	
15-Feb-08	15-Feb-08	15-Feb-08	15-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08	18-Feb-08	
Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	
Natural	Made Ground	Natural	Made Ground	Natural	Natural	Natural	Made Ground	Natural	Natural	Natural	Natural	
Below	Above	In situ	In situ	In situ	Below	Below	Above	Below	Below	Below	Below	
In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	

Chemical	Method Limit	Units	SSTLs protective of:		Max Concentration	Human Health (Unrestricted)											
			Soil	Water		PRIO TP18	PRIO TP19	PRIO TP19	PRIO TP20	PRIO TP20	PRIO TP21	PRIO TP21	PRIO TP22	PRIO TP22	PRIO TP23	PRIO TP23	PRIO TP24
Acenaphthene	0.014	mg/kg	6.6	0.26	<0.014	0.26	<0.014	<0.014	<0.014	0.048	<0.014	<0.014	<0.014	<0.014	<0.014	0.057	<0.014
Acenaphthylene	0.005	mg/kg	0.36	0.028	<0.005	0.028	<0.005	<0.005	<0.005	0.065	<0.005	<0.005	<0.005	<0.005	<0.005	0.077	<0.005
Anthracene	0.009	mg/kg	4.5	0.59	0.02	0.59	0.027	0.071	0.035	<0.009	<0.009	0.029	0.031	0.022	0.009	0.099	<0.009
Benzofluoranthene	0.012	mg/kg	4.1	1.4	0.052	1.4	0.071	0.063	0.032	0.089	0.029	0.031	0.022	0.021	0.058	0.021	<0.012
Benzofluoranthene	0.016	mg/kg	3.50	0.95	0.035	0.95	0.053	0.053	0.032	0.058	<0.012	<0.012	<0.012	<0.012	0.018	0.032	<0.016
Benzofluoranthene	0.01	mg/kg	11	1	0.054	1	0.071	0.041	0.018	0.091	<0.016	0.017	0.018	0.017	0.018	0.032	<0.016
Benzofluoranthene	0.025	mg/kg	3.7	0.49	0.041	0.49	0.034	0.041	<0.01	0.032	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.025
Benzofluoranthene	0.01	mg/kg	7.9	0.66	0.034	0.66	0.042	0.028	0.019	0.033	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.01
Chrysene	2	mg/kg	<2	1.4	0.059	1.4	0.088	0.06	0.019	0.083	0.016	0.015	0.021	0.02	0.046	<0.01	<0.01
Dibenz[ah]anthracene	0.008	mg/kg	0.83	0.21	0.008	0.21	0.012	0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
Fluoranthene	0.025	mg/kg	1.8	2.8	0.067	2.8	0.13	0.069	0.025	0.087	<0.025	0.015	0.036	2	0.063	<0.025	<0.025
Indeno[1,2,3-cd]pyrene	0.012	mg/kg	4.4	0.31	0.023	0.31	0.013	0.086	<0.012	0.037	<0.012	0.015	<0.012	<0.012	<0.012	<0.012	<0.012
Naphthalene	0.01	mg/kg	11.1	0.42	0.018	0.42	0.028	0.028	<0.011	0.028	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011
Phenanthrene	0.021	mg/kg	2.8	2.6	0.19	2.6	0.039	0.044	0.039	0.089	0.015	0.013	0.022	0.021	0.031	0.012	0.012
Pyrene	0.022	mg/kg	16	2.1	0.068	2.1	0.11	0.061	<0.022	0.13	<0.022	<0.022	<0.022	<0.022	0.39	<0.021	<0.021
Total PAH (sum of 16)	0.025	mg/kg	130	16	0.92	16	0.90	0.67	0.13	1.1	0.06	0.12	0.12	0.12	5.1	<0.022	0.038

Legend:  
 BH = Borehole  
 TP = Trial Pit  
 TK = Tank Pull  
 - = Not Analysed  
 SP = Stockpile

IR = Insignificant Risk  
 SSTL = Site specific target level  
 nc = No Stage 3 SSTL available  
 sat = unacceptable risk to receptor cannot be achieved due to c

Indicates results in excess of adopted Human Health guideline  
 Indicates results in excess of adopted Controlled Waters guideline

Table 2  
 ABB - Priority Services Station, Rairhamham, Dublin  
 Stage 3 - Analytical Results - Soil PAH

Field Identification
Depth (m)
Date
Sample Type
Sample Media
Above or Below Water Table
Sample Fate
Land Use - High Density Residential (Basement, Vehicle Pathways only)

PRIO TP12	PRIO TP13	PRIO TP13	PRIO TP14	PRIO TP14	PRIO TP15	PRIO TP15	PRIO TP16	PRIO TP16	PRIO TP17	PRIO TP17	PRIO TP18
2.0	0.7	2.5	0.5	3.5	0.4	4.0	0.5	3.3	2.6	3.4	1.5
25-Jan-08	25-Jan-08	25-Jan-08	28-Jan-08	28-Jan-08	28-Jan-08	28-Jan-08	15-Feb-08	15-Feb-08	15-Feb-08	15-Feb-08	15-Feb-08
Primary	Primary	Primary	Made Ground	Natural	Made Ground	Natural	Made Ground	Natural	Natural	Natural	Made Ground
Made Ground	Made Ground	Natural	Made Ground	Natural	Made Ground	Natural	Made Ground	Natural	Natural	Natural	Made Ground
Below	Above	Below	Above	Below	Above	Below	Above	Below	Below	Below	Below
In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ

