

Concept Life Sciences

Certificate of Analysis

Report Number: 661786-1

Date of Report: 24-Jul-2017

Customer: Borough Council of King's Lynn and West
Norfolk
King's Court
Chapel Street
King's Lynn
Norfolk
PE30 1EX

Customer Contact: Fabia Pollard

Customer Job Reference: 17/001

Customer Purchase Order: 0000099578

Customer Site Reference: Manor Farm

Date Job Received at Concept: 15-Jun-2017

Date Analysis Started: 20-Jun-2017

Date Analysis Completed: 24-Jul-2017

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation

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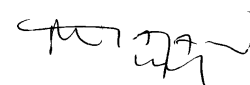
Tests covered by this certificate were conducted in accordance with Concept SOPs

All results have been reviewed in accordance with Section 25 of the Concept, Analytical Quality Quality Manual



Report checked
and authorised by :
Miajan Miah
Project Manager

Issued by :
Miajan Miah
Project Manager



Summary Of Results

Bulk Product

Dioxins

SAL Reference	Customer Sample Reference	Analysis	Symbol	WHO2005 Toxic Equivalents ng/kg	
				Lower Bound	Upper Bound
661786 001	ZONE 1 S1	Dioxins and Furans (Based on US EPA 1613)	N	110	110
661786 002	ZONE 1 S2	Dioxins and Furans (Based on US EPA 1613)	N	3500	3500
661786 003	ZONE 1 S3	Dioxins and Furans (Based on US EPA 1613)	N	140	140
661786 004	ZONE 1 S4	Dioxins and Furans (Based on US EPA 1613)	N	280	280
661786 006	ZONE 1 S6	Dioxins and Furans (Based on US EPA 1613)	N	38	38

Leachate

Dioxins

SAL Reference	Customer Sample Reference	Analysis	Symbol	WHO2005 Toxic Equivalents ng/l	
				Lower Bound	Upper Bound
661786 004	ZONE 1 S4	Dioxins and Furans (Based on US EPA 1613)	U	0.0	0.017
661786 005	ZONE 1 S5	Dioxins and Furans (Based on US EPA 1613)	U	0.0	0.019

Bulk Product

Customer Sample Reference : ZONE 1 S1

SAL Sample Reference : 661786 001

Date Sampled : 13-JUN-2017

Dioxins and Furans (Based on US EPA 1613)

Technique : GC/MS (HR)

Determinand	Symbol	LOD ng/kg	Result ng/kg	WHO2005 Toxic Equivalents ng/kg	
				Lower Bound	Upper Bound
2,3,7,8-TCDD	N	0.26	8.2	8.2	8.2
1,2,3,7,8-PeCDD	N	0.27	27	27	27
1,2,3,4,7,8-HxCDD	N	0.25	20	2.0	2.0
1,2,3,6,7,8-HxCDD	N	0.27	35	3.5	3.5
1,2,3,7,8,9-HxCDD	N	0.27	43	4.3	4.3
1,2,3,4,6,7,8-HpCDD	N	0.28	140	1.4	1.4
OCDD	N	0.46	260	0.078	0.078
Dioxins Totals :				46	46
2,3,7,8-TCDF	N	0.25	87	8.7	8.7
1,2,3,7,8-PeCDF	N	0.30	80	2.4	2.4
2,3,4,7,8-PeCDF	N	0.30	89	27	27
1,2,3,4,7,8-HxCDF	N	0.16	79	7.9	7.9
1,2,3,6,7,8-HxCDF	N	0.14	74	7.4	7.4
2,3,4,6,7,8-HxCDF	N	0.18	82	8.2	8.2
1,2,3,7,8,9-HxCDF	N	0.18	23	2.3	2.3
1,2,3,4,6,7,8-HpCDF	N	0.35	250	2.5	2.5
1,2,3,4,7,8,9-HpCDF	N	0.40	21	0.21	0.21
OCDF	N	0.46	100	0.030	0.030
Furans Totals :				66	66
Totals :				110	110

Bulk Product

Customer Sample Reference : ZONE 1 S2

SAL Sample Reference : 661786 002

Date Sampled : 13-JUN-2017

Dioxins and Furans (Based on US EPA 1613)

Technique : GC/MS (HR)

