

Appendix C: Miscellaneous Soil and Groundwater Tables

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Table 1
Soil Analytical Results - Relative Percentage Differences (RPDs)
Priority SS, Nutgrove Ave., Rathfamham, Co. Dublin.

Sample type	M.D.L.	Units	PRIO_DUP01 Duplicate of PRIO_TP35	PRIO_TP35 Primary	%RPDs
Chemical					
Allphatics					
C5-C6	0.01	mg/kg	<0.01	<0.01	NC
>C6-C8	0.01	mg/kg	<0.01	<0.01	NC
>C8-C10	0.01	mg/kg	<0.01	<0.01	NC
>C10-C12	0.01	mg/kg	<0.01	<0.01	NC
>C12-C16	0.1	mg/kg	2.5	1	85.71
>C16-C21	0.1	mg/kg	6.2	2.7	78.65
>C21-C35	0.1	mg/kg	30	27	10.53
Total Aliphatics	0.1	mg/kg	38	31	20.29
Aromatics					
C6-C7	0.01	mg/kg	<0.01	<0.01	NC
>C7-C8	0.01	mg/kg	<0.01	<0.01	NC
>C8-C10	0.01	mg/kg	<0.01	<0.01	NC
>C10-C12	0.01	mg/kg	<0.01	<0.01	NC
>C12-C16	0.1	mg/kg	0.4	<0.1	NC
>C16-C21	0.1	mg/kg	0.31	<0.1	NC
>C21-C35	0.1	mg/kg	15	37	84.62
Total Aromatics	0.1	mg/kg	16	37	79.26
Benzene	0.01	mg/kg	<0.01	<0.01	NC
Ethylbenzene	0.01	mg/kg	<0.01	<0.01	NC
MTBE	0.01	mg/kg	<0.01	<0.01	NC
PRO	0.01	mg/kg	<0.01	<0.01	NC
Toluene	0.01	mg/kg	<0.01	<0.01	NC
Xylene	0.01	mg/kg	<0.01	<0.01	NC
TOC		%	1.8	1.2	NC
pH		-	8.2	8.34	NC
HEAVY METALS					
Arsenic	1	mg/kg	13	15	NC
Beryllium	1	mg/kg	<0.4	0.6	NC
Cadmium	1	mg/kg	1	1.3	NC
Chromium	1	mg/kg	20	19	5.13
Copper	1	mg/kg	20	20	0.00
Lead	1	mg/kg	160	160	0.00
Mercury	1	mg/kg	<0.6	<0.6	NC
Nickel	1	mg/kg	25	28	11.32
Selenium	1	mg/kg			NC
Vanadium	1	mg/kg	18	21	0.00
Zinc	1	mg/kg	94	94	0.00
PAHs					
Acenaphthene	0.014	mg/kg	<0.014	<0.014	NC
Acenaphthylene	0.005	mg/kg	<0.005	0.007	NC
Anthracene	0.009	mg/kg	<0.009	0.02	NC
Benzo(a)anthracene	0.012	mg/kg	0.150	0.098	NC
Benzo(a)pyrene	0.012	mg/kg	0.140	0.085	NC
Benzo(b)fluoranthene	0.016	mg/kg	0.200	0.12	NC
Benzo(ghi)perylene	0.01	mg/kg	0.093	0.062	NC
Benzo(k)fluoranthene	0.025	mg/kg	<0.025	0.044	NC
Chrysene	0.01	mg/kg	0.180	0.11	48.28
Dibenzo(ah)anthracene	0.008	mg/kg	<0.008	0.013	NC
Fluoranthene	0.025	mg/kg	0.290	0.16	57.78
Fluorene	0.012	mg/kg	<0.012	<0.012	NC
Indeno(123cd)pyrene	0.011	mg/kg	0.058	0.038	41.67
Naphthalene	0.01	mg/kg	0.180	0.09	66.67
Phenanthrene	0.021	mg/kg	0.270	0.14	63.41
Pyrene	0.022	mg/kg	0.23	0.15	42.11

NC - Not Calculable

Bold - % RPD greater than 40% and results reported greater than ten times the MDL.

