



JBS 40289-11350

21 June 2007
Jacob Whiting
Project Manager
Honeysuckle Development Corporation

Via Email: jacob.whiting@honeysuckle.nsw.gov.au

Material Classification – Park Residential, Honeysuckle Drive, Newcastle, NSW

Dear Jacob,

1. Introduction & Background

JBS Environmental Pty Ltd was engaged by Honeysuckle Development Corporation (HDC) to classify in-situ materials located at the 'Park Residential' site (Lot 1111 DP 1027135), located on Honeysuckle Drive, Newcastle, NSW. It is understood that, as part of the proposed development works, the subsurface materials may require offsite disposal.

2. Objectives

The objective of the current sampling regime is to characterise in-situ materials from 0 to 3m below ground surface (bgs) for disposal in accordance with DEC (2004)¹.

3. Material Characterisation

3.1. Material Description

The soils (in-situ) to be classified were located beneath the entire site, from the ground surface to a depth of approximately 3m below ground surface (bgs). Based on information provided by HDC, the material to be classified is estimated to be approximately 21,900m³ in volume.

Observations conducted during field activities indicated that the in-situ material was generally comprised of two distinct layers of fill material. The 'gravelly silty sand', located from the surface to a depth of approximately 0.5m bgs, was comprised of fine grained silty sands and slag gravels. The underlying 'dredged alluvial sand' was comprised of homogenous dredged alluvial sand and shell fragments. A summary of the soil profile is presented in **Table 3.1**.

Table 3.1 – Summary of the soil profile

Approx. depth (m)	Soil description
0.0 – 0.5m	FILL: gravelly silty sand with slag gravels
0.5 – 3.0m	FILL: dredged alluvial sand with shell fragments

A variation to the general soil profile described above was detected at investigation location TP8, in the north-western portion of the site. This location exhibited dredged alluvial sand from the ground surface to a depth of approximately 1.8m bgs. This was underlain by sandy clay fill with slag gravels and railway ballast present to a depth of approximately 2.7m bgs. This was underlain by clayey sand.

Based on the observed soil profile of the site, approximately 3,650m³ of gravelly silty sand and 18,250m³ of dredged alluvial sand is present beneath the site to a maximum depth of 3m bgs.

¹ DEC (2004) *Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-liquid Wastes*.

3.2. Sample Collection

Ten test pits were excavated across the site, to a maximum depth of 3.0 m bgs. Between three and four soil samples were collected at each location, at depths of approximately 0.2m, 1.0m, 2.0m and 3.0m bgs.

Samples were collected from the centre of the excavator bucket using a stainless steel trowel, then placed directly into an unpreserved jar and transferred to a chilled esky for sample preservation prior to and during shipment to the testing laboratory.

3.3. Sample Analysis

Soil samples were transported under chain of custody conditions to a NATA certified laboratory (Envirolab), where detailed chemical analysis was performed. Twenty primary samples were collected from the in-situ soils were analysed for heavy metals², total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene and xylenes (BTEX), polynuclear aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs) and polychlorinated biphenyls (PCBs). Seven samples from the in-situ soils were also analysed using Toxicity Characteristic Leaching Procedure (TCLP) for heavy metals and PAHs.

The analysis of twenty samples is considered sufficient to characterise the in-situ soils.

3.4. Quality Assurance / Quality Control

Two blind duplicate samples (QA1 and QA2) and two split duplicate samples (QA1A and QA2A) were collected during the current investigation. Split duplicate samples were transported under chain of custody conditions to a NATA certified laboratory (NMI) for analysis. One blind duplicate sample (QA1) and one split duplicate sample (QA1A) were analysed for heavy metals, TPH, BTEX compounds, PAHs, OCPs and PCBs.

3.5. Discussion of Analytical Results

The in-situ soils were classified based on the strata described in **Section 3.1**.

Based on a review of the bore logs, samples collected between 2.0m and 3.0m bgs at TP8 were characterised with samples collected from the gravelly silty sand. A summary of the analytical results and classification of the in-situ soil strata is provided in **Tables 3.5.1** to **3.5.2** respectively.

95% Upper Confidence Level (Average) concentrations of contaminants have been used to determine the appropriate waste classification for the gravelly silty sand and the dredged alluvial sand. Detailed laboratory reports and chain of custody documentation are provided in **Attachment 2**.

² arsenic, cadmium, chromium, lead, mercury, nickel

Table 3.5.1 – Classification of the gravelly silty sand

Element		95% UCL _{average} concentration (mg/kg) ⁽²⁾	TCLP (mg/L) ⁽³⁾	Classification by Element ⁽¹⁾	Overall Classification
Metals	Arsenic	13.0043	<0.01	INERT	INERT⁽⁴⁾
	Cadmium	2.3778	0.01	INERT	
	Chromium	8.1033	<0.01	INERT	
	Lead	241.7030	0.1	INERT	
	Mercury	0.4622	<0.0005	INERT	
	Nickel	14.4407	<0.02	INERT	
BTEX	Benzene	<1	-	INERT	
	Toluene	<1	-	INERT	
	Ethyl-benzene	<1	-	INERT	
	Xylenes	<3	-	INERT	
TPH	C6 - C9	<25	-	INERT	
	C10 - C36	167.8932	-	INERT	
PAHs	Total PAHS	18.8697	-	INERT	
	B(a)P	1.4872 ⁽⁴⁾	<0.001	INERT ⁽⁴⁾	
PCBs	Total PCBs	<0.6	-	INERT	

Notes:

- (1) DEC (2004) Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-liquid Wastes
(2) 95% UCL_{average} calculations are not provided if analytical results are below detection limit.
(3) Highest results of procedure provided.
(4) Total contaminant concentrations disregarded in accordance with immobilization approval No. 1999/07.

Table 3.5.2 – Classification of the dredged alluvial sand

Element		95% UCL _{ave} concentration (mg/kg) ⁽²⁾	TCLP (mg/L) ⁽³⁾	Classification by Element ⁽¹⁾	Overall Classification
Metals	Arsenic	3.5189	<0.05	INERT	INERT
	Cadmium	<1	<0.01	INERT	
	Chromium	1.4975	<0.01	INERT	
	Lead	2.8446	0.08	INERT	
	Mercury	<0.1	<0.0005	INERT	
	Nickel	<1	<0.02	INERT	
BTEX	Benzene	<1	-	INERT	
	Toluene	<1	-	INERT	
	Ethyl-benzene	<1	-	INERT	
	Xylenes	<3	-	INERT	
TPH	C6 - C9	<25	-	INERT	
	C10 - C36	<250	-	INERT	
PAHs	Total PAHS	3.1447	-	INERT	
	B(a)P	0.1445	<0.001	INERT	
PCBs	Total PCBs	<0.6	-	INERT	

Notes:

- (1) DEC (2004) Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-liquid Wastes
(2) 95% UCL_{ave} calculations are not provided if analytical results are below detection limit.
(3) Highest results of procedure provided.