Chemical	Method	Units	SSTLs Protective of:		Max Concentration	Concentration											
			Human Health Unsat. Soil	Controlled Waters		PRIO TP12	PRIO TP13	PRIO TP13	PRIO TP14	PRIO TP14	PRIO TP15	PRIO TP15	PRIO TP16	PRIO TP16	PRIO TP17	PRIO TP17	PRIO TP18
Acenaphthene	Limit	mg/kg	7.380	IR	6.6	<0.014	<0.014	0.024	0.085	0.024	0.023	0.018	<0.014	<0.014	<0.014	<0.014	<0.014
Acenaphthylene	0.014	mg/kg	6.17	IR	0.36	<0.005	<0.005	<0.005	0.04	<0.005	<0.005	0.09	<0.005	<0.005	<0.005	<0.005	<0.005
Anthracene	0.009	mg/kg	sat	IR	4.5	<0.004	0.013	<0.009	0.21	0.017	0.023	0.12	0.11	<0.012	<0.012	0.024	0.037
Benzofluoranthene	0.012	mg/kg	3.350	IR	4.1	0.016	0.047	0.022	1.1	<0.012	<0.012	0.1	0.088	<0.012	0.041	<0.012	0.022
Benzofluoranthene	0.012	mg/kg	3.350	IR	6.4	0.017	0.026	<0.016	1.1	<0.016	<0.016	0.13	0.096	<0.016	0.05	<0.016	0.026
Benzofluoranthene	0.016	mg/kg	sat	IR	11	0.022	0.025	<0.01	0.63	<0.01	<0.01	0.067	0.04	<0.01	0.024	<0.01	0.014
Benzofluoranthene	0.01	mg/kg	sat	IR	3.7	<0.013	0.025	<0.01	0.85	<0.01	<0.01	0.047	0.061	<0.01	0.024	<0.01	0.025
Benzofluoranthene	0.025	mg/kg	sat	IR	3	<0.025	0.025	<0.025	1.2	<0.01	0.015	0.13	0.11	<0.01	0.056	<0.025	<0.025
Chrysene	0.01	mg/kg	sat	IR	7.9	0.028	0.046	0.012	1.2	<0.01	0.015	0.13	0.11	<0.01	0.056	0.024	0.029
Coronene	2	mg/kg	sat	IR	<2	<0.008	<0.008	<0.008	0.14	<0.008	<0.008	0.033	0.012	<0.008	0.006	<0.008	<0.008
Dibenzofluoranthene	0.008	mg/kg	sat	IR	0.63	<0.008	<0.008	<0.008	2.1	<0.025	<0.025	0.21	0.2	<0.025	0.096	<0.025	0.043
Fluoranthene	0.025	mg/kg	sat	IR	18	0.026	0.058	<0.025	0.062	<0.012	<0.012	0.017	<0.012	<0.012	0.018	<0.012	0.029
Fluoranthene	0.012	mg/kg	sat	IR	4.4	<0.012	<0.012	<0.012	0.062	<0.012	<0.012	0.052	0.036	<0.011	0.037	<0.011	0.026
Indeno(1,2,3-cd)pyrene	0.011	mg/kg	sat	IR	3	<0.011	0.019	<0.011	0.82	<0.011	<0.011	0.017	0.015	<0.011	0.036	0.037	0.026
Indeno(1,2,3-cd)pyrene	0.01	mg/kg	11.1	IR	11.1	0.03	0.016	<0.01	0.059	<0.01	<0.01	0.18	0.1	0.035	0.099	0.035	0.073
Phenanthrene	0.021	mg/kg	sat	IR	28	0.066	0.075	<0.021	0.91	<0.021	0.022	0.18	0.15	<0.022	0.074	<0.022	0.038
Phenanthrene	0.021	mg/kg	sat	IR	16	0.063	0.053	<0.022	1.7	<0.022	<0.022	0.18	0.15	<0.022	0.074	<0.022	0.038
Pyrene	0.022	mg/kg	sat	IR	15	0.063	0.053	<0.022	1.7	<0.022	<0.022	0.18	0.15	<0.022	0.074	<0.022	0.038
Pyrene	0.025	mg/kg	nc	IR	130	0.26	0.43	0.053	12	0.041	0.084	1.3	1.1	0.071	0.24	0.14	0.35
Total PAH (Sum of 16)	0.025	mg/kg	nc	IR	130	0.26	0.43	0.053	12	0.041	0.084	1.3	1.1	0.071	0.24	0.14	0.35

LEGEND  
 BH = Benzene  
 TP = Trial Pt  
 TK = Tank Pull  
 - = Not Analyzed  
 SP = Stockpile

IR = Insignificant Risk  
 SSTL = Site specific target level  
 nc = No Stage 3 SSTL available  
 sat = unacceptable risk to receptor cannot be achieved due to c

Indicates results in excess of adopted Human Health guideline  
 Indicates results in excess of adopted Controlled Waters guideline







Table 2  
 ABB - Priority Service Station, Rathfarnham, Dublin  
 Stage 3 - Analytical Results - Soil PAH

Field Identification
Depth (m)
Date
Sample Type
Sample Media
Above or Below Water Table
Sample Fate
Land Use - High Density Residential (Basement, vapour pathways only)

PRIO_TP36	PRIO_TP36	PRIO_TP37	PRIO_TP37
2.0	3.7	0.5	4.0
21-Feb-08	21-Feb-08	21-Feb-08	21-Feb-08
Primary	Primary	Primary	Primary
Natural	Natural	Made Ground	Natural
Below	Below	Above	Below
In situ	In situ	In situ	In situ

Chemical	Method Detection Limit	Units	SSTL3 protective of:		Max Concentration			
			Humid Unsaturated Soil	Controlled Waters				
Aceanthylene	0.014	mg/kg	7.33	IR	6.6	0.2	<0.014	<0.014
Acenaphthylene	0.005	mg/kg	6.17	IR	0.36	0.019	<0.005	<0.005
Anthracene	0.009	mg/kg		IR	4.5	0.45	<0.009	<0.009
Benzo(a)anthracene	0.012	mg/kg		IR	4.1	1	0.027	0.53
Benzo(a)pyrene	0.012	mg/kg		IR	6.4	0.75	<0.012	<0.012
Benzo(b)fluoranthene	0.016	mg/kg		IR	11	1	0.02	0.65
Benzo(k)fluoranthene	0.025	mg/kg		IR	3.7	0.41	<0.01	<0.01
Chrysene	0.01	mg/kg		IR	7.9	0.39	<0.025	<0.025
Dibenz(a,h)anthracene	0.008	mg/kg		IR	<2	0.94	0.026	0.49
Fluoranthene	0.025	mg/kg		IR	0.83	0.15	<0.008	0.061
Fluorene	0.012	mg/kg		IR	1.8	2.2	<0.025	0.6
Indeno(1,2,3-cd)pyrene	0.011	mg/kg		IR	4.4	0.19	<0.012	<0.012
Naphthalene	0.01	mg/kg		IR	5	0.35	<0.011	<0.011
Phenanthrene	0.021	mg/kg		IR	17	0.021	0.04	0.029
Pyrene	0.022	mg/kg		IR	28	1.3	0.034	0.14
Total PAH (Sum of 16)	0.025	mg/kg		IR	130	1.5	<0.022	<0.022
				IR		11	0.15	4.3

LEGEND  
 BH = Borehole  
 TP = Trial Pit  
 TK = Tank Pail  
 . = Not Analysed  
 SP = Stockpile

IR = insignificant Risk  
 SSTL = Site specific target level  
 NC = No Stage 3 SSTL available  
 sat = unacceptable risk to receptor cannot be achieved due to c

XX  
 XX  
 Indicates results in excess of adopted Human Health guideline  
 Indicates results in excess of adopted Controlled Waters guideline