Determinand	Symbol	LOD ng/kg	Result ng/kg	WHO2005 Toxic Equivalents ng/kg	
				Lower Bound	Upper Bound
2,3,7,8-TCDD	N	0.35	150	150	150
1,2,3,7,8-PeCDD	N	0.35	1000	1000	1000
1,2,3,4,7,8-HxCDD	N	0.29	1500	150	150
1,2,3,6,7,8-HxCDD	N	0.29	1700	170	170
1,2,3,7,8,9-HxCDD	N	0.29	2200	220	220
1,2,3,4,6,7,8-HpCDD	N	0.47	20000	200	200
OCDD	N	0.88	41000	12	12
Dioxins Totals :				1900	1900
2,3,7,8-TCDF	N	0.33	310	31	31
1,2,3,7,8-PeCDF	N	0.37	1000	30	30
2,3,4,7,8-PeCDF	N	0.40	1200	360	360
1,2,3,4,7,8-HxCDF	N	0.31	2400	240	240
1,2,3,6,7,8-HxCDF	N	0.28	2700	270	270
2,3,4,6,7,8-HxCDF	N	0.29	3300	330	330
1,2,3,7,8,9-HxCDF	N	0.31	910	91	91
1,2,3,4,6,7,8-HpCDF	N	0.62	19000	190	190
1,2,3,4,7,8,9-HpCDF	N	0.68	1300	13	13
OCDF	N	0.99	8300	2.5	2.5
Furans Totals :				1600	1600
Totals :				3500	3500

Bulk Product

Customer Sample Reference : ZONE 1 S3
 SAL Sample Reference : 661786 003
 Date Sampled : 13-JUN-2017

Dioxins and Furans (Based on US EPA 1613)

Technique : GC/MS (HR)

Determinand	Symbol	LOD ng/kg	Result ng/kg	WHO2005 Toxic Equivalents ng/kg	
				Lower Bound	Upper Bound
2,3,7,8-TCDD	N	0.26	5.2	5.2	5.2
1,2,3,7,8-PeCDD	N	0.27	20	20	20
1,2,3,4,7,8-HxCDD	N	0.25	29	2.9	2.9
1,2,3,6,7,8-HxCDD	N	0.24	33	3.3	3.3
1,2,3,7,8,9-HxCDD	N	0.24	45	4.5	4.5
1,2,3,4,6,7,8-HpCDD	N	0.39	640	6.4	6.4
OCDD	N	0.48	2300	0.69	0.69
Dioxins Totals :				43	43
2,3,7,8-TCDF	N	0.27	52	5.2	5.2
1,2,3,7,8-PeCDF	N	0.32	72	2.2	2.2
2,3,4,7,8-PeCDF	N	0.34	97	29	29
1,2,3,4,7,8-HxCDF	N	0.26	140	14	14
1,2,3,6,7,8-HxCDF	N	0.25	140	14	14
2,3,4,6,7,8-HxCDF	N	0.30	160	16	16
1,2,3,7,8,9-HxCDF	N	0.28	49	4.9	4.9
1,2,3,4,6,7,8-HpCDF	N	0.51	890	8.9	8.9
1,2,3,4,7,8,9-HpCDF	N	0.59	130	1.3	1.3
OCDF	N	0.52	1200	0.36	0.36
Furans Totals :				96	96
Totals :				140	140

Bulk Product

Customer Sample Reference : ZONE 1 S4

SAL Sample Reference : 661786 004

Date Sampled : 13-JUN-2017

Dioxins and Furans (Based on US EPA 1613)

Technique : GC/MS (HR)

Determinand	Symbol	LOD ng/kg	Result ng/kg	WHO2005 Toxic Equivalents ng/kg	
				Lower Bound	Upper Bound
2,3,7,8-TCDD	N	0.26	10	10	10
1,2,3,7,8-PeCDD	N	0.23	54	54	54
1,2,3,4,7,8-HxCDD	N	0.23	60	6.0	6.0
1,2,3,6,7,8-HxCDD	N	0.25	90	9.0	9.0
1,2,3,7,8,9-HxCDD	N	0.25	110	11	11
1,2,3,4,6,7,8-HpCDD	N	0.40	1800	18	18
OCDD	N	0.60	5700	1.7	1.7
Dioxins Totals :				110	110
2,3,7,8-TCDF	N	0.23	83	8.3	8.3
1,2,3,7,8-PeCDF	N	0.24	130	3.9	3.9
2,3,4,7,8-PeCDF	N	0.26	160	48	48
1,2,3,4,7,8-HxCDF	N	0.26	240	24	24
1,2,3,6,7,8-HxCDF	N	0.24	260	26	26
2,3,4,6,7,8-HxCDF	N	0.28	290	29	29
1,2,3,7,8,9-HxCDF	N	0.29	100	10	10
1,2,3,4,6,7,8-HpCDF	N	0.52	1500	15	15
1,2,3,4,7,8,9-HpCDF	N	0.59	250	2.5	2.5
OCDF	N	0.70	1700	0.51	0.51
Furans Totals :				170	170
Totals :				280	280

Bulk Product

Customer Sample Reference : ZONE 1 S6

SAL Sample Reference : 661786 006

Dioxins and Furans (Based on US EPA 1613)

Technique : GC/MS (HR)