Concentrations of volatile hydrocarbons (TPH C₆-C₉ and BTEX compounds), OCPs and PCBs were below the laboratory practical quantitation limit (PQL) in all samples analysed.

Concentrations of heavy metals in the gravelly silty sand and dredged alluvial sand were similar to typical background levels of heavy metals in soils in greater Newcastle, NSW. All leachable concentrations of heavy metals and PAHs in the dredged alluvial sand were below the laboratory PQL, with the exception of lead.

Elevated levels of chromium, lead, nickel, PAHs and benzo(a)pyrene were identified in the gravelly silty sand. This is a consequence of the slag material observed in the soils. TCLP analyses indicate that leachable concentrations of heavy metals and PAHs in the gravelly silty sand were below the laboratory PQL, with the exception of cadmium and lead.

3.6. Discussion of Quality Assurance / Quality Control

Blind duplicate samples had relative percentage differences (RPDs) generally below the target of 50%, with the exception of the following:

- Concentrations of TPH C₂₉-C₃₆, anthracene, arsenic, cadmium, lead, mercury and nickel in primary sample TP5/0.2 and duplicate sample QA1, with RPDs of 78%, 100%, 78%, 52% and 61% respectively.

Split duplicate samples had relative percentage differences (RPDs) generally below the target of 50%, with the exception of the following:

- Concentrations of TPH C₁₅-C₂₈, flouranthene, pyrene, benz(a)anthracene, chrysene, benzo(b)&(k)fluoranthene, benzo(a)pyrene, arsenic, cadmium, lead and nickel in primary sample TP5/0.2 and duplicate sample QA1A, with RPDs of 89%, 141%, 138%, 67%, 75%, 67%, 75%, 114%, 75%, 124% and 71% respectively.

Variations between the sample pairs noted above may be attributed to sample heterogeneity, which is particularly common in fill material. Sample heterogeneity can lead to non-uniform distribution of contaminants which can result in elevated RPDs.

Variation in some analytes may also be attributed to the detection of analytes at concentrations close to the laboratory limit of reporting. Detection of target analytes at concentrations close to the LOR can result in exaggerated RPDs, artificially suggesting that the analyte results vary more than they actually do.

On review of the RPD exceedences and the associated analyte concentrations, it is considered that the elevated RPDs do not significantly affect the outcomes of this investigation.

4. Conclusions

Based on the results of this investigation, and subject to the limitations in **Attachment 1**, the following conclusions are made:

Materials described as 'gravelly silty sand' (described in **Section 3.1**) are classified as 'INERT WASTE' in accordance with the immobilisation approval No. 1999/07. This approval is provided for metallurgical furnace slag or metallurgical furnace slag contaminated natural excavated materials. This material may be disposed of to waste facilities that can legally receive them.

Materials identified in this investigation as the 'dredged alluvial sand' (described in **Section 3.1**) are classified as 'INERT WASTE', in accordance with DEC (2004).

If you require any further assistance, please do not hesitate to contact me on (02) 8338 1011.

Prepared by:



Michael Parker
Environmental Scientist
JBS Environmental Pty Ltd

Peer reviewed by:



Kellie Harkin
Senior Environmental Consultant
JBS Environmental Pty Ltd

- Attachments:
- (1) Limitations
 - (2) Laboratory Certificates and Chain of Custody Documentation
 - (3) 95% Upper Confidence Level (Average) Calculations
 - (4) Sample Investigation Locations
 - (5) Borehole Logs

Attachment 1

Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

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Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS Environmental Pty Ltd reserves the right to review the report in the context of the additional information.

Attachment 2 – Laboratory Certificates and Chain of Custody Documentation



Envirolab Services Pty Ltd

ABN 37 112 535 645

54 Frenchs Rd Willoughby NSW 2068

ph 02 9958 5801 fax 02 9958 5803

email: tnotaras@envirolabservices.com.au

CERTIFICATE OF ANALYSIS 11383

Client:

JBS Environmental

P.O. Box 940

MASCOT

NSW 1460

Attention: Cathy Roberts

Sample log in details:

Your Reference:

40289, Park Residential Classification

No. of samples:

40 Soils

Date samples received:

25/05/07

Date completed instructions received:

25/05/07

Analysis Details:

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by:

1/06/07

Date of Preliminary Report:

Not Issued

Issue Date:

18/06/07

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Tests not covered by NATA are denoted with *.

Results Approved By:


Jacinta Hurst
Operations Manager

Envirolab Reference: 11383
Revision No: R 01



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vTPH & BTEX in Soil						
Our Reference:	UNITS	11383-1	11383-2	11383-5	11383-7	11383-9
Your Reference	-----	TP1	TP1	TP2	TP2	TP3
Depth	-----	0.2	1.0	0.2	2.0	0.2
Date Sampled		24/05/07	24/05/07	24/05/07	24/05/07	24/05/07
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
Date analysed	--	30/05/2007	30/05/2007	30/05/2007	30/05/2007	30/05/2007
vTPH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m + p-Xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate aaa-Trifluorotoluene	%	96	105	111	96	97

vTPH & BTEX in Soil						
Our Reference:	UNITS	11383-12	11383-13	11383-14	11383-17	11383-19
Your Reference	-----	TP3	TP4	TP4	TP5	TP5
Depth	-----	3.0	0.2	1.0	0.2	2.0
Date Sampled		24/05/07	24/05/07	24/05/07	24/05/07	24/05/07
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
Date analysed	--	30/05/2007	30/05/2007	30/05/2007	30/05/2007	30/05/2007
vTPH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m + p-Xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate aaa-Trifluorotoluene	%	103	107	102	100	107

vTPH & BTEX in Soil						
Our Reference:	UNITS	11383-21	11383-24	11383-25	11383-26	11383-28
Your Reference	-----	TP6	TP6	TP7	TP7	TP8
Depth	-----	0.2	3.0	1.0	2.0	1.0
Date Sampled		24/05/07	24/05/07	25/05/07	25/05/07	25/05/07
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
Date analysed	--	30/05/2007	30/05/2007	30/05/2007	30/05/2007	30/05/2007
vTPH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m + p-Xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate aaa-Trifluorotoluene	%	100	98	106	103	100

vTPH & BTEX in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	11383-30 TP8 3.0 25/05/07 Soil	11383-31 TP9 0.2 25/05/07 Soil	11383-33 TP9 2.0 25/05/07 Soil	11383-35 TP10 0.2 25/05/07 Soil	11383-36 TP10 1.0 25/05/07 Soil
Date extracted	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
Date analysed	--	30/05/2007	30/05/2007	30/05/2007	30/05/2007	30/05/2007
vTPH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m + p-Xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate aaa-Trifluorotoluene	%	95	95	112	96	98