Table 3  
 A88 - Proby Service Station, Rahimhaman, Dublin  
 Stage 3 - Analytical Results - Soil Heavy Metals

Field Identification
Drain (n)
Date
Sample Type
Sample Media
Above or Below Water Table
Sample Date
Field Use - High Density Residential
Basement, yes/no (Permeo 3 only)

PRIO-TK01	PRIO-TK02	PRIO-TK03	PRIO-TK04	PRIO-TK05	PRIO-TK06	PRIO-TK07	PRIO-TK08	PRIO-TK09	PRIO-TK10	PRIO-TK11	PRIO-TK12	PRIO-TK13
0.5	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
13-01-08	13-01-08	13-01-08	13-01-08	13-01-08	13-01-08	13-01-08	13-01-08	13-01-08	13-01-08	13-01-08	13-01-08	13-01-08
Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Made ground	Natural	Made ground	Made ground	Made ground	Made ground	Made ground	Made ground	Made ground	Made ground	Made ground	Made ground	Made ground
Above	Below	Below	Below	Below	Below	Below	Below	Below	Below	Below	Below	Below
In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ

Chemical	Method Detection Limit	Units	SSTL protective of:		Max Concentration	PRIO-TK01 - PRIO-TK13												
			Human Health Unsat. Soil	Community Water		PRIO-TK01	PRIO-TK02	PRIO-TK03	PRIO-TK04	PRIO-TK05	PRIO-TK06	PRIO-TK07	PRIO-TK08	PRIO-TK09	PRIO-TK10	PRIO-TK11	PRIO-TK12	PRIO-TK13
Asenic	3	mg/kg	no path	IR	47	9	5	7	9	5	5	8	7	5	8	9	8	
Beryllium	0.4	mg/kg	no path	IR	1	<1	<0.4	<0.4	0.5	<0.4	0.4	0.4	0.4	<0.4	<0.4	0.4	0.4	
Cadmium	0.3	mg/kg	no path	0.3	10	<1	1.1	1.1	1.1	1.4	1.4	1.5	1.4	1.5	1.7	1.7	1.4	
Chromium	4.5	mg/kg	no path	IR	35	13	19	8.3	16	10	22	10	12	15	10	20	15	
Copper	5	mg/kg	no path	IR	69	8	15	8	9	10	17	18	17	21	20	20	22	
Lead	2	mg/kg	no path	IR	40	8	26	7	78	11	14	14	14	21	18	18	35	
Mercury (total conc. sum)	0.6	mg/kg	no path	IR	0.6	<1.2	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	
Nickel	0.9	mg/kg	no path	IR	51	16	18	11	21	15	35	29	17	33	31	34	23	
Vanadium	1.5	mg/kg	no path	IR	51	17	18	12	24	20	24	14	19	23	22	22	24	
Zinc	2.5	mg/kg	no path	IR	79	56	80	43	120	42	84	80	71	91	63	57	82	

LC50ND  
 BH = Borehole  
 TP = Trial Pit  
 TK = Tank Pad  
 - = Not Analysed  
 SP = Stockpile

IR = Insignificant Risk  
 no path = no pathway considered viable  
 SSTL = Site specific target level  
 nc = No Stage 3 SSTL available

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Table 3  
 a)g: Phony Service Station, Parkham, Dublin  
 Stage 3 - Analytical Results - Soil Heavy Metals

Field Identification	
Depth (m)	
Sample Type	
Sample Media	
Above or Below EXEM Label	
Sample EXEM Label	
Land Use - Residential	
Residential	
Basement (Level Below 0.1m)	

PH10_TP12	PH10_TP12	PH10_TP13	PH10_TP13	PH10_TP14	PH10_TP14	PH10_TP15	PH10_TP15	PH10_TP16	PH10_TP16	PH10_TP17	PH10_TP17	PH10_TP18	PH10_TP18	PH10_TP19	PH10_TP19
0.3	2.0	0.7	2.5	0.5	3.5	0.4	4.0	0.5	3.3	2.6	3.4	1.5	3.4	0.5	
25-Jan-08	25-Jan-08	25-Jan-08	25-Jan-08	28-Jan-08	28-Jan-08	28-Jan-08	28-Jan-08	15-Feb-08	15-Feb-08	15-Feb-08	15-Feb-08	15-Feb-08	15-Feb-08	15-Feb-08	
Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	
Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	
Above	Above	Above	Above	Above	Above	Above	Above	Above	Above	Above	Above	Above	Above	Above	
In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ	

Chemical	Method Detection Limit	Units	SSTL - protective of		Max Concentration	Results														
			Human Health Uncontaminated Soil	Commercial Waste		PH10_TP12	PH10_TP12	PH10_TP13	PH10_TP13	PH10_TP14	PH10_TP14	PH10_TP15	PH10_TP15	PH10_TP16	PH10_TP16	PH10_TP17	PH10_TP17	PH10_TP18	PH10_TP18	PH10_TP19
Asbestos	3	mg/kg	no path	IR	47	1.3	20	19	15	14	8	11	8	5	7	6	7	8	7	26
Barium	0.4	mg/kg	no path	IR	1	<0.4	0.7	0.6	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.7
Cadmium	0.3	mg/kg	no path	IR	10	1.7	1.8	1.4	0.9	1.4	1	0.8	1.7	1.2	1.5	1.4	1.4	1.4	1.4	0.7
Chromium	4.5	mg/kg	no path	IR	35	1.7	2.3	2.2	1.6	1.9	1.3	1.1	1.6	1.2	1.6	1.3	1.4	1.6	1.5	22
Copper	6	mg/kg	no path	IR	69	2.3	1.7	2.2	1.1	2.6	1.0	1.1	2.3	1.2	2.2	2.0	1.7	1.8	2.3	62
Lead	2	mg/kg	no path	IR	31	0.6	0.6	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	4.0
Mercury (Inorganic Compounds)	0.5	mg/kg	no path	IR	0.5	<0.6	0.6	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	4.0
Nickel	0.9	mg/kg	no path	IR	63	26	30	40	14	28	19	14	36	17	23	21	27	29	31	32
Vanadium	1.5	mg/kg	no path	IR	51	32	33	22	18	29	18	18	23	15	23	21	21	22	21	43
Zinc	2.5	mg/kg	no path	IR	79	110	83	83	41	130	52	54	59	62	90	100	71	73	89	810

LEGEND  
 BH = Borehole  
 TP = Trial Pit  
 TK = Tank Pail  
 \* = Not Analysed  
 SP = Stockpile  
 IR = Insignificant Risk  
 no path = no pathway considered viable  
 SSTL = Site specific target level  
 no = No Stage 3 SSTL available  
 indicates results in excess of adopted Human Health guideline  
 indicates results in excess of adopted Controlled Waters guideline