Determinand	Symbol	LOD ng/kg	Result ng/kg	WHO2005 Toxic Equivalents ng/kg	
				Lower Bound	Upper Bound
2,3,7,8-TCDD	N	0.21	5.6	5.6	5.6
1,2,3,7,8-PeCDD	N	0.21	13	13	13
1,2,3,4,7,8-HxCDD	N	0.23	5.8	0.58	0.58
1,2,3,6,7,8-HxCDD	N	0.23	19	1.9	1.9
1,2,3,7,8,9-HxCDD	N	0.23	18	1.8	1.8
1,2,3,4,6,7,8-HpCDD	N	0.40	160	1.6	1.6
OCDD	N	0.64	380	0.11	0.11
Dioxins Totals :				25	25
2,3,7,8-TCDF	N	0.20	17	1.7	1.7
1,2,3,7,8-PeCDF	N	0.25	15	0.45	0.45
2,3,4,7,8-PeCDF	N	0.23	17	5.1	5.1
1,2,3,4,7,8-HxCDF	N	0.30	17	1.7	1.7
1,2,3,6,7,8-HxCDF	N	0.29	16	1.6	1.6
2,3,4,6,7,8-HxCDF	N	0.28	14	1.4	1.4
1,2,3,7,8,9-HxCDF	N	0.24	3.9	0.39	0.39
1,2,3,4,6,7,8-HpCDF	N	0.80	58	0.58	0.58
1,2,3,4,7,8,9-HpCDF	N	0.68	3.5	0.035	0.035
OCDF	N	0.76	21	0.0063	0.0063
Furans Totals :				13	13
Totals :				38	38

Leachate

Customer Sample Reference : ZONE 1 S4
 SAL Sample Reference : 661786 004
 Date Sampled : 13-JUN-2017

Dioxins and Furans (Based on US EPA 1613)

Technique : GC/MS (HR)

Determinand	Symbol	LOD ng/l	Result ng/l	WHO2005 Toxic Equivalents ng/l	
				Lower Bound	Upper Bound
2,3,7,8-TCDD	U	0.0050	<0.0050	0.0	0.0050
1,2,3,7,8-PeCDD	U	0.0055	<0.0055	0.0	0.0055
1,2,3,4,7,8-HxCDD	U	0.0080	<0.0080	0.0	0.00080
1,2,3,6,7,8-HxCDD	U	0.0080	<0.0080	0.0	0.00080
1,2,3,7,8,9-HxCDD	U	0.0080	<0.0080	0.0	0.00080
1,2,3,4,6,7,8-HpCDD	U	0.0090	<0.0090	0.0	0.00009
OCDD	U	0.0090	<0.0090	0.0	0.00000
Dioxins Totals :				0.0	0.013
2,3,7,8-TCDF	U	0.0050	<0.0050	0.0	0.00050
1,2,3,7,8-PeCDF	U	0.0050	<0.0050	0.0	0.00015
2,3,4,7,8-PeCDF	U	0.0050	<0.0050	0.0	0.0015
1,2,3,4,7,8-HxCDF	U	0.0050	<0.0050	0.0	0.00050
1,2,3,6,7,8-HxCDF	U	0.0050	<0.0050	0.0	0.00050
2,3,4,6,7,8-HxCDF	U	0.0050	<0.0050	0.0	0.00050
1,2,3,7,8,9-HxCDF	U	0.0050	<0.0050	0.0	0.00050
1,2,3,4,6,7,8-HpCDF	U	0.0089	<0.0089	0.0	0.00009
1,2,3,4,7,8,9-HpCDF	U	0.0088	<0.0088	0.0	0.00009
OCDF	U	0.015	<0.015	0.0	0.00000
Furans Totals :				0.0	0.0043
Totals :				0.0	0.017

Leachate

Customer Sample Reference : ZONE 1 S5

SAL Sample Reference : 661786 005

Dioxins and Furans (Based on US EPA 1613)

Technique : GC/MS (HR)