vTPH & BTEX in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	11383-39 QA1 - 25/05/07 Soil
Date extracted	--	29/05/2007
Date analysed	--	30/05/2007
vTPH C ₆ - C ₉	mg/kg	<25
Benzene	mg/kg	<1.0
Toluene	mg/kg	<1.0
Ethylbenzene	mg/kg	<1.0
m + p-Xylene	mg/kg	<2.0
o-Xylene	mg/kg	<1.0
Surrogate aaa-Trifluorotoluene	%	93

sTPH in Soil (C10-C36)						
Our Reference:	UNITS	11383-1	11383-2	11383-5	11383-7	11383-9
Your Reference	-----	TP1	TP1	TP2	TP2	TP3
Depth	-----	0.2	1.0	0.2	2.0	0.2
Date Sampled		24/05/07	24/05/07	24/05/07	24/05/07	24/05/07
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
Date analysed	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
TPH C10 - C14	mg/kg	<50	<50	<50	<50	<50
TPH C15 - C28	mg/kg	<100	<100	<100	<100	<100
TPH C29 - C36	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	97	93	97	93	95

sTPH in Soil (C10-C36)						
Our Reference:	UNITS	11383-12	11383-13	11383-14	11383-17	11383-19
Your Reference	-----	TP3	TP4	TP4	TP5	TP5
Depth	-----	3.0	0.2	1.0	0.2	2.0
Date Sampled		24/05/07	24/05/07	24/05/07	24/05/07	24/05/07
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
Date analysed	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
TPH C10 - C14	mg/kg	<50	<50	<50	<50	<50
TPH C15 - C28	mg/kg	<100	<100	<100	<100	<100
TPH C29 - C36	mg/kg	<100	<100	<100	110	<100
Surrogate o-Terphenyl	%	92	96	93	94	97

sTPH in Soil (C10-C36)						
Our Reference:	UNITS	11383-21	11383-24	11383-25	11383-26	11383-28
Your Reference	-----	TP6	TP6	TP7	TP7	TP8
Depth	-----	0.2	3.0	1.0	2.0	1.0
Date Sampled		24/05/07	24/05/07	25/05/07	25/05/07	25/05/07
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
Date analysed	--	29/05/2007	29/05/2007	30/05/2007	30/05/2007	30/05/2007
TPH C10 - C14	mg/kg	<50	<50	<50	<50	<50
TPH C15 - C28	mg/kg	<100	<100	<100	<100	<100
TPH C29 - C36	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	94	95	95	98	92

sTPH in Soil (C10-C36)						
Our Reference:	UNITS	11383-30	11383-31	11383-33	11383-35	11383-36
Your Reference	-----	TP8	TP9	TP9	TP10	TP10
Depth	-----	3.0	0.2	2.0	0.2	1.0
Date Sampled		25/05/07	25/05/07	25/05/07	25/05/07	25/05/07
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
Date analysed	--	30/05/2007	30/05/2007	30/05/2007	30/05/2007	30/05/2007
TPH C10 - C14	mg/kg	<50	<50	<50	<50	<50
TPH C15 - C28	mg/kg	<100	<100	<100	<100	<100
TPH C29 - C36	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	97	94	92	92	93

sTPH in Soil (C10-C36)		
Our Reference:	UNITS	11383-39
Your Reference	-----	QA1
Depth	-----	-
Date Sampled		25/05/07
Type of sample		Soil
Date extracted	--	29/05/2007
Date analysed	--	30/05/2007
TPH C10 - C14	mg/kg	<50
TPH C15 - C28	mg/kg	<100
TPH C29 - C36	mg/kg	<100
Surrogate o-Terphenyl	%	94

PAHs in Soil						
Our Reference:	UNITS	11383-1	11383-2	11383-5	11383-7	11383-9
Your Reference	-----	TP1	TP1	TP2	TP2	TP3
Depth	-----	0.2	1.0	0.2	2.0	0.2
Date Sampled		24/05/07	24/05/07	24/05/07	24/05/07	24/05/07
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
Date analysed	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Acenaphthylene	mg/kg	0.1	<0.1	0.2	<0.1	0.2
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.7	<0.1	1.6	<0.1	1.5
Anthracene	mg/kg	<0.1	<0.1	0.2	<0.1	0.2
Fluoranthene	mg/kg	2.8	<0.1	4.8	<0.1	5.1
Pyrene	mg/kg	2.6	<0.1	4.5	<0.1	4.9
Benzo(a)anthracene	mg/kg	0.9	<0.1	1.6	<0.1	1.8
Chrysene	mg/kg	1.1	<0.1	1.7	<0.1	1.9
Benzo(b,k)fluoranthene	mg/kg	1.9	<0.2	2.7	<0.2	3.5
Benzo(a)pyrene	mg/kg	1.2	<0.05	1.5	<0.05	2.0
Indeno(1,2,3-c,d)pyrene	mg/kg	0.7	<0.1	1.0	<0.1	1.5
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Benzo(g,h,i)perylene	mg/kg	0.8	<0.1	1.1	<0.1	1.5
Surrogate p-Terphenyl-d14	%	91	87	91	86	90

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	11383-12 TP3 3.0 24/05/07 Soil	11383-13 TP4 0.2 24/05/07 Soil	11383-14 TP4 1.0 24/05/07 Soil	11383-17 TP5 0.2 24/05/07 Soil	11383-19 TP5 2.0 24/05/07 Soil
Date extracted	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
Date analysed	--	29/05/2007	30/05/2007	30/05/2007	30/05/2007	30/05/2007
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.3	<0.1	0.8	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Fluoranthene	mg/kg	0.1	1.0	<0.1	2.9	<0.1
Pyrene	mg/kg	0.1	1.0	<0.1	2.7	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.3	<0.1	1.0	<0.1
Chrysene	mg/kg	<0.1	0.4	<0.1	1.1	<0.1
Benzo(b,k)fluoranthene	mg/kg	<0.2	0.7	<0.2	2.0	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.3	<0.05	1.1	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.3	<0.1	0.7	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.3	<0.1	0.7	<0.1
Surrogate p-Terphenyl-d14	%	88	90	89	90	86

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	11383-21 TP6 0.2 24/05/07 Soil	11383-24 TP6 3.0 24/05/07 Soil	11383-25 TP7 1.0 25/05/07 Soil	11383-26 TP7 2.0 25/05/07 Soil	11383-28 TP8 1.0 25/05/07 Soil
Date extracted	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
Date analysed	--	30/05/2007	30/05/2007	30/05/2007	30/05/2007	30/05/2007
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	1.3	<0.1	0.5	<0.1	0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	5.1	<0.1	1.9	<0.1	0.6
Pyrene	mg/kg	4.8	<0.1	1.9	<0.1	0.5
Benzo(a)anthracene	mg/kg	1.7	<0.1	0.4	<0.1	0.2
Chrysene	mg/kg	2.0	<0.1	0.7	<0.1	0.3
Benzo(b,k)fluoranthene	mg/kg	3.5	<0.2	1.0	<0.2	0.2
Benzo(a)pyrene	mg/kg	1.9	<0.05	0.5	<0.05	0.08
Indeno(1,2,3-c,d)pyrene	mg/kg	1.6	<0.1	0.6	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	1.6	<0.1	0.7	<0.1	<0.1
Surrogate p-Terphenyl-d14	%	90	91	89	85	89