Table 9  
 ADB - Priority Services Station, Rathfarnham, Dublin  
 Stage 3 - Analytical Results - Soil Heavy Metals

Field Identification	PRI0_TP27	PRI0_TP28	PRI0_TP29	PRI0_TP30	PRI0_TP31	PRI0_TP32	PRI0_TP33	PRI0_TP34
Date	19-Feb-08	19-Feb-08	19-Feb-08	19-Feb-08	19-Feb-08	19-Feb-08	19-Feb-08	19-Feb-08
Sample Type	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Sample Media	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Above or Below Water Table	Above	Above	Above	Above	Above	Above	Above	Above
Sample Rate	Below	Below	Below	Below	Below	Below	Below	Below
Land Use - High Density Residential (residential, vapour pathways only)	In situ	In situ	In situ	In situ	In situ	In situ	In situ	In situ

Chemical	Method Detection Limit	SSTLs protective of:		Mix Concentration
		Human Health (unrestricted Soil)	Controlled Activities	
Arsenic	3 mg/kg	no path	IR	47
Beryllium	0.4 mg/kg	no path	IR	1
Cadmium	0.3 mg/kg	no path	IR	18
Chromium	4.5 mg/kg	no path	IR	35
Copper	6 mg/kg	no path	IR	68
Lead	2 mg/kg	no path	IR	650
Mercury (inorganic compounds)	0.6 mg/kg	no path	IR	0.6
Nickel	0.9 mg/kg	no path	IR	63
Vanadium	1.5 mg/kg	no path	IR	51
Zinc	2.5 mg/kg	no path	IR	360

Chemical	PRI0_TP27	PRI0_TP28	PRI0_TP29	PRI0_TP30	PRI0_TP31	PRI0_TP32	PRI0_TP33	PRI0_TP34
Arsenic	6	8	12	11	7	14	14	20
Beryllium	<0.4	<0.4	0.9	<0.4	0.6	0.6	0.6	<0.4
Cadmium	1.4	1.7	1.9	1.1	1.8	1.4	1.4	<0.4
Chromium	13	16	21	16	14	18	18	27
Copper	18	22	25	22	19	23	22	28
Lead	22	17	35	240	14	19	19	130
Mercury (inorganic compounds)	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Nickel	17	39	35	23	30	26	27	35
Vanadium	18	25	38	23	39	28	21	25
Zinc	55	68	120	100	86	62	90	90

LEGEND  
 BH = Borehole  
 FP = Flat Pit  
 TK = Tank Pile  
 - = Not Analysed  
 SP = Stockpile

IR - Insignificant Risk  
 no path = no pathway considered viable  
 SSTL = Site specific target level  
 nc = No Stage 3 SSTL available

Indicates results in excess of adopted Human Health guideline  
 Indicates results in excess of adopted Controlled Activities guideline

Table 1  
 ABB - Priority Services Station, Rathbarney, Dublin  
 Stage 3 - Analytical Results - Soil Heavy Metals

Field Identification	Depth (m)	Date	Sample Type	Sample Media	Above or Below Water Table	Sampling File	Land Use - High Density Residential (Basement, vapour pathway's only)	PRIO_TP34	PRIO_DUP01	PRIO_TP35	PRIO_TP36	PRIO_TP37	PRIO_TP38	PRIO_TP39
2.5	0.5	21-Feb-08	Primary	Made Ground	Above	In situ	In situ	13	13	15	12	14	12	7
2.5	0.5	21-Feb-08	Primary	Made Ground	Below	In situ	In situ	<0.4	<0.4	0.6	0.4	0.4	<0.4	<0.4
2.5	0.5	21-Feb-08	Primary	Made Ground	Below	In situ	In situ	17	17	13	10	1.6	1.8	0.8
2.5	0.5	21-Feb-08	Primary	Made Ground	Below	In situ	In situ	15	15	19	16	15	15	11
2.5	0.5	21-Feb-08	Primary	Made Ground	Below	In situ	In situ	14	14	20	17	63	18	0
2.5	0.5	21-Feb-08	Primary	Made Ground	Below	In situ	In situ	21	160	160	18	68	17	18
2.5	0.5	21-Feb-08	Primary	Made Ground	Below	In situ	In situ	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
2.5	0.5	21-Feb-08	Primary	Made Ground	Below	In situ	In situ	29	26	28	32	23	37	18
2.5	0.5	21-Feb-08	Primary	Made Ground	Below	In situ	In situ	18	18	21	18	21	16	11
2.5	0.5	21-Feb-08	Primary	Made Ground	Below	In situ	In situ	95	94	94	2800	95	96	72
2.5	0.5	21-Feb-08	Primary	Made Ground	Below	In situ	In situ	47	47	47	47	47	47	47

Chemical	Method Detection Limit	Units	SSTLs protective of:		Max Concentration
			Human Health Unsat. Soil	Controlled Waters	
Arsenic	3	mg/kg	no path	IR	47
Beryllium	0.4	mg/kg	no path	IR	1
Cadmium	0.3	mg/kg	no path	IR	19
Chromium	4.5	mg/kg	no path	IR	35
Copper	6	mg/kg	no path	IR	68
Lead	2	mg/kg	no path	IR	690
Mercury (inorganic compounds)	0.6	mg/kg	no path	IR	0.6
Nickel	0.9	mg/kg	no path	IR	63
Vanadium	1.5	mg/kg	no path	IR	51
Zinc	2.5	mg/kg	no path	IR	2800

LEGEND  
 BH = Borehole  
 TP = Trial Pit  
 TK = Tank Puff  
 \* = Not Analysed  
 SP = Stockpile

IR = Insignificant Risk  
 no path = no pathway considered viable  
 SSTL = Site specific target level  
 nc = No Stage 3 SSTL available

Indicates results in excess of accepted Human Health guideline  
 Indicates results in excess of accepted Controlled Waters guideline





Table 4  
 ABB - Priority Service Station, Railliamham, Dublin  
 Stage 3 - Analytical Results Water TPH