Table 2
 Water Analytical Results: Relative Percentage Differences
 Priory SS, Nutgrove Ave., Rathfarnham, Co. Dublin.

Sample Identify	PRIO DUP	PRIO MW06	%RPDs	PRIO MW09	PRIO DUP01	%RPDs
Sampling Date	30-Mar-06	30-Mar-06		26-May-06	26-May-06	
Type of sample	Duplicate	Primary		Primary	Duplicate	

Chemical	MDL	Units						
Aliphatics								
C5-C6	10	µg/l	<10	<10	NC	<10	<10	NC
>C6-C8	10	µg/l	<10	<10	NC	<10	<10	NC
>C8-C10	10	µg/l	<10	<10	NC	<10	<10	NC
>C10-C12	10	µg/l	<10	<10	NC	<10	<10	NC
>C12-C16	10	µg/l	<10	<10	NC	<10	<10	NC
>C16-C21	10	µg/l	<10	<10	NC	<10	<10	NC
>C21-C35	10	µg/l	<10	<10	NC	<10	<10	NC
Total Aliphatics	10	µg/l	<10	<10	NC	<10	<10	NC
Aromatics								
C6-C7	10	µg/l	<10	<10	NC	<10	<10	NC
>C7-C8	10	µg/l	<10	<10	NC	<10	<10	NC
>C8-C10	10	µg/l	<10	<10	NC	<10	<10	NC
>C10-C12	10	µg/l	<10	<10	NC	<10	<10	NC
>C12-C16	10	µg/l	<10	<10	NC	<10	<10	NC
>C16-C21	10	µg/l	<10	<10	NC	<10	<10	NC
>C21-C35	10	µg/l	<10	<10	NC	<10	<10	NC
Total Aromatics	0.01	µg/l	<10	<10	NC	<10	<10	NC
SVOC's, PRO & TPH								
TPH	10	µg/l	<10	<10	NC	<10	<10	NC
Benzene	1	µg/l	<10	<10	NC	<10	<10	NC
Ethylbenzene	1	µg/l	<10	<10	NC	<10	<10	NC
MTBE	1	µg/l	<10	<10	NC	<10	<10	NC
GRO	10	µg/l	<10	<10	NC	<10	<10	NC
Toluene	1	µg/l	<10	<10	NC	<10	<10	NC
Total Xylene	1	µg/l	<20	<20	NC	<20	<20	NC
Metals								
Arsenic	1	µg/l	<1	1	NC	1	<1	NC
Beryllium	1	µg/l	<1	<1	NC	<1	<1	NC
Boron	10	µg/l	-	-	-	-	-	-
Cadmium	0.4	µg/l	<0.4	<0.4	NC	<0.4	<0.4	NC
Chromium	1	µg/l	<1	6	NC	<1	<1	NC
Copper	1	µg/l	<1	<1	NC	2	<1	NC
Lead	1	µg/l	<1	<1	NC	<1	<1	NC
Mercury	0.5	µg/l	<0.05	<0.05	NC	<0.05	<0.05	NC
Nickel	1	µg/l	3	5	50.00	61	6	164.18
Selenium	1	µg/l	-	-	NC	-	-	NC
Vanadium	1	µg/l	<1	1	NC	<1	<1	NC
Zinc	3	µg/l	<3	4	NC	21	19	10.00
PAHs								
Acenaphthene	0.01	µg/l	<0.01	<0.01	NC	<0.01	<0.01	NC
Acenaphthylene	0.01	µg/l	<0.01	<0.01	NC	<0.01	<0.01	NC
Anthracene	0.01	µg/l	<0.01	<0.01	NC	<0.01	<0.01	NC
Benzo[a]anthracene	0.01	µg/l	<0.01	<0.01	NC	<0.01	<0.01	NC
Benzo[a]pyrene	0.01	µg/l	<0.01	<0.01	NC	<0.01	<0.01	NC
Benzo[b]fluoranthene	0.01	µg/l	<0.01	<0.01	NC	<0.01	<0.01	NC
Benzo[ghi]perylene	0.01	µg/l	<0.01	<0.01	NC	<0.01	<0.01	NC
Benzo[k]fluoranthene	0.01	µg/l	<0.01	<0.01	NC	<0.01	<0.01	NC
Chrysene	0.01	µg/l	<0.01	<0.01	NC	<0.01	<0.01	NC
Dibenz[ah]anthracene	0.01	µg/l	<0.01	<0.01	NC	<0.01	<0.01	NC
Fluoranthene	0.01	µg/l	<0.01	<0.01	NC	<0.01	<0.01	NC
Fluorene	0.01	µg/l	<0.01	<0.01	NC	<0.01	<0.01	NC
Indeno[123cd]pyrene	0.01	µg/l	<0.01	<0.01	NC	<0.01	<0.01	NC
Naphthalene	0.01	µg/l	<0.01	<0.01	NC	<0.01	<0.01	NC
Phenanthrene	0.01	µg/l	<0.01	<0.01	NC	<0.01	<0.01	NC
Pyrene	0.01	µg/l	<0.01	<0.01	NC	<0.01	<0.01	NC