Determinand	Symbol	LOD ng/l	Result ng/l	WHO2005 Toxic Equivalents ng/l	
				Lower Bound	Upper Bound
2,3,7,8-TCDD	U	0.0060	<0.0060	0.0	0.0060
1,2,3,7,8-PeCDD	U	0.0060	<0.0060	0.0	0.0060
1,2,3,4,7,8-HxCDD	U	0.0060	<0.0060	0.0	0.00060
1,2,3,6,7,8-HxCDD	U	0.0060	<0.0060	0.0	0.00060
1,2,3,7,8,9-HxCDD	U	0.0060	<0.0060	0.0	0.00060
1,2,3,4,6,7,8-HpCDD	U	0.010	<0.010	0.0	0.00010
OCDD	U	0.013	<0.013	0.0	0.00000
Dioxins Totals :				0.0	0.014
2,3,7,8-TCDF	U	0.0063	<0.0063	0.0	0.00063
1,2,3,7,8-PeCDF	U	0.0060	<0.0060	0.0	0.00018
2,3,4,7,8-PeCDF	U	0.0060	<0.0060	0.0	0.0018
1,2,3,4,7,8-HxCDF	U	0.0060	<0.0060	0.0	0.00060
1,2,3,6,7,8-HxCDF	U	0.0060	<0.0060	0.0	0.00060
2,3,4,6,7,8-HxCDF	U	0.0060	<0.0060	0.0	0.00060
1,2,3,7,8,9-HxCDF	U	0.0060	<0.0060	0.0	0.00060
1,2,3,4,6,7,8-HpCDF	U	0.010	<0.010	0.0	0.00010
1,2,3,4,7,8,9-HpCDF	U	0.010	<0.010	0.0	0.00010
OCDF	U	0.012	<0.012	0.0	0.00000
Furans Totals :				0.0	0.0052
Totals :				0.0	0.019

Concept Reference: 661786						
Project Site: Manor Farm						
Customer Reference: 17/001						
Leachate to BS EN 12457-2 (10:1) Analysed as Water						
Metals Suite						
Concept Reference			661786 004	661786 005		
Customer Sample Reference			ZONE 1 S4	ZONE 1 S5		
Test Sample			10:1	10:1		
Date Sampled			13-JUN-2017			
Determinand	Method	LOD	Units	Symbol		
Arsenic (Dissolved)	ICP/MS (Filtered)	0.2	µg/l	U	34	3.3
Boron	ICP/OES	0.01	mg/l	N	0.72	0.03
Barium (Dissolved)	ICP/MS (Filtered)	1	µg/l	U	100	45
Beryllium (Dissolved)	ICP/MS (Filtered)	0.05	µg/l	U	<0.05	<0.05
Cadmium (Dissolved)	ICP/MS (Filtered)	0.02	µg/l	U	0.14	0.03
Chromium VI	Discrete Analyser	0.003	mg/l	U	0.026	<0.003
Cobalt (Dissolved)	ICP/MS (Filtered)	1	µg/l	U	3	<1
Chromium (Dissolved)	ICP/MS (Filtered)	1	µg/l	U	26	<1
Copper (Dissolved)	ICP/MS (Filtered)	0.5	µg/l	U	<0.5	<0.5
Iron	ICP/OES	0.01	mg/l	U	<0.01	<0.01
Mercury (Dissolved)	ICP/MS (Filtered)	0.05	µg/l	U	⁽⁹⁾ <0.50	<0.05
Manganese (Dissolved)	ICP/MS (Filtered)	1	µg/l	U	3	<1
Molybdenum (Dissolved)	ICP/MS (Filtered)	1	µg/l	U	37	16
Nickel (Dissolved)	ICP/MS (Filtered)	1	µg/l	U	13	<1
Lead (Dissolved)	ICP/MS (Filtered)	0.3	µg/l	U	26	<0.3
Antimony (Dissolved)	ICP/MS (Filtered)	1	µg/l	U	36	12
Selenium (Dissolved)	ICP/MS (Filtered)	0.5	µg/l	U	6.2	<0.5
Tin	ICP/OES	0.01	mg/l	U	<0.01	<0.01
Vanadium (Dissolved)	ICP/MS (Filtered)	2	µg/l	U	8	<2
Zinc (Dissolved)	ICP/MS (Filtered)	2	µg/l	U	<2	3

Concept Reference: 661786										
Project Site: Manor Farm										
Customer Reference: 17/001										
Bulk Product Analysed as Bulk Product										
Metals Suite										
Concept Reference			661786 001	661786 002	661786 003	661786 004	661786 006			
Customer Sample Reference			ZONE 1 S1	ZONE 1 S2	ZONE 1 S3	ZONE 1 S4	ZONE 1 S6			
Test Sample			A40	A40	A40	A40	A40			
Date Sampled			13-JUN-2017	13-JUN-2017	13-JUN-2017	13-JUN-2017				
Determinand	Method	LOD	Units	Symbol						
Arsenic	ICP/OES	1	mg/kg	N	120	150	130	110	37	
Boron (water-soluble)	ICP/OES	1	mg/kg	N	3	3	2	2	<1	
Barium	ICP/OES	1	mg/kg	N	360	290	480	480	200	
Beryllium	ICP/OES	10	mg/kg	N	<10	<10	<10	<10	<10	
Cadmium	ICP/OES	1	mg/kg	N	11	4	4	8	1	
Chromium VI	ICP/OES	1.0	mg/kg	N	<1.0	<1.0	<1.0	<1.0	<1.0	
Cobalt	ICP/OES	10	mg/kg	N	15	12	13	15	<10	
Chromium	ICP/OES	1	mg/kg	N	91	72	65	83	55	
Copper	ICP/OES	1	mg/kg	N	430	420	430	480	210	
Iron	ICP/OES	1	mg/kg	N	22000	17000	20000	23000	13000	
Mercury	ICP/OES	1	mg/kg	N	<1	<1	<1	<1	<1	
Manganese	ICP/OES	1	mg/kg	N	700	570	570	640	420	
Molybdenum	ICP/OES	10	mg/kg	N	<10	<10	<10	12	11	
Nickel	ICP/OES	1	mg/kg	N	39	25	41	46	45	
Lead	ICP/OES	1	mg/kg	N	2200	2000	2100	2100	350	
Antimony	ICP/OES	10	mg/kg	N	64	66	65	69	22	
Tin	ICP/OES	2	mg/kg	N	45	69	56	84	9	
Vanadium	ICP/OES	10	mg/kg	N	69	60	64	72	21	
Zinc	ICP/OES	1	mg/kg	N	3400	5200	5600	5900	860	