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	11383-30 TP8 3.0 25/05/07 Soil	11383-31 TP9 0.2 25/05/07 Soil	11383-33 TP9 2.0 25/05/07 Soil	11383-35 TP10 0.2 25/05/07 Soil	11383-36 TP10 1.0 25/05/07 Soil
Date extracted	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
Date analysed	--	30/05/2007	30/05/2007	30/05/2007	30/05/2007	30/05/2007
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.9	0.2	<0.1	0.3	<0.1
Anthracene	mg/kg	0.3	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	4.2	0.1	0.4	0.9	<0.1
Pyrene	mg/kg	3.7	0.1	0.4	1.0	<0.1
Benzo(a)anthracene	mg/kg	1.8	<0.1	0.1	0.3	<0.1
Chrysene	mg/kg	1.5	<0.1	0.2	0.4	<0.1
Benzo(b,k)fluoranthene	mg/kg	2.0	<0.2	<0.2	0.6	<0.2
Benzo(a)pyrene	mg/kg	1.1	<0.05	0.06	0.3	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	<0.1	<0.1	0.2	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.4	<0.1	<0.1	0.3	<0.1
Surrogate p-Terphenyl-d14	%	93	81	88	92	85

PAHs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	11383-39 QA1 - 25/05/07 Soil
Date extracted	--	29/05/2007
Date analysed	--	30/05/2007
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	0.9
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	3.7
Pyrene	mg/kg	3.2
Benzo(a)anthracene	mg/kg	1.2
Chrysene	mg/kg	1.4
Benzo(b,k)fluoranthene	mg/kg	2.0
Benzo(a)pyrene	mg/kg	0.9
Indeno(1,2,3-c,d)pyrene	mg/kg	0.7
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	0.7
Surrogate p-Terphenyl-d14	%	91

Organochlorine Pesticides in soil						
Our Reference:	UNITS	11383-1	11383-2	11383-5	11383-7	11383-9
Your Reference	-----	TP1	TP1	TP2	TP2	TP3
Depth	-----	0.2	1.0	0.2	2.0	0.2
Date Sampled		24/05/07	24/05/07	24/05/07	24/05/07	24/05/07
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	--	28/05/2007	28/05/2007	28/05/2007	28/05/2007	28/05/2007
Date analysed	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	103	98	102	98	103

Organochlorine Pesticides in soil						
Our Reference:	UNITS	11383-12	11383-13	11383-14	11383-17	11383-19
Your Reference	-----	TP3	TP4	TP4	TP5	TP5
Depth	-----	3.0	0.2	1.0	0.2	2.0
Date Sampled		24/05/07	24/05/07	24/05/07	24/05/07	24/05/07
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	--	28/05/2007	28/05/2007	28/05/2007	28/05/2007	28/05/2007
Date analysed	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	100	102	100	103	100

Organochlorine Pesticides in soil						
Our Reference:	UNITS	11383-21	11383-24	11383-25	11383-26	11383-28
Your Reference	-----	TP6	TP6	TP7	TP7	TP8
Depth	-----	0.2	3.0	1.0	2.0	1.0
Date Sampled		24/05/07	24/05/07	25/05/07	25/05/07	25/05/07
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	--	28/05/2007	28/05/2007	28/05/2007	28/05/2007	28/05/2007
Date analysed	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	100	102	102	98	102

Organochlorine Pesticides in soil						
Our Reference:	UNITS	11383-30	11383-31	11383-33	11383-35	11383-36
Your Reference	-----	TP8	TP9	TP9	TP10	TP10
Depth	-----	3.0	0.2	2.0	0.2	1.0
Date Sampled		25/05/07	25/05/07	25/05/07	25/05/07	25/05/07
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	--	28/05/2007	28/05/2007	28/05/2007	28/05/2007	28/05/2007
Date analysed	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	103	103	102	103	100

Organochlorine Pesticides in soil		
Our Reference:	UNITS	11383-39
Your Reference	-----	QA1
Depth	-----	-
Date Sampled		25/05/07
Type of sample		Soil
Date extracted	--	28/05/2007
Date analysed	--	29/05/2007
HCB	mg/kg	<0.1
alpha-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Surrogate TCLMX	%	103

PCBs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	11383-1 TP1 0.2 24/05/07 Soil	11383-2 TP1 1.0 24/05/07 Soil	11383-5 TP2 0.2 24/05/07 Soil	11383-7 TP2 2.0 24/05/07 Soil	11383-9 TP3 0.2 24/05/07 Soil
Date extracted	--	28/05/2007	28/05/2007	28/05/2007	28/05/2007	28/05/2007
Date analysed	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	103	98	102	98	103

PCBs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	11383-12 TP3 3.0 24/05/07 Soil	11383-13 TP4 0.2 24/05/07 Soil	11383-14 TP4 1.0 24/05/07 Soil	11383-17 TP5 0.2 24/05/07 Soil	11383-19 TP5 2.0 24/05/07 Soil
Date extracted	--	28/05/2007	28/05/2007	28/05/2007	28/05/2007	28/05/2007
Date analysed	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	100	102	100	103	100

PCBs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	11383-21 TP6 0.2 24/05/07 Soil	11383-24 TP6 3.0 24/05/07 Soil	11383-25 TP7 1.0 25/05/07 Soil	11383-26 TP7 2.0 25/05/07 Soil	11383-28 TP8 1.0 25/05/07 Soil
Date extracted	--	28/05/2007	28/05/2007	28/05/2007	28/05/2007	28/05/2007
Date analysed	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	100	102	102	98	102

PCBs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	11383-30 TP8 3.0 25/05/07 Soil	11383-31 TP9 0.2 25/05/07 Soil	11383-33 TP9 2.0 25/05/07 Soil	11383-35 TP10 0.2 25/05/07 Soil	11383-36 TP10 1.0 25/05/07 Soil
Date extracted	--	28/05/2007	28/05/2007	28/05/2007	28/05/2007	28/05/2007
Date analysed	--	29/05/2007	29/05/2007	29/05/2007	29/05/2007	29/05/2007
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	103	103	102	103	100