NC - Not Calculable
 BOLD - % RPD > 40% and concentration of primary and duplicate > 10 times the MDL.

Table 2
Water Analytical Results: Relative Percentage Differences
Priory SS, Nutgrove Ave., Rathfarnham, Co. Dublin.

Sample Identity Sampling Date Type of sample	PRIO MW01		PRIO DUP01		%RPDs	PRIO MW01		PRIO DUP01		%RPDs
	21-Jan-08		21-Jan-08			04-Mar-08		04-Mar-08		
	Primary		Duplicate of MW01			Primary		Duplicate		
Aliphatics										
C5-C6	10	µg/l	<10	<10	NC	<10	<10	<10	NC	
>C6-C8	10	µg/l	<10	<10	NC	<10	<10	<10	NC	
>C8-C10	10	µg/l	<10	<10	NC	<10	<10	<10	NC	
>C10-C12	10	µg/l	<10	<10	NC	<10	<10	<10	NC	
>C12-C16	10	µg/l	<10	<10	NC	<10	<10	<10	NC	
>C16-C21	10	µg/l	<10	<10	NC	<10	<10	<10	NC	
>C21-C35	10	µg/l	<10	<10	NC	<10	<10	<10	NC	
Total Aliphatics	10	µg/l	<10	<10	NC	<10	<10	<10	NC	
Aromatics										
C6-C7	10	µg/l	<10	<10	NC	<10	<10	<10	NC	
>C7-C8	10	µg/l	<10	<10	NC	<10	<10	<10	NC	
>C8-C10	10	µg/l	<10	<10	NC	<10	<10	<10	NC	
>C10-C12	10	µg/l	<10	<10	NC	<10	<10	<10	NC	
>C12-C16	10	µg/l	<10	<10	NC	<10	<10	<10	NC	
>C16-C21	10	µg/l	<10	<10	NC	<10	<10	<10	NC	
>C21-C35	10	µg/l	<10	<10	NC	<10	<10	<10	NC	
Total Aromatics	0.01	µg/l	<10	<10	NC	<10	<10	<10	NC	
SVOC's, PRO & TPH										
TPH	10	µg/l	<10	<10	NC	<10	<10	<10	NC	
Benzene	1	µg/l	<10	<10	NC	<10	<10	<10	NC	
Ethylbenzene	1	µg/l	<10	<10	NC	<10	<10	<10	NC	
MTBE	1	µg/l	<10	<10	NC	<10	<10	<10	NC	
GRO	10	µg/l	<10	<10	NC	<10	<10	<10	NC	
Toluene	1	µg/l	<10	<10	NC	<10	<10	<10	NC	
Total Xylene	1	µg/l	<10	<10	NC	<10	<10	<10	NC	
Metals										
Arsenic	1	µg/l	<1	<1	NC	1	<1	<1	NC	
Beryllium	1	µg/l	<1	<1	NC				NC	
Boron	10	µg/l	-	-	NC	<1	<1	<1	40.00	
Cadmium	0.4	µg/l	<0.4	<0.4	NC	<0.5	<0.5	<0.5	NC	
Chromium	1	µg/l	<1	<1	NC	3	2	2	NC	