Field Identification		Date		Sample Type		Well Status		Residential (Basement, vapour)	
Method	Detection Limit	Units	Human Health	Controlled	Present	Primary	Present	Primary	Present
TPH Aromatics by GC-FID									
TPH >EC8-7: aromatic	10	µg/l	5,650	nc	<10	<10	<10	<10	<10
TPH >EC8-9: aromatic	10	µg/l	4,910	nc	<10	<10	<10	<10	<10
TPH >EC8-10: aromatic	10	µg/l	1,520	nc	<10	<10	<10	<10	<10
TPH >EC10-12: aromatic	10	µg/l	5,720	nc	<10	<10	<10	<10	<10
TPH >EC12-16: aromatic	10	µg/l	sat	nc	<10	<10	<10	<10	<10
TPH >EC16-21: aromatic	10	µg/l	sat	nc	<10	<10	<10	<10	<10
TPH >EC21-35: aromatic	10	µg/l	sat	nc	<10	<10	<10	<10	<10
Total Aromatics (C8-C35)	10	µg/l	nc	nc	<10	<10	<10	<10	<10
TPH Aliphatics by GC-FID									
TPH >EC5-6: aliphatic	10	µg/l	1,710	nc	<10	<10	<10	<10	<10
TPH >EC5-8: aliphatic	10	µg/l	1,210	nc	<10	<10	<10	<10	<10
TPH >EC8-10: aliphatic	10	µg/l	46	nc	<10	<10	<10	<10	<10
TPH >EC10-12: aliphatic	10	µg/l	30.7	nc	<10	<10	<10	<10	<10
TPH >EC12-16: aliphatic	10	µg/l	sat	nc	<10	<10	<10	<10	<10
TPH >EC16-21: aliphatic	10	µg/l	sat	nc	<10	<10	<10	<10	<10
TPH >EC21-35: aliphatic	10	µg/l	sat	nc	<10	<10	<10	<10	<10
Total Aliphatics (C5-C35)	10	µg/l	nc	nc	<10	<10	<10	<10	<10
TPH-PROT (C4-C12)	10	µg/l	nc	nc	<10	<10	<10	<10	<10
TPH (C5-C35)	10	µg/l	nc	nc	<10	<10	<10	<10	<10
TPH Hazard Index	0				0.75	0.75	0.75	0.75	0.75
BTEXs by GC-FID									
Benzene	10	µg/l	60	IR	<10	<10	<10	<10	<10
Ethylbenzene	10	µg/l	8,470	IR	<10	<10	<10	<10	<10
Methyl tert butyle ether (MTBE)	10	µg/l	405,000	IR	<10	<10	<10	<10	<10
Toluene	10	µg/l	3,910	IR	<10	<10	<10	<10	<10
m-P-Xylene	10	µg/l	3,850	nc	<10	<10	<10	<10	<10
O-Xylene	10	µg/l	4,840	nc	<10	<10	<10	<10	<10
Total Xylene	10	µg/l	3,850	IR	<10	<10	<10	<10	<10
BTEXs by GC-MS									
Benzene	1	µg/l	60	IR	<1	<1	<1	<1	<1
Ethylbenzene	1	µg/l	8,470	IR	<1	<1	<1	<1	<1
Methyl tert butyle ether (MTBE)	1	µg/l	405,000	IR	<1	<1	<1	<1	<1
Toluene	1	µg/l	3,910	IR	<1	<1	<1	<1	<1
m-P-Xylene	1	µg/l	3,850	nc	<1	<1	<1	<1	<1
O-Xylene	1	µg/l	4,840	nc	<1	<1	<1	<1	<1
Total Xylene	2	µg/l	3,850	IR	<1	<1	<1	<1	<1

SSTLs protective of:  
 Human Health  
 Controlled  
 Present  
 Primary  
 Present

IR = Insignificant Risk  
 SSTL = Site specific target level  
 nc = No Stage 3 SSTL available  
 Note 1: Total Xylene calculated as a total of m-P-Xylene and O-Xyl  
 sat = unacceptable risk to receptor cannot be achieved due to catc

Indicates results in excess of adopted Human Health guideline  
 Indicates results in excess of adopted Controlled Waters guideline

LEGEND  
 MW = Monitoring Well  
 Dup = Duplicate Sample  
 - = Not Analysed



Table 5  
 ABB - Priory Service Station, Rathnam, Dublin  
 Stage 3 - Analytical Results - Water PAH

Field Identification
Date
Sample Type
Well Status
Land Use - High Density Residential (Basement; vapour

PRIO_MW01	PRIO_MW02	PRIO_MW03	PRIO_MW04	PRIO_MW05	PRIO_MW06	PRIO_DUP
30-Mar-06	30-Mar-06	30-Mar-06	30-Mar-06	30-Mar-06	30-Mar-06	30-Mar-06
Primary Present	Primary Present	Primary Present	Primary Present	Primary Present	Primary Present	Duplicate of MW06

Chemical	Method Detection Limit	Units	SSTLs protective of:		Max Concentration	PRIO_MW01	PRIO_MW02	PRIO_MW03	PRIO_MW04	PRIO_MW05	PRIO_MW06	PRIO_DUP
			Human Health	Controlled Waters								
Acenaphthene	0.015	µg/l	sat	IR	<0.015	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Acenaphthylene	0.011	µg/l	10,800	IR	<0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Anthracene	0.015	µg/l	sat	IR	<0.015	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo[a]anthracene	0.017	µg/l	sat	IR	<0.017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo[a]pyrene	0.009	µg/l	251	IR	<0.009	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo[b]fluoranthene	0.023	µg/l	sat	IR	<0.023	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo[g,h,i]perylene	0.016	µg/l	sat	IR	<0.016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo[k]fluoranthene	0.027	µg/l	sat	IR	<0.027	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chrysene	0.013	µg/l	sat	IR	<0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Coronene		µg/l	nc	nc		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dibenz[a,h]anthracene	0.016	µg/l	sat	IR	<0.016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Fluoranthene	0.017	µg/l	sat	IR	<0.017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Fluorene	0.014	µg/l	sat	IR	<0.014	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno[1,2,3-cd]pyrene	0.014	µg/l	sat	IR	<0.014	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Naphthalene	0.1	µg/l	1,060	IR	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenanthrene	0.022	µg/l	sat	IR	<0.022	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pyrene	0.015	µg/l	sat	IR	<0.015	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total PAH (Sum of 16)	0.1	µg/l	nc	nc	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

LEGEND

MW = Monitoring Well  
 Dup = Duplicate Sample  
 - = Not Analysed

SSTL = Site specific target level  
 nc = No Stage 3 SSTL available  
 sat = unacceptable risk to receptor cannot be achieved due to calculated saturation of vapour pathway  
 IR = Insignificant Risk

XX  
 XX  
 Indicates results in excess of adopted Human Health guideline  
 Indicates results in excess of adopted Controlled Waters guideline

Table 5  
 ABB - Priority Service Station, Rathfarnham, Dublin  
 Stage 3 - Analytical Results - Water PAH

Field Identification
Date
Sample Type
Well Status
Land Use : High Density Residential /Basement, vapour