Concept Reference: 661786						
Project Site: Manor Farm						
Customer Reference: 17/001						
Leachate to BS EN 12457-2 (10:1) Analysed as Water						
PAH US EPA 16 (B and K split)						
Concept Reference			661786 004	661786 005		
Customer Sample Reference			ZONE 1 S4	ZONE 1 S5		
Test Sample			10:1	10:1		
Date Sampled			13-JUN-2017			
Determinand	Method	LOD	Units	Symbol		
Naphthalene	GC/MS (SIR)	0.01	µg/l	U	(131,13) 0.10	(13,131) 0.02
Acenaphthylene	GC/MS (SIR)	0.01	µg/l	U	0.09	(13) 0.03
Acenaphthene	GC/MS (SIR)	0.01	µg/l	U	(13) 0.10	(13) 0.05
Fluorene	GC/MS (SIR)	0.01	µg/l	U	0.13	(13) <0.01
Phenanthrene	GC/MS (SIR)	0.01	µg/l	U	(13) 0.08	(13) <0.01
Anthracene	GC/MS (SIR)	0.01	µg/l	U	0.07	(13) 0.01
Fluoranthene	GC/MS (SIR)	0.01	µg/l	U	0.05	(13) 0.02
Pyrene	GC/MS (SIR)	0.01	µg/l	U	0.04	(13) 0.01
Benzo(a)Anthracene	GC/MS (SIR)	0.01	µg/l	U	0.03	(13) <0.01
Chrysene	GC/MS (SIR)	0.01	µg/l	U	0.02	(13) <0.01
Benzo(b)fluoranthene	GC/MS (SIR)	0.01	µg/l	U	0.02	(13) <0.01
Benzo(k)fluoranthene	GC/MS (SIR)	0.01	µg/l	U	0.02	(13) 0.01
Benzo(a)Pyrene	GC/MS (SIR)	0.01	µg/l	U	0.02	(13) 0.01
Indeno(123-cd)Pyrene	GC/MS (SIR)	0.01	µg/l	U	0.02	(13) <0.01
Dibenzo(ah)Anthracene	GC/MS (SIR)	0.01	µg/l	U	0.02	(13) <0.01
Benzo(ghi)Perylene	GC/MS (SIR)	0.01	µg/l	U	0.02	(13) 0.01
Polyaromatic Hydrocarbons (Total)	GC/MS (SIR)	0.01	µg/l	U	0.83	0.17