Copper	1	µg/l	<1	<1	NC	<1.6	<1.6	<1.6	NC	
Lead	1	µg/l	<1	<1	NC	<0.5	0.7	0.7	NC	
Mercury	0.5	µg/l	<0.01	<0.01	NC	<0.01	<0.01	<0.01	NC	
Nickel	1	µg/l	3	2	40.00	5.1	3.6	3.6	34.48	
Selenium	1	µg/l	-	-	NC	-	-	-	NC	
Vanadium	1	µg/l	1	2	66.67	<1	<1	<1	NC	
Zinc	3	µg/l	<3	<3	NC	<5	<5	<5	NC	
PAHs										
Acenaphthene	0.01	µg/l	<0.015	<0.015	NC	<0.015	<0.015	<0.015	NC	
Acenaphthylene	0.01	µg/l	<0.011	<0.011	NC	<0.011	<0.011	<0.011	NC	
Anthracene	0.01	µg/l	<0.015	<0.015	NC	<0.015	<0.015	<0.015	NC	
Benzo(a)anthracene	0.01	µg/l	<0.017	<0.017	NC	<0.017	<0.017	<0.017	NC	
Benzo(a)pyrene	0.01	µg/l	<0.009	<0.009	NC	<0.009	<0.009	<0.009	NC	
Benzo(b)fluoranthene	0.01	µg/l	<0.023	<0.023	NC	<0.023	<0.023	<0.023	NC	
Benzo(ghi)perylene	0.01	µg/l	<0.016	<0.016	NC	<0.016	<0.016	<0.016	NC	
Benzo(k)fluoranthene	0.01	µg/l	<0.027	<0.027	NC	<0.027	<0.027	<0.027	NC	
Chrysene	0.01	µg/l	<0.013	<0.013	NC	<0.013	<0.013	<0.013	NC	
Dibenzo(ah)anthracene	0.01	µg/l	<0.016	<0.016	NC	<0.016	<0.016	<0.016	NC	
Fluoranthene	0.01	µg/l	<0.017	<0.017	NC	<0.017	<0.017	<0.017	NC	
Fluorene	0.01	µg/l	<0.014	<0.014	NC	<0.014	<0.014	<0.014	NC	
Indeno(123cd)pyrene	0.01	µg/l	<0.014	<0.014	NC	<0.014	<0.014	<0.014	NC	
Naphthalene	0.01	µg/l	<0.1	<0.1	NC	<0.1	<0.1	<0.1	NC	
Phenanthrene	0.01	µg/l	<0.022	<0.022	NC	<0.022	<0.022	<0.022	NC	
Pyrene	0.01	µg/l	<0.015	<0.015	NC	<0.015	<0.015	<0.015	NC	

NC - Not Calculable
BOLD - % RPD > 40% and concentration of primary and duplicate > 10 times the MDL

Table 3
 ABB - Priority Services Station, Rathfriland, Dublin
 Stage 2 - Analytical Results - NRA Leachate Metals

Field Identification
Date
Sample Type
Sample Media
Above or Below Water Table
Sample Fauna
Land Use - High Density Residential