PRIO_MW07	PRIO_MW08	PRIO_MW09	PRIO_DUP01	PRIO_TRIP	PRIO_MW01	PRIO_DUP01
26-May-06	26-May-06	26-May-06	26-May-06	26-May-06	21-Jan-08	21-Jan-08
Primary	Primary	Primary	Duplicate of	Primary	Primary	Duplicate of MW01
Present	Present	Present			Present	

Chemical	Method Detection Limit	Units	SSTLs protective of:		Max Concentration	Controlled Waters	Human Health
			Human Health	Controlled Waters			
Acenaphthene	0.015	µg/l	sat	IR	<0.015	IR	<0.01
Acenaphthylene	0.011	µg/l	10,800	IR	<0.011	IR	<0.01
Anthracene	0.015	µg/l	sat	IR	<0.015	IR	<0.01
Benzo[a]anthracene	0.017	µg/l	sat	IR	<0.017	IR	<0.01
Benzo[a]pyrene	0.009	µg/l	251	IR	<0.009	IR	<0.01
Benzo[b]fluoranthene	0.023	µg/l	sat	IR	<0.023	IR	<0.01
Benzo[g,h,i]perylene	0.016	µg/l	sat	IR	<0.016	IR	<0.01
Benzo[k]fluoranthene	0.027	µg/l	sat	IR	<0.027	IR	<0.01
Chrysene	0.013	µg/l	sat	IR	<0.013	IR	<0.01
Coronene		µg/l	nc	nc	<0.01	nc	<0.01
Dibenzofluoranthene	0.016	µg/l	sat	IR	<0.016	IR	<0.01
Fluoranthene	0.017	µg/l	sat	IR	<0.017	IR	<0.01
Fluorene	0.014	µg/l	sat	IR	<0.014	IR	<0.01
Indeno[1,2,3-cd]pyrene	0.014	µg/l	sat	IR	<0.014	IR	<0.01
Naphthalene	0.1	µg/l	1,060	IR	<0.1	IR	<0.01
Phenanthrene	0.022	µg/l	sat	IR	<0.022	IR	<0.01
Pyrene	0.015	µg/l	sat	IR	<0.015	IR	<0.01
Total PAH (Sum of 16)	0.1	µg/l	nc	nc	<0.1	nc	<0.01

LEGEND

MW = Monitoring Well  
 Dup = Duplicate Sample  
 - = Not Analysed  
 SSTL = Site specific target level  
 nc = No Stage 3 SSTL available  
 sat = unacceptable risk to receptor cannot be achieved due to ca  
 IR = Insignificant Risk

Indicates results in excess of adopted Human Health guideline  
 Indicates results in excess of adopted Controlled Waters guideline

Table 5  
 ABB - Priory Service Station, Rathfarnham, Dublin  
 Stage 3 - Analytical Results - Water PAH

Field Identification		SSTLs protective of:											
Chemical	Method Detection Limit	Units	Human Health	Controlled Waters	Max Concentration	21-Jan-08 Present	PRIO MW02 21-Jan-08 Primary Present	PRIO MW03 21-Jan-08 Primary Present	PRIO MW04 21-Jan-08 Primary Present	PRIO MW05 21-Jan-08 Primary Present	PRIO MW06 21-Jan-08 Primary Present	PRIO MW08 21-Jan-08 Primary Present	PRIO MW09 21-Jan-08 Primary Present
Acenaphthene	0.015	µg/l	sat	IR	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Acenaphthylene	0.011	µg/l	10,800	IR	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011
Anthracene	0.015	µg/l	sat	IR	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Benzo[a]anthracene	0.017	µg/l	sat	IR	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017
Benzo[a]pyrene	0.009	µg/l	251	IR	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
Benzo[b]fluoranthene	0.023	µg/l	sat	IR	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023
Benzo[k]fluoranthene	0.016	µg/l	sat	IR	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
Benzo[e]fluoranthene	0.027	µg/l	sat	IR	<0.027	<0.027	<0.027	<0.027	<0.027	<0.027	<0.027	<0.027	<0.027
Chrysene	0.013	µg/l	sat	IR	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013
Coronene		µg/l	nc	nc									
Dibenz[a,h]anthracene	0.016	µg/l	sat	IR	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
Fluoranthene	0.017	µg/l	sat	IR	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017
Fluorene	0.014	µg/l	sat	IR	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014
Indeno[1,2,3-cd]pyrene	0.014	µg/l	sat	IR	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014
Naphthalene	0.1	µg/l	1,060	IR	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	0.022	µg/l	sat	IR	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022
Pyrene	0.015	µg/l	sat	IR	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Total PAH (Sum of 16)	0.1	µg/l	nc	nc	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

LEGEND  
 MW = Monitoring Well  
 Dup = Duplicate Sample  
 . = Not Analysed  
 SSSL = Site specific target level  
 nc = No Stage 3 SSSL available  
 sat = unacceptable risk to receptor cannot be achieved due to ca  
 IR = Insignificant Risk

XX  
 XX  
 Indicates results in excess of adopted Human Health guideline  
 Indicates results in excess of adopted Controlled Waters guideline

Table 5  
 ABB - Priory Service Station, Rathfarnham, Dublin  
 Stage 3 - Analytical Results - Water PAH

Field Identification	PRIO_MW07	PRIO_TRIPO2	PRIO_MW01	PRIO_DUP01	PRIO_MW02	PRIO_MW03	PRIO_MW04
Date	28-Jan-08	28-Jan-08	4-Mar-08	4-Mar-08	4-Mar-08	4-Mar-08	4-Mar-08
Sample Type	Primary	Primary	Primary	Duplicate of MW01	Primary	Primary	Primary
Well Status	Present	Present	Present		Present	Present	Present
Land Use : High Density Residential (Basement; vapour							

Chemical	Method Detection Limit	Units	SSTLs protective of:		Max Concentration	Controlled Waters	Human Health
			Human Health	Waters			
Acenaphthene	0.015	µg/l	sat	IR	<0.015	IR	<0.015
Acenaphthylene	0.011	µg/l	10,800	IR	<0.011	IR	<0.011
Anthracene	0.015	µg/l	sat	IR	<0.015	IR	<0.015
Benzo[a]anthracene	0.017	µg/l	sat	IR	<0.017	IR	<0.017
Benzo[a]pyrene	0.009	µg/l	251	IR	<0.009	IR	<0.009
Benzo[b]fluoranthene	0.023	µg/l	sat	IR	<0.023	IR	<0.023
Benzo[g,h,i]perylene	0.016	µg/l	sat	IR	<0.016	IR	<0.016
Benzo[k]fluoranthene	0.027	µg/l	sat	IR	<0.027	IR	<0.027
Chrysene	0.013	µg/l	sat	IR	<0.013	IR	<0.013
Coronene		µg/l	nc	nc			
Dibenz[a,h]anthracene	0.016	µg/l	sat	IR	<0.016	IR	<0.016
Fluoranthene	0.017	µg/l	sat	IR	<0.017	IR	<0.017
Fluorene	0.014	µg/l	sat	IR	<0.014	IR	<0.014
Indeno[1,2,3-cd]pyrene	0.014	µg/l	sat	IR	<0.014	IR	<0.014
Naphthalene	0.1	µg/l	1,060	IR	<0.1	IR	<0.1
Phenanthrene	0.022	µg/l	sat	IR	<0.022	IR	<0.022
Pyrene	0.015	µg/l	sat	IR	<0.015	IR	<0.015
Total PAH (Sum of 16)	0.1	µg/l	nc	nc	<0.1	nc	<0.1