PCBs in Soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	11383-39 QA1 - 25/05/07 Soil
Date extracted	--	28/05/2007
Date analysed	--	29/05/2007
Arochlor 1016	mg/kg	<0.1
Arochlor 1232	mg/kg	<0.1
Arochlor 1242	mg/kg	<0.1
Arochlor 1248	mg/kg	<0.1
Arochlor 1254	mg/kg	<0.1
Arochlor 1260	mg/kg	<0.1
Surrogate TCLMX	%	103

Acid Extractable metals in soil						
Our Reference:	UNITS	11383-1	11383-2	11383-5	11383-7	11383-9
Your Reference	-----	TP1	TP1	TP2	TP2	TP3
Depth	-----	0.2	1.0	0.2	2.0	0.2
Date Sampled		24/05/07	24/05/07	24/05/07	24/05/07	24/05/07
Type of sample		Soil	Soil	Soil	Soil	Soil
Arsenic	mg/kg	10	<4.0	11	<4.0	6.6
Cadmium	mg/kg	<1.0	<1.0	1.5	<1.0	1.2
Chromium	mg/kg	7.7	1.4	9.9	1.3	7.4
Lead	mg/kg	120	1.1	220	3.6	77
Mercury	mg/kg	0.15	<0.10	0.21	<0.10	<0.10
Nickel	mg/kg	18	<1.0	9.6	<1.0	6.3

Acid Extractable metals in soil						
Our Reference:	UNITS	11383-12	11383-13	11383-14	11383-17	11383-19
Your Reference	-----	TP3	TP4	TP4	TP5	TP5
Depth	-----	3.0	0.2	1.0	0.2	2.0
Date Sampled		24/05/07	24/05/07	24/05/07	24/05/07	24/05/07
Type of sample		Soil	Soil	Soil	Soil	Soil
Arsenic	mg/kg	5.6	<4.0	<4.0	22	<4.0
Cadmium	mg/kg	<1.0	2.5	<1.0	1.5	<1.0
Chromium	mg/kg	1.7	4.6	1.3	7.9	1.3
Lead	mg/kg	3.7	52	1.1	550	1.2
Mercury	mg/kg	<0.10	<0.10	<0.10	0.17	<0.10
Nickel	mg/kg	1.2	4.2	<1.0	18	<1.0

Acid Extractable metals in soil						
Our Reference:	UNITS	11383-21	11383-24	11383-25	11383-26	11383-28
Your Reference	-----	TP6	TP6	TP7	TP7	TP8
Depth	-----	0.2	3.0	1.0	2.0	1.0
Date Sampled		24/05/07	24/05/07	25/05/07	25/05/07	25/05/07
Type of sample		Soil	Soil	Soil	Soil	Soil
Arsenic	mg/kg	8.9	4.1	<4.0	<4.0	<4.0
Cadmium	mg/kg	4.6	<1.0	<1.0	<1.0	<1.0
Chromium	mg/kg	5.5	1.3	1.2	1.2	1.7
Lead	mg/kg	97	2.4	3.7	1.0	1.8
Mercury	mg/kg	0.17	<0.10	<0.10	<0.10	<0.10
Nickel	mg/kg	5.6	<1.0	<1.0	<1.0	1.2

Acid Extractable metals in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	11383-30 TP8 3.0 25/05/07 Soil	11383-31 TP9 0.2 25/05/07 Soil	11383-33 TP9 2.0 25/05/07 Soil	11383-35 TP10 0.2 25/05/07 Soil	11383-36 TP10 1.0 25/05/07 Soil
Arsenic	mg/kg	4.7	<4.0	<4.0	7.7	4.8
Cadmium	mg/kg	<1.0	1.3	<1.0	<1.0	<1.0
Chromium	mg/kg	8.3	6.8	<1.0	5.8	1.6
Lead	mg/kg	13	20	1.7	100	3.2
Mercury	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Nickel	mg/kg	7.5	20	<1.0	5.6	1.1

Acid Extractable metals in soil Our Reference: Your Reference Depth Date Sampled Type of sample	UNITS ----- -----	11383-39 QA1 - 25/05/07 Soil
Arsenic	mg/kg	9.7
Cadmium	mg/kg	<1.0
Chromium	mg/kg	6.5
Lead	mg/kg	240
Mercury	mg/kg	0.10
Nickel	mg/kg	9.6

Moisture						
Our Reference:	UNITS	11383-1	11383-2	11383-5	11383-7	11383-9
Your Reference	-----	TP1	TP1	TP2	TP2	TP3
Depth	-----	0.2	1.0	0.2	2.0	0.2
Date Sampled		24/05/07	24/05/07	24/05/07	24/05/07	24/05/07
Type of sample		Soil	Soil	Soil	Soil	Soil
Moisture	%	7.9	5.6	8.5	18	14

Moisture						
Our Reference:	UNITS	11383-12	11383-13	11383-14	11383-17	11383-19
Your Reference	-----	TP3	TP4	TP4	TP5	TP5
Depth	-----	3.0	0.2	1.0	0.2	2.0
Date Sampled		24/05/07	24/05/07	24/05/07	24/05/07	24/05/07
Type of sample		Soil	Soil	Soil	Soil	Soil
Moisture	%	3.7	6.8	20	6.2	16

Moisture						
Our Reference:	UNITS	11383-21	11383-24	11383-25	11383-26	11383-28
Your Reference	-----	TP6	TP6	TP7	TP7	TP8
Depth	-----	0.2	3.0	1.0	2.0	1.0
Date Sampled		24/05/07	24/05/07	25/05/07	25/05/07	25/05/07
Type of sample		Soil	Soil	Soil	Soil	Soil
Moisture	%	3.5	8.2	0.20	2.2	3.7

Moisture						
Our Reference:	UNITS	11383-30	11383-31	11383-33	11383-35	11383-36
Your Reference	-----	TP8	TP9	TP9	TP10	TP10
Depth	-----	3.0	0.2	2.0	0.2	1.0
Date Sampled		25/05/07	25/05/07	25/05/07	25/05/07	25/05/07
Type of sample		Soil	Soil	Soil	Soil	Soil
Moisture	%	19	17	2.6	2.1	4.6

Moisture		
Our Reference:	UNITS	11383-39
Your Reference	-----	QA1
Depth	-----	-
Date Sampled		25/05/07
Type of sample		Soil
Moisture	%	5.9

Metals in TCLP					
Our Reference:	UNITS	11383-7	11383-9	11383-25	11383-31
Your Reference	-----	TP2	TP3	TP7	TP9
Depth	-----	2.0	0.2	1.0	0.2
Date Sampled		24/05/07	24/05/07	25/05/07	25/05/07
Type of sample		Soil	Soil	Soil	Soil
pH of soil for fluid# determ.	pH units	9.10	9.20	9.20	6.50
pH of soil for fluid # determ. (acid)	pH units	1.90	1.20	1.90	1.70
Extraction fluid used	-	1	1	1	1
pH of final Leachate	pH units	5.60	5.60	5.50	5.00
Arsenic in TCLP	mg/L	<0.05	<0.05	<0.05	<0.05
Cadmium in TCLP	mg/L	<0.01	<0.01	<0.01	<0.01
Chromium in TCLP	mg/L	<0.01	<0.01	<0.01	<0.01
Lead in TCLP	mg/L	0.08	0.06	<0.03	<0.03
Mercury in TCLP	mg/L	<0.0005	<0.0005	<0.0005	<0.0005
Nickel in TCLP	mg/L	<0.02	<0.02	<0.02	<0.02