PRIO_1P01	PRIO_1P02	PRIO_1P07	PRIO_1P15	PRIO_1P20	PRIO_1P23	PRIO_1P26	PRIO_1P27	PRIO_1P29	PRIO_1P31
unknown	0.5	0.5	0.4	3.5	1.5	0.5	0.5	1.5	3.8
21-Jan-08	24-Jan-08	25-Jan-08	28-Jan-08	18-Feb-08	18-Feb-08	19-Feb-08	19-Feb-08	19-Feb-08	19-Feb-08
Primary	Primary	Primary	Primary	Primary	Natural	Primary	Primary	Primary	Primary
	Made Ground	Made Ground	Made Ground	Natural	Natural	Made Ground	Made Ground	Made Ground	Natural
	Above	Above	Above	Below	Below	Above	Above	Below	Below
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	GACs protective of:		Concentration	Max Concentration	GACs Concentration in Water	GACs Concentration in Soil	GACs Concentration in Soil	GACs Concentration in Soil	GACs Concentration in Soil	GACs Concentration in Soil	GACs Concentration in Soil	GACs Concentration in Soil	GACs Concentration in Soil	GACs Concentration in Soil	GACs Concentration in Soil	GACs Concentration in Soil	GACs Concentration in Soil
			Human Health Shallow Soil	Human Health Deep Soil															
Leachable Arsenic	1	mg/kg	123	1	14	<1	9	4	4	1	4	4	4	4	4	4	4	4	3
Leachable Beryllium	1	mg/kg	1	1	0.4	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Leachable Cadmium	0.4	mg/kg	130	1	9	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Leachable Chromium	1	mg/kg	4190	1	12	2	12	5	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Leachable Copper	1	mg/kg	4190	1	12	2	12	5	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Leachable Lead	0.01	mg/kg	8	1	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Leachable Manganese	1	mg/kg	50	1	3	3	<1	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Leachable Nickel	1	mg/kg	500	1	39	3	4	3	12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Leachable Vanadium	1	mg/kg	580	1	3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Leachable Zinc	3	mg/kg	580	1	3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3

LEGEND
 BH = Borhole
 TP = Trial Pit
 TK = Tank Pull
 * = Not Analysed

RS = GAC-Residual Saturation
 nc = No Stage 2 GAC available
 IF = Imported Fill

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

Table 4
 A88 - Priority Service Station, Rathfriland, Duncannon
 Stage 2 - Analytical Results - CEN Leachate Metals and Miscellaneous

Field Identification	
Date	
Sample Type	
Sample Media	
Above or Below Water Table	
Surface Fate	
Land Use	High Density Residential

PRIO_EC01	PRIO_EC03	PRIO_EC04	PRIO_EC08	PRIO_EC09	PRIO_EC03	PRIO_TK07	PRIO_TK13
21-Jan-03	15-Feb-03	16-Feb-03	21-Jan-03	07-Feb-03	13-Feb-03	13-Feb-03	13-Feb-03
Primary	Primary	Primary	Primary	Primary	Match Ground	Match Ground	Match Ground
In situ	In situ	In situ	In situ	Ex situ	Ex situ	In situ	In situ