LEGEND  
 MW = Monitoring Well  
 Dup = Duplicate Sample  
 - = Not Analysed

SSTL = Site specific target level  
 nc = No Stage 3 SSTL available  
 sat = unacceptable risk to receptor cannot be achieved due to ca  
 IR = Insignificant Risk

xx  
 xx  
 Indicates results in excess of adopted Human Health guideline  
 Indicates results in excess of adopted Controlled Waters guideline

Table 5  
 ABB - Priory Service Station, Rathfarnham, Dublin  
 Stage 3 - Analytical Results - Water PAH

Field Identification		PRIO_MW05	PRIO_MW06	PRIO_MW07	PRIO_MW08	PRIO_MW09	TRIP BLANK
Date		4-Mar-08	4-Mar-08	4-Mar-08	4-Mar-08	4-Mar-08	4-Mar-08
Sample Type		Primary	Primary	Primary	Primary	Primary	Trip Blank
Well Status		Present	Present	Present	Present	Present	-
Land Use - High Density Residential / Basement, vapour							

Chemical	Method Detection Limit	Units	SSTLs protective of:		Max Concentration
			Human Health	Controlled Waters	
Acenaphthene	0.015	µg/l	sat	IR	<0.015
Acenaphthylene	0.011	µg/l	10,800	IR	<0.011
Anthracene	0.015	µg/l	sat	IR	<0.015
Benzo(a)anthracene	0.017	µg/l	sat	IR	<0.017
Benzo(a)pyrene	0.009	µg/l	251	IR	<0.009
Benzo(b)fluoranthene	0.023	µg/l	sat	IR	<0.023
Benzo(g,h,i)perylene	0.016	µg/l	sat	IR	<0.016
Benzo(k)fluoranthene	0.027	µg/l	sat	IR	<0.027
Chrysene	0.013	µg/l	sat	IR	<0.013
Coronene			nc	nc	
Dibenz(a,h)anthracene	0.016	µg/l	sat	IR	<0.016
Fluoranthene	0.017	µg/l	sat	IR	<0.017
Fluorene	0.014	µg/l	sat	IR	<0.014
Indeno(1,2,3-cd)pyrene	0.014	µg/l	sat	IR	<0.014
Naphthalene	0.1	µg/l	1,060	IR	<0.1
Phenanthrene	0.022	µg/l	sat	IR	<0.022
Pyrene	0.015	µg/l	sat	IR	<0.015
Total PAH (Sum of 16)	0.1	µg/l	nc	nc	<0.1

LEGEND  
 MW = Monitoring Well  
 Dup = Duplicate Sample  
 -- = Not Analysed

SSTL = Site specific target level  
 nc = No Stage 3 SSTL available  
 sat = unacceptable risk to receptor cannot be achieved due to ca  
 IR = Insignificant Risk

Indicates results in excess of adopted Human Health guideline  
 Indicates results in excess of adopted Controlled Waters guideline

Table 6  
 ABB - Priory Service Station, Rathfriland, Dublin  
 Stage 3 - Analytical Results - Water Heavy Metals

Field Identification		PRIO_MW01	PRIO_MW02	PRIO_MW03	PRIO_MW04	PRIO_MW05	PRIO_MW06	PRIO_DUP
Date		30-Mar-06	30-Mar-06	30-Mar-06	30-Mar-06	30-Mar-06	30-Mar-06	30-Mar-06
Sample Type		Primary	Primary	Primary	Primary	Primary	Primary	Duplicate of MW06
Well Status		Present	Present	Present	Present	Present	Present	
Land Use : High Density Residential (Basement; vapour pathways only)								

Chemical	Method Detection Limit	Units	SSTLs protective of:		Max Concentration	No. of Samples	Status
			Human Health	Controlled Waters			
Arsenic	1	µg/l	no path	IR	<1	3	<1
Beryllium	1	µg/l	no path	IR	<1	<1	<1
Cadmium	0.4	µg/l	no path	IR	<0.4	<0.4	<0.4
Chromium	1	µg/l	no path	IR	<1	9	<1
Copper	1	µg/l	no path	IR	<1	7	<1
Lead	1	µg/l	no path	IR	<1	2	<1
Mercury	0.01	µg/l	no path	IR	<0.05	<0.05	<0.05
Nickel	1	µg/l	no path	IR	2	2	6
Vanadium	1	µg/l	no path	IR	<1	3	<1
Zinc	3	µg/l	no path	IR	8	13	<3

LEGEND

- MW = Monitoring Well
- Dup = Duplicate Sample
- = Not Analysed
- XX = Indicates results in excess of adopted Human Health guideline
- XX = Indicates results in excess of adopted Controlled Waters guideline

Table 6  
 ABB - Priory Service Station, Rathfarnham, Dublin  
 Stage 3 - Analytical Results - Water Heavy Metals

Field Identification		SSTLs protective of:										
Chemical	Method Detection Limit	Units	Human Health	Controlled Waters	Max Concentration	PRIO MW07	PRIO MW08	PRIO MW09	PRIO DUP01	PRIO TRIP	PRIO MW01	PRIO DUP01
Arsenic	1	µg/l	no path	IR	3	2	3	3	3	26-May-06 Primary	21-Jan-08 Primary	21-Jan-08 Duplicate of MW01
Beryllium	1	µg/l	no path	IR	<1	<1	<1	<1	<1	26-May-06 Primary	21-Jan-08 Primary	21-Jan-08 Duplicate of MW01
Cadmium	0.4	µg/l	no path	IR	<0.4	<0.4	<0.4	<0.4	<0.4	26-May-06 Primary	21-Jan-08 Primary	21-Jan-08 Duplicate of MW01
Chromium	1	µg/l	no path	IR	9	2	1	1	<1	26-May-06 Primary	21-Jan-08 Primary	21-Jan-08 Duplicate of MW01
Copper	1	µg/l	no path	IR	7	2	<1	<1	2	26-May-06 Primary	21-Jan-08 Primary	21-Jan-08 Duplicate of MW01
Lead	1	µg/l	no path	IR	2	<1	<1	<1	<1	26-May-06 Primary	21-Jan-08 Primary	21-Jan-08 Duplicate of MW01
Mercury	0.01	µg/l	no path	IR	<0.05	<0.05	<0.05	<0.05	<0.05	26-May-06 Primary	21-Jan-08 Primary	21-Jan-08 Duplicate of MW01
Nickel	1	µg/l	no path	IR	61	5	6	3	61	26-May-06 Primary	21-Jan-08 Primary	21-Jan-08 Duplicate of MW01
Vanadium	1	µg/l	no path	IR	3	2	<1	3	<1	26-May-06 Primary	21-Jan-08 Primary	21-Jan-08 Duplicate of MW01
Zinc	3	µg/l	no path	IR	29	29	19	12	21	26-May-06 Primary	21-Jan-08 Primary	21-Jan-08 Duplicate of MW01