PAHs in TCLP (USEPA 1311)					
Our Reference:	UNITS	11383-7	11383-9	11383-25	11383-31
Your Reference	-----	TP2	TP3	TP7	TP9
Depth	-----	2.0	0.2	1.0	0.2
Date Sampled		24/05/07	24/05/07	25/05/07	25/05/07
Type of sample		Soil	Soil	Soil	Soil
Date extracted	--	30/05/2007	30/05/2007	30/05/2007	30/05/2007
Date analysed	--	30/05/2007	30/05/2007	30/05/2007	30/05/2007
Naphthalene	mg/L	<0.001	<0.001	<0.001	<0.001
Acenaphthylene	mg/L	<0.001	<0.001	<0.001	<0.001
Acenaphthene	mg/L	<0.001	<0.001	<0.001	<0.001
Fluorene	mg/L	<0.001	<0.001	<0.001	<0.001
Phenanthrene	mg/L	<0.001	<0.001	<0.001	<0.001
Anthracene	mg/L	<0.001	<0.001	<0.001	<0.001
Fluoranthene	mg/L	<0.001	<0.001	<0.001	<0.001
Pyrene	mg/L	<0.001	<0.001	<0.001	<0.001
Benzo(a)anthracene	mg/L	<0.001	<0.001	<0.001	<0.001
Chrysene	mg/L	<0.001	<0.001	<0.001	<0.001
Benzo(b,k)fluoranthene	mg/L	<0.002	<0.002	<0.002	<0.002
Benzo(a)pyrene	mg/L	<0.001	<0.001	<0.001	<0.001
Indeno(1,2,3-c,d)pyrene	mg/L	<0.001	<0.001	<0.001	<0.001
Dibenzo(a,h)anthracene	mg/L	<0.001	<0.001	<0.001	<0.001
Benzo(g,h,i)perylene	mg/L	<0.001	<0.001	<0.001	<0.001
Surrogate p-Terphenyl-d14	%	93	91	103	104

Method ID	Methodology Summary
GC.16	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS.
GC.14	Soil samples extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
GC.3	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
GC.12	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
GC-5	Soil samples are extracted with hexane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
GC-6	Soil samples are extracted with hexane/acetone and waters with dichloromethane and analysed by GC-ECD.
Metals.20 ICP-AES	Determination of various metals by ICP-AES.
Metals.21 CV-AAS	Determination of Mercury by Cold Vapour AAS.
LAB.8	Moisture content determined by heating at 105 deg C for a minimum of 4 hours.
EXTRACT.7	Toxicity Characteristic Leaching Procedure (TCLP).