Chemical	Method	Detection Limit	Units	GAC Concentration		Max Concentration	GAC EC01	GAC EC03	GAC EC04	GAC EC08	GAC EC09	GAC TK07	GAC TK13
				Human Health Shallow Soil	Human Health Deep Soil								
Leachate Antimony	0.01	mg/kg	20	nc	nc	0.09	<0.01	0.08	<0.01	0.04	<0.01	0.02	0.04
Leachate Arsenic	0.01	mg/kg	20	nc	nc	0.04	<0.01	0.04	<0.01	0.02	<0.01	0.02	0.04
Leachate Barium	0.01	mg/kg	20	nc	nc	0.13	0.13	0.11	0.06	0.05	<0.01	0.05	0.05
Leachate Beryllium	0.01	mg/kg	123	nc	nc	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Leachate Boron	0.01	mg/kg	nc	nc	nc	0.3	<0.2	0.3	<0.2	<0.2	<0.03	<0.03	<0.03
Leachate Cadmium	0.005	mg/kg	1	nc	nc	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01
Leachate Chromium	0.01	mg/kg	130	nc	nc	0.06	<0.01	0.06	<0.01	<0.01	<0.01	<0.01	<0.01
Leachate Copper	0.016	mg/kg	4160	nc	nc	0.079	<0.016	0.079	<0.016	<0.016	<0.016	<0.016	<0.016
Leachate Lead	0.005	mg/kg	450	nc	nc	0.995	<0.005	0.995	<0.005	<0.005	<0.005	<0.005	<0.005
Leachate Mercury	0.0001	mg/kg	8	nc	nc	0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Leachate Manganese	0.01	mg/kg	1310	nc	nc	0.24	0.12	0.12	0.023	0.2	0.2	0.24	0.24
Leachate Nickel	0.015	mg/kg	50	nc	nc	3.0	<0.015	3.0	<0.015	<0.015	<0.015	<0.015	<0.015
Leachate Selenium	0.01	mg/kg	35	nc	nc	0.1	0.03	0.03	0.03	0.2	<0.01	<0.01	<0.01
Leachate Vanadium	0.01	mg/kg	500	nc	nc	0.2	0.03	0.2	<0.01	<0.01	<0.01	<0.01	<0.01
Leachate Zinc	0.05	mg/kg	580	nc	nc	82.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Leachate Chloride	10	mg/kg	nc	nc	nc	10	<10	<10	<10	<10	<10	<10	<10
Leachate Fluoride	5	mg/kg	nc	nc	nc	<5	<5	<5	<5	<5	<5	<5	<5
Leachate Sulphate	30	mg/kg	nc	nc	nc	2100	140	150	<30	<30	<30	<30	<30
Total Dissolved Solids	100	mg/kg	nc	nc	nc	2850	510	1800	540	2800	2800	2800	2800
Phenolic Monitors	0.1	mg/kg	nc	nc	nc	0.2	<0.1	<0.1	0.1	0.2	0.2	0.2	0.2
Dissolved Organic Carbon	-	mg/kg	nc	nc	nc	90	nc	90	nc	10	nc	nc	nc
Total Sulphate	100	mg/kg	nc	nc	nc	790	790	560	650	nc	nc	nc	nc
Anc. Al PM	0.03	mg/kg	nc	nc	nc	4.5	2.8	4.5	3.8	1.5	nc	nc	nc
Anc. Al PM	0.03	mg/kg	nc	nc	nc	0.96	0.33	0.3	0.26	0.16	nc	nc	nc
Loss On Ignition	0.3	mg/kg	nc	nc	nc	7.74	8.4	9.4	7.4	7.4	nc	nc	nc
PCB Conformer 101	0.001	mg/kg	nc	nc	nc	0.169	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PCB Conformer 118	0.001	mg/kg	nc	nc	nc	1.12	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PCB Conformer 138	0.001	mg/kg	nc	nc	nc	0.258	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PCB Conformer 153	0.001	mg/kg	nc	nc	nc	0.37	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PCB Conformer 180	0.001	mg/kg	nc	nc	nc	0.448	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PCB Conformer 28	0.001	mg/kg	nc	nc	nc	0.0203	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PCB Conformer 52	0.001	mg/kg	nc	nc	nc	0.025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total PCBs	0.001	mg/kg	nc	nc	nc	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Antimony	15	mg/kg	15	nc	nc	5	nc	nc	nc	nc	nc	nc	nc
Total Barium	6	mg/kg	9340	nc	nc	1.41	nc	nc	nc	nc	nc	nc	nc
Total Beryllium	0.6	mg/kg	1310	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Total Molybdenum	3	mg/kg	33	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Total Selenium	3	mg/kg	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc

LEGEND
 BH = Borohole
 TP = Trial Pit
 TK = Tank Pit
 - = Not Analysed

nc = No Stage 2 GAC available

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

Table 5
 Priory Service Station, Rathfarnham, Dublin
 Analytical Results - Soil Results Compared to Landfill Acceptance Criteria