LEGEND  
 MW = Monitoring Well  
 Dup = Duplicate Sample  
 - = Not Analysed

SSTL = Site specific target level  
 nc = No Stage 3 SSTL available  
 no path = no pathway considered viable  
 IR = Insignificant Risk

Indicates results in excess of adopted Human Health guideline  
 Indicates results in excess of adopted Controlled Waters guideline

Table 6  
 ABB - Priority Service Station, Rathfarnham, Dublin  
 Stage 3 - Analytical Results - Water Heavy Metals

Field Identification
Date
Sample Type
Well Status
Land Use : High Density Residential (Basement, vapour pathways only)

PRIO_MW02	PRIO_MW03	PRIO_MW04	PRIO_MW05	PRIO_MW06	PRIO_MW08	PRIO_MW09
21-Jan-08	21-Jan-08	21-Jan-08	21-Jan-08	21-Jan-08	21-Jan-08	21-Jan-08
Primary	Primary	Primary	Primary	Primary	Primary	Primary
Present	Present	Present	Present	Present	Present	Present

Chemical	Method Detection Limit	Units	SSTLs protective of:		Max Concentration
			Human Health	Controlled Waters	
Arsenic	1	µg/l	no path	IR	3
Beryllium	1	µg/l	no path	IR	<1
Cadmium	0.4	µg/l	no path	IR	<0.4
Chromium	1	µg/l	no path	IR	9
Copper	1	µg/l	no path	IR	7
Lead	1	µg/l	no path	IR	2
Mercury	0.01	µg/l	no path	IR	<0.05
Nickel	1	µg/l	no path	IR	61
Vanadium	1	µg/l	no path	IR	3
Zinc	3	µg/l	no path	IR	29

LEGEND

MW = Monitoring Well  
 Dup = Duplicate Sample  
 - = Not Analysed

SSTL = Site specific target level  
 nc = No Stage 3 SSTL available  
 no path = no pathway considered viable  
 IR = Insignificant Risk

XX  
 XX

Indicates results in excess of adopted Human Health guideline  
 Indicates results in excess of adopted Controlled Waters guideline



Table 6  
 ABB - Priory Service Station, Rathbarham, Dublin  
 Stage 3 - Analytical Results - Water Heavy Metals

Field Identification
Date
Sample Type
Well Status
Land Use : High Density Residential (Basement; vapour pathways only)

PRIO_MW07	PRIO_TRIP02	PRIO_MW01	PRIO_DUP01	PRIO_MW02	PRIO_MW03	PRIO_MW04
28-Jan-08	28-Jan-08	4-Mar-08	4-Mar-08	4-Mar-08	4-Mar-08	4-Mar-08
Primary	Primary	Primary	Duplicate of MW01	Primary	Primary	Primary
Present		Present		Present	Present	Present

Chemical	Method Detection Limit	Units	SSTLs protective of:		Max Concentration					
			Human Health	Controlled Waters						
Arsenic	1	µg/l	no path	IR	3	2	<1	<1	<1	6
Beryllium	1	µg/l	no path	IR	<1	<1	<1	<1	<1	<1
Cadmium	0.4	µg/l	no path	IR	<0.4	<0.4	<0.5	<0.5	<0.5	<0.5
Chromium	1	µg/l	no path	IR	9	2	2	4	2	2
Copper	1	µg/l	no path	IR	7	<1	<1.6	<1.6	1.9	<1.6
Lead	1	µg/l	no path	IR	2	<1	<0.5	0.7	1.8	<0.5
Mercury	0.01	µg/l	no path	IR	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel	1	µg/l	no path	IR	61	3	5.1	3.6	2.2	2.8
Vanadium	1	µg/l	no path	IR	3	2	<1	<1	<1	2
Zinc	3	µg/l	no path	IR	29	18	<5	<5	<5	<5

LEGEND

MW = Monitoring Well  
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SSTL = Site specific target level  
 nc = No Stage 3 SSTL available  
 no path = no pathway considered viable  
 IR = Insignificant Risk

XX  
 XX  
 Indicates results in excess of adopted Human Health guideline  
 Indicates results in excess of adopted Controlled Waters guideline

Table 6  
 ABB - Priory Service Station, Rathfarnham, Dublin  
 Stage 3 - Analytical Results - Water Heavy Metals

Field Identification
Date
Sample Type
Well Status
Land Use : High Density Residential (Basement: vapour pathways only)

PRIO_MW05	PRIO_MW06	PRIO_MW07	PRIO_MW08	PRIO_MW09	TRIP
4-Mar-08	4-Mar-08	4-Mar-08	4-Mar-08	4-Mar-08	4-Mar-08
Primary	Primary	Primary	Primary	Primary	Trip Blank
Present	Present	Present	Present	Present	-

Chemical	Method Detection Limit	Units	SSTLs protective of:		Max Concentration
			Human Health	Controlled Waters	
Arsenic	1	µg/l	no path	IR	3
Beryllium	1	µg/l	no path	IR	<1
Cadmium	0.4	µg/l	no path	IR	<0.4
Chromium	1	µg/l	no path	IR	9
Copper	1	µg/l	no path	IR	7
Lead	1	µg/l	no path	IR	4.8
Mercury	0.01	µg/l	no path	IR	2.8
Nickel	1	µg/l	no path	IR	<0.05
Vanadium	1	µg/l	no path	IR	1.6
Zinc	3	µg/l	no path	IR	3
					29

LEGEND

- MW = Monitoring Well
- Dup = Duplicate Sample
- = Not Analysed
- XX
- XX
- Indicates results in excess of adopted Human Health guideline
- Indicates results in excess of adopted Controlled Waters guideline