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTPH & BTEX in Soil						Base II Duplicate II %RPD		
Date extracted	--			[NT]	11383-1	29/05/2007 29/05/2007	[NR]	[NR]
Date analysed	--			[NT]	11383-1	30/05/2007 30/05/2007	[NR]	[NR]
vTPH C ₆ - C ₉	mg/kg	25	GC.16	<25	11383-1	<25 <25	LCS	83%
Benzene	mg/kg	1	GC.14	<1.0	11383-1	<1.0 <1.0	LCS	66%
Toluene	mg/kg	1	GC.14	<1.0	11383-1	<1.0 <1.0	LCS	84%
Ethylbenzene	mg/kg	1	GC.14	<1.0	11383-1	<1.0 <1.0	LCS	83%
m + p-Xylene	mg/kg	2	GC.14	<2.0	11383-1	<2.0 <2.0	LCS	90%
o-Xylene	mg/kg	1	GC.14	<1.0	11383-1	<1.0 <1.0	LCS	92%
Surrogate aaa-Trifluorotoluene	%		GC.14	[NT]	11383-1	96 101 RPD: 5	LCS	102%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
sTPH in Soil (C10-C36)						Base II Duplicate II %RPD		
Date extracted	--			[NT]	11383-1	29/05/2007 29/05/2007	[NR]	[NR]
Date analysed	--			[NT]	11383-1	29/05/2007 29/05/2007	[NR]	[NR]
TPH C ₁₀ - C ₁₄	mg/kg	50	GC.3	<50	11383-1	<50 <50	LCS	105%
TPH C ₁₅ - C ₂₈	mg/kg	100	GC.3	<100	11383-1	<100 <100	LCS	97%
TPH C ₂₉ - C ₃₆	mg/kg	100	GC.3	<100	11383-1	<100 <100	LCS	120%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Date extracted	--			[NT]	11383-1	29/05/2007 29/05/2007	[NR]	[NR]
Date analysed	--			[NT]	11383-1	29/05/2007 29/05/2007	[NR]	[NR]
Naphthalene	mg/kg	0.1	GC.12	<0.1	11383-1	<0.1 <0.1	LCS	113%
Acenaphthylene	mg/kg	0.1	GC.12	<0.1	11383-1	0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	GC.12	<0.1	11383-1	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	GC.12	<0.1	11383-1	<0.1 <0.1	LCS	104%
Phenanthrene	mg/kg	0.1	GC.12	<0.1	11383-1	0.7 0.6 RPD: 15	LCS	100%
Anthracene	mg/kg	0.1	GC.12	<0.1	11383-1	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	GC.12	<0.1	11383-1	2.8 2.4 RPD: 15	LCS	116%
Pyrene	mg/kg	0.1	GC.12	<0.1	11383-1	2.6 2.3 RPD: 12	LCS	115%
Benzo(a)anthracene	mg/kg	0.1	GC.12	<0.1	11383-1	0.9 0.8 RPD: 12	[NR]	[NR]
Chrysene	mg/kg	0.1	GC.12	<0.1	11383-1	1.1 1.0 RPD: 10	LCS	108%
Benzo(b,k)fluoranthene	mg/kg	0.2	GC.12	<0.2	11383-1	1.9 1.6 RPD: 17	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	GC.12	<0.05	11383-1	1.2 0.9 RPD: 29	LCS	93%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	GC.12	<0.1	11383-1	0.7 0.7 RPD: 0	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	GC.12	<0.1	11383-1	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	GC.12	<0.1	11383-1	0.8 0.7 RPD: 13	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		GC.12	[NT]	11383-1	91 89 RPD: 2	LCS	88%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organochlorine Pesticides in soil						Base II Duplicate II %RPD		
Date extracted	--			[NT]	11383-1	28/05/2007 28/05/2007	[NR]	[NR]
Date analysed	--			[NT]	11383-1	29/05/2007 29/05/2007	[NR]	[NR]
HCB	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	LCS	115%
gamma-BHC	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	LCS	108%
Heptachlor	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	LCS	70%
delta-BHC	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	LCS	107%
Heptachlor Epoxide	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	LCS	103%
gamma-Chlordane	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	LCS	99%
Dieldrin	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	LCS	105%
Endrin	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	LCS	78%
pp-DDD	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	LCS	103%
Endosulfan II	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	LCS	111%
Methoxychlor	mg/kg	0.1	GC-5	<0.1	11383-1	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%		GC-5	[NT]	11383-1	103 97 RPD: 6	LCS	103%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PCBs in Soil						Base II Duplicate II %RPD		
Date extracted	--			[NT]	11383-1	28/05/2007 28/05/2007	[NR]	[NR]
Date analysed	--			[NT]	11383-1	29/05/2007 29/05/2007	[NR]	[NR]
Arochlor 1016	mg/kg	0.1	GC-6	<0.1	11383-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	GC-6	<0.1	11383-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	GC-6	<0.1	11383-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	GC-6	<0.1	11383-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	GC-6	<0.1	11383-1	<0.1 <0.1	LCS	85%
Arochlor 1260	mg/kg	0.1	GC-6	<0.1	11383-1	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%		GC-6	[NT]	11383-1	103 97 RPD: 6	LCS	104%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Arsenic	mg/kg	4	Metals.20 ICP-AES	<4.0	11383-1	10 11 RPD: 10	LCS	104%
Cadmium	mg/kg	1	Metals.20 ICP-AES	<1.0	11383-1	<1.0 <1.0	LCS	104%
Chromium	mg/kg	1	Metals.20 ICP-AES	<1.0	11383-1	7.7 5.9 RPD: 26	LCS	109%
Lead	mg/kg	1	Metals.20 ICP-AES	<1.0	11383-1	120 93 RPD: 25	LCS	105%
Mercury	mg/kg	0.1	Metals.21 CV-AAS	<0.10	11383-1	0.15 0.14 RPD: 7	LCS	95%
Nickel	mg/kg	1	Metals.20 ICP-AES	<1.0	11383-1	18 6.7 RPD: 91	LCS	105%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results		
Moisture	%	0.1	LAB.8	<0.10	11383-1	Base II Duplicate II %RPD		
Moisture	%	0.1	LAB.8	<0.10	11383-1	7.9 7.9 RPD: 0		
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Metals in TCLP						Base II Duplicate II %RPD		
Arsenic in TCLP	mg/L	0.05	Metals.20 ICP-AES	<0.05	[NT]	[NT]	LCS	96%
Cadmium in TCLP	mg/L	0.01	Metals.20 ICP-AES	<0.01	[NT]	[NT]	LCS	90%
Chromium in TCLP	mg/L	0.01	Metals.20 ICP-AES	<0.01	[NT]	[NT]	LCS	91%
Lead in TCLP	mg/L	0.03	Metals.20 ICP-AES	<0.03	[NT]	[NT]	LCS	88%
Mercury in TCLP	mg/L	0.0005	Metals.21 CV-AAS	<0.0005	[NT]	[NT]	LCS	96%
Nickel in TCLP	mg/L	0.02	Metals.20 ICP-AES	<0.02	[NT]	[NT]	LCS	90%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in TCLP (USEPA 1311)						Base Duplicate %RPD		
Date extracted	--			[NT]	[NT]	[NT]	[NR]	[NR]
Date analysed	--			[NT]	[NT]	[NT]	[NR]	[NR]
Naphthalene	mg/L	0.001	GC.12	<0.001	[NT]	[NT]	LCS	91%
Acenaphthylene	mg/L	0.001	GC.12	<0.001	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/L	0.001	GC.12	<0.001	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/L	0.001	GC.12	<0.001	[NT]	[NT]	LCS	94%
Phenanthrene	mg/L	0.001	GC.12	<0.001	[NT]	[NT]	LCS	88%
Anthracene	mg/L	0.001	GC.12	<0.001	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/L	0.001	GC.12	<0.001	[NT]	[NT]	LCS	100%
Pyrene	mg/L	0.001	GC.12	<0.001	[NT]	[NT]	LCS	99%
Benzo(a)anthracene	mg/L	0.001	GC.12	<0.001	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/L	0.001	GC.12	<0.001	[NT]	[NT]	LCS	95%
Benzo(b,k)fluoranthene	mg/L	0.002	GC.12	<0.002	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/L	0.001	GC.12	<0.001	[NT]	[NT]	LCS	81%
Indeno(1,2,3-c,d)pyrene	mg/L	0.001	GC.12	<0.001	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/L	0.001	GC.12	<0.001	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/L	0.001	GC.12	<0.001	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		GC.12	[NT]	[NT]	[NT]	LCS	89%
QUALITY CONTROL vTPH & BTEX in Soil	UNITS	Dup. Sm#		Duplicate Base + Duplicate + %RPD				
Date extracted	--	11383-21		29/05/2007 29/05/2007				
Date analysed	--	11383-21		30/05/2007 30/05/2007				
vTPH C ₆ - C ₉	mg/kg	11383-21		<25 <25				
Benzene	mg/kg	11383-21		<1.0 <1.0				
Toluene	mg/kg	11383-21		<1.0 <1.0				
Ethylbenzene	mg/kg	11383-21		<1.0 <1.0				
m + p-Xylene	mg/kg	11383-21		<2.0 <2.0				
o-Xylene	mg/kg	11383-21		<1.0 <1.0				
Surrogate aaa-Trifluorotoluene	%	11383-21		100 108 RPD: 8				

QUALITY CONTROL sTPH in Soil (C10-C36)	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	--	11383-21	29/05/2007 29/05/2007
Date analysed	--	11383-21	29/05/2007 29/05/2007
TPH C10 - C14	mg/kg	11383-21	<50 <50
TPH C15 - C28	mg/kg	11383-21	<100 <100
TPH C29 - C36	mg/kg	11383-21	<100 <100
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	--	11383-21	29/05/2007 29/05/2007
Date analysed	--	11383-21	30/05/2007 30/05/2007
Naphthalene	mg/kg	11383-21	<0.1 <0.1
Acenaphthylene	mg/kg	11383-21	<0.1 <0.1
Acenaphthene	mg/kg	11383-21	<0.1 <0.1
Fluorene	mg/kg	11383-21	<0.1 <0.1
Phenanthrene	mg/kg	11383-21	1.3 1.2 RPD: 8
Anthracene	mg/kg	11383-21	0.1 0.1 RPD: 0
Fluoranthene	mg/kg	11383-21	5.1 5.3 RPD: 4
Pyrene	mg/kg	11383-21	4.8 4.9 RPD: 2
Benzo(a)anthracene	mg/kg	11383-21	1.7 1.8 RPD: 6
Chrysene	mg/kg	11383-21	2.0 2.2 RPD: 10
Benzo(b,k)fluoranthene	mg/kg	11383-21	3.5 3.8 RPD: 8
Benzo(a)pyrene	mg/kg	11383-21	1.9 2.2 RPD: 15
Indeno(1,2,3-c,d)pyrene	mg/kg	11383-21	1.6 1.8 RPD: 12
Dibenzo(a,h)anthracene	mg/kg	11383-21	0.1 0.1 RPD: 0
Benzo(g,h,i)perylene	mg/kg	11383-21	1.6 1.8 RPD: 12
Surrogate p-Terphenyl-d14	%	11383-21	90 91 RPD: 1