Field Identification
Depth
Date
Sample Type
Sample Media
Sample Fate
Land Use

PRIO BF01	PRIO BF03	PRIO TK07	PRIO-TK13
-	-	2	2
21-Jan-08	7-Feb-08	13-Feb-08	13-Feb-08
Primary	Primary	Primary	Primary
Soil	Soil	Made ground	Made ground
Exsitu	Exsitu	In situ	In situ

Chemical	Method Detection Limit	Units	Waste Acceptance Criteria							
			Murphy's	KTK	Austrian Guidelines	Inert Waste Guidelines				
Leachable Antimony	0.05	mg/kg	0.08	0.7	nc	nc	<0.05	0.09	<0.01	0.04
Leachable Arsenic	0.01	mg/kg	0.5	2	0.5	0.5	<0.01	0.04	<0.01	0.02
Leachable Barium	0.01	mg/kg	20	100	10	20	0.15	0.11	0.06	0.65
Leachable Beryllium	0.01	mg/kg	nc	nc	nc	nc	<0.01	<0.01	<0.01	<0.01
Leachable Boron	0.1	mg/kg	nc	nc	nc	nc	<0.1	<0.3	<0.2	<0.2
Leachable Cadmium	0.004	mg/kg	0.04	1	0.05	0.04	<0.004	<0.005	<0.005	<0.005
Leachable Chromium	0.01	mg/kg	0.5	10	1	0.5	<0.01	0.06	<0.01	<0.01
Leachable Copper	0.01	mg/kg	2	60	2	2	<0.01	0.079	<0.016	<0.016
Leachable Lead	0.01	mg/kg	0.5	10	1	0.5	<0.01	<0.005	<0.005	0.005
Leachable Mercury	0.0005	mg/kg	0.01	0.2	0.01	0.01	<0.0001	0.0001	<0.0001	<0.0001
Leachable Molybdenum	0.01	mg/kg	0.5	10	nc	0.5	0.12	0.1	0.2	0.24
Leachable Nickel	0.01	mg/kg	0.4	10	1	0.4	<0.01	0.023	<0.015	0.029
Leachable Selenium	0.01	mg/kg	0.1	0.5	nc	0.1	<0.01	0.03	<0.01	<0.01
Leachable Vanadium	0.01	mg/kg	nc	nc	nc	nc	0.03	0.2	<0.01	<0.01
Leachable Zinc	0.03	mg/kg	4	50	10	4	<0.03	<0.05	<0.05	<0.05
Leachable Chloride	10	mg/kg	800	15 000	2000	800	10.00	<10	<10	10
Leachable Dissolved Organic Carbon	10	mg/kg	500	800	200	500	20.00	60	10	60
Leachable Fluoride	5	mg/kg	10	150	20	10	<5	<5	<5	<5
Leachable Sulphate	30	mg/kg	1,000	20,000	nc	1,000	140.00	150	<30	2100
Leachable TDS	50	mg/kg	4,000	60,000	nc	4,000	570.00	1800	340	2800
Leachable Total Phenols (Monohydric Phenols)	0.1	mg/kg	1	nc	nc	1	<0.1	<0.1	0.1	0.2
Antimony	1.5	mg/kg	nc	nc	nc	nc	2	<1.5	<1.5	2.3
Arsenic	3	mg/kg	nc	nc	50	nc	6	4	5	8
Barium	6	mg/kg	nc	nc	nc	nc	87	39	35	58
Beryllium	0.4	mg/kg	nc	nc	nc	nc	<0.4	<0.4	<0.4	0.6
Cadmium	0.3	mg/kg	nc	nc	2	nc	1	0.6	1.4	1.4
Chromium	4.5	mg/kg	nc	nc	300	nc	35	7.7	9.4	15
Copper	6	mg/kg	nc	nc	100	nc	22	8	17	22