Concept Reference: 661786										
Project Site: Manor Farm										
Customer Reference: 17/001										
Bulk Product Analysed as Bulk Product										
TPH C8-C40 Ali/Aro										
Concept Reference			661786 001	661786 002	661786 003	661786 004	661786 006			
Customer Sample Reference			ZONE 1 S1	ZONE 1 S2	ZONE 1 S3	ZONE 1 S4	ZONE 1 S6			
Test Sample			AR	AR	AR	AR	AR			
Date Sampled			13-JUN-2017	13-JUN-2017	13-JUN-2017	13-JUN-2017				
Determinand	Method	LOD	Units	Symbol						
Total Petroleum Hydrocarbons (C8-C10 aliphatic)	GCxGC	1	mg/kg	N	<1	<1	<1	<1	<1	<1
Total Petroleum Hydrocarbons (C10-C12 aliphatic)	GCxGC	1	mg/kg	N	(13) <1	(13) <1	(13) <1	(13) <1	(13) <1	(13) <1
Total Petroleum Hydrocarbons (C12-C16 aliphatic)	GCxGC	1	mg/kg	N	(13) <1	(13) 2	(13) <1	(13) <1	(13) 3	(13) 3
Total Petroleum Hydrocarbons (C16-C21 aliphatic)	GCxGC	1	mg/kg	N	(13) 1	(13) 17	(13) <1	(13) <1	(13) 3	(13) 7
Total Petroleum Hydrocarbons (C21-C35 aliphatic)	GCxGC	2	mg/kg	N	(13) 6	(13) 18	(13) 3	(13) 3	(13) 3	(13) 7
Total Petroleum Hydrocarbons (C35-C40 aliphatic)	GCxGC	1	mg/kg	N	(13) <1	(13) <1	(13) <1	(13) <1	(13) <1	(13) <1
Total Petroleum Hydrocarbons (C8-C10 aromatic)	GCxGC	1	mg/kg	N	<1	<1	<1	<1	<1	<1
Total Petroleum Hydrocarbons (C10-C12 aromatic)	GCxGC	2	mg/kg	N	(13) <2	(13) <2	(13) <2	(13) <2	(13) <2	(13) <2
Total Petroleum Hydrocarbons (C12-C16 aromatic)	GCxGC	1	mg/kg	N	(13) 3	(13) 19	(13) <1	(13) <1	(13) 6	(13) 6
Total Petroleum Hydrocarbons (C16-C21 aromatic)	GCxGC	1	mg/kg	N	(13) 5	(13) 76	(13) <1	(13) <1	(13) 9	(13) 9
Total Petroleum Hydrocarbons (C21-C35 aromatic)	GCxGC	1	mg/kg	N	(13) 5	(13) 18	(13) <1	(13) <1	(13) 4	(13) 4
Total Petroleum Hydrocarbons (C35-C40 aromatic)	GCxGC	1	mg/kg	N	(13) <1	(13) <1	(13) <1	(13) <1	(13) <1	(13) <1

Concept Reference: 661786							
Project Site: Manor Farm							
Customer Reference: 17/001							
Leachate to BS EN 12457-2 (10:1) Analysed as Water							
TPH C8-C40 Ali/Aro							
					Concept Reference	661786 004	661786 005
					Customer Sample Reference	ZONE 1 S4	ZONE 1 S5
					Test Sample	10:1	10:1
					Date Sampled	13-JUN-2017	
Determinand	Method	LOD	Units	Symbol			
Total Petroleum Hydrocarbons DW(C8-C10 aliphatic)	GCxGC (LV)	0.01	mg/l	N	<0.01	<0.01	
Total Petroleum Hydrocarbons (C10-C12 aliphatic)	GCxGC (LV)	0.01	mg/l	N	⁽¹³⁾ <0.01	⁽¹³⁾ <0.01	
Total Petroleum Hydrocarbons (C12-C16 aliphatic)	GCxGC (LV)	0.01	mg/l	N	⁽¹³⁾ <0.01	⁽¹³⁾ <0.01	
Total Petroleum Hydrocarbons (C16-C21 aliphatic)	GCxGC (LV)	0.01	mg/l	N	⁽¹³⁾ <0.01	⁽¹³⁾ <0.01	
Total Petroleum Hydrocarbons (C21-C35 aliphatic)	GCxGC (LV)	0.01	mg/l	N	⁽¹³⁾ <0.01	⁽¹³⁾ <0.01	
Total Petroleum Hydrocarbons (C35-C40 aliphatic)	GCxGC (LV)	0.01	mg/l	N	⁽¹³⁾ <0.01	⁽¹³⁾ <0.01	
Total Petroleum Hydrocarbons DW(C8-C10 aromatic)	GCxGC (LV)	0.01	mg/l	N	<0.01	<0.01	
Total Petroleum Hydrocarbons (C10-C12 aromatic)	GCxGC (LV)	0.01	mg/l	N	⁽¹³⁾ <0.01	⁽¹³⁾ <0.01	
Total Petroleum Hydrocarbons (C12-C16 aromatic)	GCxGC (LV)	0.01	mg/l	N	⁽¹³⁾ <0.01	⁽¹³⁾ <0.01	
Total Petroleum Hydrocarbons (C16-C21 aromatic)	GCxGC (LV)	0.01	mg/l	N	⁽¹³⁾ <0.01	⁽¹³⁾ <0.01	
Total Petroleum Hydrocarbons (C21-C35 aromatic)	GCxGC (LV)	0.01	mg/l	N	⁽¹³⁾ <0.01	⁽¹³⁾ <0.01	
Total Petroleum Hydrocarbons (C35-C40 aromatic)	GCxGC (LV)	0.01	mg/l	N	⁽¹³⁾ <0.01	⁽¹³⁾ <0.01	