Lead	2	mg/kg	nc	nc	150	nc	32	12	14	35
Mercury	0.6	mg/kg	nc	nc	1	nc	<0.6	<0.6	<0.6	<0.6
Molybdenum	0.6	mg/kg	nc	nc	nc	nc	3	1	<0.6	1.8
Nickel	0.9	mg/kg	nc	nc	100	nc	38	11	25	23
Selenium	3	mg/kg	nc	nc	nc	nc	<3	<3	<3	<3
Vanadium	1.5	mg/kg	nc	nc	nc	nc	34	12	13	24
Zinc	2.5	mg/kg	nc	nc	500	nc	77	4.5	71	82
Total Organic Carbon	0.2	%	3	nc	2	3	6.4	0.4	0.4	2.3
pH	-	pH Units	nc	nc	nc	nc	8.67	10.67	8.46	7.74
Anc At pH4	0.03	mol H+/kg	nc	nc	nc	nc	2.8	4.5	3.6	1.5
Anc At pH6	0.03	mol H+/kg	nc	nc	nc	nc	0.33	0.3	0.36	0.16
Flash Point	70	Degrees C	nc	nc	nc	nc	>70	>70	1.3	7.74
Loss On Ignition	0.3	%	nc	nc	nc	nc	1.6	<0.003	1.3	4.6
Pcb Congener 101	0.001	mg/kg	nc	nc	nc	nc	<0.001	<0.003	<0.003	<0.003
Pcb Congener 118	0.001	mg/kg	nc	nc	nc	nc	<0.001	<0.003	<0.003	<0.003
Pcb Congener 138	0.001	mg/kg	nc	nc	nc	nc	<0.001	<0.003	<0.003	<0.003
Pcb Congener 153	0.001	mg/kg	nc	nc	nc	nc	<0.001	<0.003	<0.003	<0.003
Pcb Congener 180	0.001	mg/kg	nc	nc	nc	nc	<0.001	<0.003	<0.003	<0.003
Pcb Congener 28	0.001	mg/kg	nc	nc	nc	nc	<0.001	<0.003	<0.003	<0.003
Pcb Congener 52	0.001	mg/kg	nc	nc	nc	nc	<0.001	<0.003	<0.003	<0.003
Total 7 Congener Pcb's	0.001	mg/kg	1	nc	nc	1	<0.001	<0.003	<0.003	<0.003
Total 6 PAHs	0.025	mg/kg	6	nc	0.5	2	0.256	0.362	<0.099	0.449
Total 10 PAHs	0.025	mg/kg	nc	40	nc	nc	0.495	0.523	<0.24	0.768
Total 16 PAHs	0.025	mg/kg	nc	nc	nc	nc	0.70	0.7	0.14	0.93
Total 17 PAHs	0.025	mg/kg	100	nc	nc	nc	0.70	0.7	0.14	0.93
Coronene	2	mg/kg	nc	nc	nc	nc	<2	<2	<2	<2
BTEX (sum of 4)**	0.04	mg/kg	6	nc	nc	6	<0.01	0.101	<0.1	<0.1
EPH (DRO)(C10-C40)**	35	mg/kg	nc	1,000	20	nc	<35	160.0	46	170
GRO (C4-C12)	0.01	mg/kg	nc	nc	nc	nc	<0.01	0.1	<0.01	<0.01
Mineral Oil***	1	mg/kg	500	nc	nc	500	27	88	49	29

LEGEND
 BF = Beckfill, stockpiled
 - = Not Analysed
 * BTEX sum of 4 calculated from speciated results
 ***Mineral Oil calculated from speciated results (Aliphatic C10-C40)
 **EPH (DRO)(C10-C40) calculated from speciated results (Aliphatic & Aromatic C10-C40)
 nc = no criteria

XX Indicates results in excess of Murphy's Acceptance Criteria
 XX Indicates results in excess of KTK Acceptance Criteria