Concept Reference: 661786 Project Site: Manor Farm Customer Reference: 17/001 Bulk Product Analysed as Bulk Product Semi-Volatile Organic Compounds (USEPA 625)									
Concept Reference					661786 001	661786 002	661786 003	661786 004	661786 006
Customer Sample Reference					ZONE 1 S1	ZONE 1 S2	ZONE 1 S3	ZONE 1 S4	ZONE 1 S6
Test Sample					AR	AR	AR	AR	AR
Date Sampled					13-JUN-2017	13-JUN-2017	13-JUN-2017	13-JUN-2017	
Determinand	Method	LOD	Units	Symbol					
Phenol	GC/MS	0.1	mg/kg	N	0.1	0.1	<0.1	<0.1	<0.1
Bis (2-chloroethyl) ether	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
2-Chlorophenol	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
1,3-Dichlorobenzene	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	0.1	<0.1
1,4-Dichlorobenzene	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	0.1	<0.1
1,2-Dichlorobenzene	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	0.1	<0.1
Bis (2-chloroisopropyl) ether	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
2-methyl phenol	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
3/4-Methylphenol	GC/MS	0.1	mg/kg	N	0.1	0.3	<0.1	<0.1	<0.1
Hexachloroethane	GC/MS	0.1	mg/kg	N	(162) <0.2	(162) <0.2	(162) <0.2	(162) <0.2	(162) <0.2
Nitrobenzene	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
Isophorone	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
2-Nitrophenol	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
2,4-Dimethylphenol	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
Bis (2-chloroethoxy) methane	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
2,4-Dichlorophenol	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
1,2,4-Trichlorobenzene	GC/MS	0.1	mg/kg	N	<0.1	<0.1	0.1	0.2	<0.1
Naphthalene	GC/MS	0.1	mg/kg	N	<0.1	0.1	<0.1	0.1	<0.1
4-Chloroaniline	GC/MS	0.1	mg/kg	N	(162) <0.5	(162) <0.5	(162) <0.5	(162) <0.5	(162) <0.5
Hexachlorobutadiene	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
4-Chloro-3-methylphenol	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
Hexachlorocyclopentadiene	GC/MS	0.1	mg/kg	N	(162) <0.5	(162) <0.5	(162) <0.5	(162) <0.5	(162) <0.5
2,4,6-Trichlorophenol	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
2,4,5-Trichlorophenol	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
2-Chloronaphthalene	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
2-Nitroaniline	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethyl phthalate	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
2,6-Dinitrotoluene	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
3-Nitroaniline	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzofuran	GC/MS	0.1	mg/kg	N	<0.1	0.2	<0.1	<0.1	<0.1
2,4-Dinitrotoluene	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
Diethyl phthalate	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	GC/MS	0.1	mg/kg	N	<0.1	0.2	<0.1	<0.1	<0.1
4-Chlorophenyl phenylether	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
4-Nitroaniline	GC/MS	0.1	mg/kg	N	(162) <0.2	(162) <0.2	(162) <0.2	(162) <0.2	(162) <0.2
Azobenzene	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
4-Bromophenyl phenylether	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
Hexachlorobenzene	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
Pentachlorophenol	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	GC/MS	0.1	mg/kg	N	0.2	4.0	0.1	<0.1	<0.1
Anthracene	GC/MS	0.1	mg/kg	N	<0.1	1.0	<0.1	<0.1	<0.1
Carbazole	GC/MS	0.1	mg/kg	N	<0.1	0.2	<0.1	<0.1	<0.1
Di-n-butylphthalate	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	GC/MS	0.1	mg/kg	N	0.2	2.3	0.1	<0.1	<0.1
Pyrene	GC/MS	0.1	mg/kg	N	0.2	1.5	0.1	<0.1	<0.1
Butyl benzylphthalate	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)Anthracene	GC/MS	0.1	mg/kg	N	<0.1	0.1	<0.1	<0.1	<0.1
Chrysene	GC/MS	0.1	mg/kg	N	<0.1	0.2	<0.1	<0.1	<0.1
Bis (2-ethylhexyl)phthalate	GC/MS	0.1	mg/kg	N	0.4	0.3	<0.1	0.1	<0.1
Di-n-octylphthalate	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b/k)Fluoranthene	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)Pyrene	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(123-cd)Pyrene	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)Anthracene	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)Perylene	GC/MS	0.1	mg/kg	N	<0.1	<0.1	<0.1	<0.1	<0.1

Concept Reference: 661786						
Project Site: Manor Farm						
Customer Reference: 17/001						
Leachate to BS EN 12457-2 (10:1) Analysed as Water						
Semi-Volatile Organic Compounds (Reduced)						
Concept Reference			661786 004	661786 005		
Customer Sample Reference			ZONE 1 S4	ZONE 1 S5		
Test Sample			10:1	10:1		
Date Sampled			13-JUN-2017			
Determinand	Method	LOD	Units	Symbol		
Phenol	GC/MS	10	µg/l	U	<10	<10
Bis (2-chloroethyl) ether	GC/MS	10	µg/l	U	<10	<10
2-Chlorophenol	GC/MS	10	µg/l	U	<10	<10
1,3-Dichlorobenzene	GC/MS	10	µg/l	U	⁽¹⁶²⁾ <20	<10
1,4-Dichlorobenzene	GC/MS	10	µg/l	U	⁽¹⁶²⁾ <20	<10
1,2-Dichlorobenzene	GC/MS	10	µg/l	U	<10	<10
Bis (2-chloroisopropyl) ether	GC/MS	10	µg/l	U	<10	<10
2-methyl phenol	GC/MS	10	µg/l	U	<10	<10
3/4-Methylphenol	GC/MS	10	µg/l	U	⁽¹⁶²⁾ <20	<10
Hexachloroethane	GC/MS	10	µg/l	U	⁽¹⁶²⁾ <20	⁽¹⁶²⁾ <50
Nitrobenzene	GC/MS	10	µg/l	U	<10	<10
Isophorone	GC/MS	10	µg/l	U	<10	<10
2-Nitrophenol	GC/MS	10	µg/l	U	<10	<10
2,4-Dimethylphenol	GC/MS	10	µg/l	U	<10	<10
Bis (2-chloroethoxy) methane	GC/MS	10	µg/l	U	<10	<10
2,4-Dichlorophenol	GC/MS	10	µg/l	U	<10	<10
1,2,4-Trichlorobenzene	GC/MS	10	µg/l	U	⁽¹⁶²⁾ <20	⁽¹⁶²⁾ <20
4-Chloroaniline	GC/MS	10	µg/l	U	⁽¹⁶²⁾ <20	<10
Hexachlorobutadiene	GC/MS	10	µg/l	U	⁽¹⁶²⁾ <20	⁽¹⁶²⁾ <50
4-Chloro-3-methylphenol	GC/MS	10	µg/l	U	<10	<10
2-Methylnaphthalene	GC/MS	10	µg/l	U	<10	<10
Hexachlorocyclopentadiene	GC/MS	10	µg/l	U	⁽¹⁶²⁾ <20	⁽¹⁶²⁾ <50
2,4,6-Trichlorophenol	GC/MS	10	µg/l	U	<10	<10
2,4,5-Trichlorophenol	GC/MS	10	µg/l	U	<10	<10
2-Chloronaphthalene	GC/MS	10	µg/l	U	<10	<10
2-Nitroaniline	GC/MS	10	µg/l	U	<10	<10
Dimethyl phthalate	GC/MS	10	µg/l	U	<10	<10
2,6-Dinitrotoluene	GC/MS	10	µg/l	U	<10	<10
3-Nitroaniline	GC/MS	10	µg/l	U	<10	<10
Dibenzofuran	GC/MS	10	µg/l	U	<10	<10
2,4-Dinitrotoluene	GC/MS	10	µg/l	U	<10	<10
Diethyl phthalate	GC/MS	10	µg/l	U	<10	<10
4-Chlorophenyl phenylether	GC/MS	10	µg/l	U	<10	<10
4-Nitroaniline	GC/MS	10	µg/l	U	<10	<10
Azobenzene	GC/MS	10	µg/l	U	<10	<10
4-Bromophenyl phenylether	GC/MS	10	µg/l	U	<10	<10
Hexachlorobenzene	GC/MS	10	µg/l	U	<10	<10
Pentachlorophenol	GC/MS	10	µg/l	U	⁽¹⁶²⁾ <20	<10
Carbazole	GC/MS	10	µg/l	U	<10	<10
Di-n-butylphthalate	GC/MS	10	µg/l	U	<10	<10
Butyl benzylphthalate	GC/MS	10	µg/l	U	<10	<10
Bis (2-ethylhexyl)phthalate	GC/MS	10	µg/l	U	<10	<10
Di-n-octylphthalate	GC/MS	10	µg/l	U	<10	<10

Concept Reference: 661786										
Project Site: Manor Farm										
Customer Reference: 17/001										
Bulk Product Analysed as Bulk Product										
Asbestos										
Concept Reference			661786 001	661786 002	661786 003	661786 004	661786 006			
Customer Sample Reference			ZONE 1 S1	ZONE 1 S2	ZONE 1 S3	ZONE 1 S4	ZONE 1 S6			
Test Sample			AR	AR	AR	AR	AR			
Date Sampled			13-JUN-2017	13-JUN-2017	13-JUN-2017	13-JUN-2017				
Determinand	Method	LOD	Units	Symbol						
Asbestos Bulk ID	PLM			SU	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Index to symbols used in 661786-1

Value	Description
AR	As Received
A40	Assisted dried < 40C
10:1	Leachate to BS EN 12457-2 (10:1)
N.D.	Not Detected
9	LOD raised due to dilution of sample
131	Result is outside of the scope of accreditation due to a QC Failure
162	LOD determined by matrix spike recovery
13	Results have been blank corrected.
S	Analysis was subcontracted
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