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
Date extracted	--	11383-21	28/05/2007 28/05/2007
Date analysed	--	11383-21	29/05/2007 29/05/2007
HCB	mg/kg	11383-21	<0.1 <0.1
alpha-BHC	mg/kg	11383-21	<0.1 <0.1
gamma-BHC	mg/kg	11383-21	<0.1 <0.1
beta-BHC	mg/kg	11383-21	<0.1 <0.1
Heptachlor	mg/kg	11383-21	<0.1 <0.1
delta-BHC	mg/kg	11383-21	<0.1 <0.1
Aldrin	mg/kg	11383-21	<0.1 <0.1
Heptachlor Epoxide	mg/kg	11383-21	<0.1 <0.1
gamma-Chlordane	mg/kg	11383-21	<0.1 <0.1
alpha-chlordane	mg/kg	11383-21	<0.1 <0.1
Endosulfan I	mg/kg	11383-21	<0.1 <0.1
pp-DDE	mg/kg	11383-21	<0.1 <0.1
Dieldrin	mg/kg	11383-21	<0.1 <0.1
Endrin	mg/kg	11383-21	<0.1 <0.1
pp-DDD	mg/kg	11383-21	<0.1 <0.1
Endosulfan II	mg/kg	11383-21	<0.1 <0.1
pp-DDT	mg/kg	11383-21	<0.1 <0.1
Endrin Aldehyde	mg/kg	11383-21	<0.1 <0.1
Endosulfan Sulphate	mg/kg	11383-21	<0.1 <0.1
Methoxychlor	mg/kg	11383-21	<0.1 <0.1
Surrogate TCLMX	%	11383-21	100 103 RPD: 3

QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD		
Date extracted	--	11383-21	28/05/2007 28/05/2007		
Date analysed	--	11383-21	29/05/2007 29/05/2007		
Arochlor 1016	mg/kg	11383-21	<0.1 <0.1		
Arochlor 1232	mg/kg	11383-21	<0.1 <0.1		
Arochlor 1242	mg/kg	11383-21	<0.1 <0.1		
Arochlor 1248	mg/kg	11383-21	<0.1 <0.1		
Arochlor 1254	mg/kg	11383-21	<0.1 <0.1		
Arochlor 1260	mg/kg	11383-21	<0.1 <0.1		
Surrogate TCLMX	%	11383-21	100 103 RPD: 3		
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Arsenic	mg/kg	11383-21	8.9 13 RPD: 37	LCS	100%
Cadmium	mg/kg	11383-21	4.6 4.7 RPD: 2	LCS	101%
Chromium	mg/kg	11383-21	5.5 5.2 RPD: 6	LCS	106%
Lead	mg/kg	11383-21	97 86 RPD: 12	LCS	102%
Mercury	mg/kg	11383-21	0.17 <0.10	LCS	104%
Nickel	mg/kg	11383-21	5.6 5.2 RPD: 7	LCS	103%
QUALITY CONTROL Moisture	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD		
Moisture	%	11383-21	3.5 3.5 RPD: 0		
QUALITY CONTROL vTPH & BTEX in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	--	[NT]	[NT]	[NR]	[NR]
Date analysed	--	[NT]	[NT]	[NR]	[NR]
vTPH C ₆ - C ₉	mg/kg	[NT]	[NT]	11383-2	81%
Benzene	mg/kg	[NT]	[NT]	11383-2	67%
Toluene	mg/kg	[NT]	[NT]	11383-2	80%
Ethylbenzene	mg/kg	[NT]	[NT]	11383-2	82%
m + p-Xylene	mg/kg	[NT]	[NT]	11383-2	87%
o-Xylene	mg/kg	[NT]	[NT]	11383-2	87%
Surrogate aaa-Trifluorotoluene	%	[NT]	[NT]	11383-2	100%

QUALITY CONTROL sTPH in Soil (C10-C36)	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	--	[NT]	[NT]	[NR]	[NR]
Date analysed	--	[NT]	[NT]	[NR]	[NR]
TPH C10 - C14	mg/kg	[NT]	[NT]	11383-2	101%
TPH C15 - C28	mg/kg	[NT]	[NT]	11383-2	94%
TPH C29 - C36	mg/kg	[NT]	[NT]	11383-2	114%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	--	[NT]	[NT]	[NR]	[NR]
Date analysed	--	[NT]	[NT]	[NR]	[NR]
Naphthalene	mg/kg	[NT]	[NT]	11383-2	97%
Acenaphthylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	[NT]	[NT]	11383-2	103%
Phenanthrene	mg/kg	[NT]	[NT]	11383-2	98%
Anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	[NT]	[NT]	11383-2	115%
Pyrene	mg/kg	[NT]	[NT]	11383-2	114%
Benzo(a)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	[NT]	[NT]	11383-2	109%
Benzo(b,k)fluoranthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	[NT]	[NT]	11383-2	96%
Indeno(1,2,3-c,d)pyrene	mg/kg	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	[NT]	[NT]	11383-2	86%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	--	[NT]	[NT]	[NR]	[NR]
Date analysed	--	[NT]	[NT]	[NR]	[NR]
HCB	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	[NT]	[NT]	11383-2	101%
gamma-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	[NT]	[NT]	11383-2	98%
Heptachlor	mg/kg	[NT]	[NT]	11383-2	68%
delta-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	[NT]	[NT]	11383-2	96%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	11383-2	93%
gamma-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	[NT]	[NT]	11383-2	89%
Dieldrin	mg/kg	[NT]	[NT]	11383-2	93%
Endrin	mg/kg	[NT]	[NT]	11383-2	68%
pp-DDD	mg/kg	[NT]	[NT]	11383-2	93%
Endosulfan II	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	11383-2	97%
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	11383-2	98%

QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	--	[NT]	[NT]	[NR]	[NR]
Date analysed	--	[NT]	[NT]	[NR]	[NR]
Arochlor 1016	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1232	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1242	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1248	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1254	mg/kg	[NT]	[NT]	11383-2	73%
Arochlor 1260	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	11383-2	94%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Arsenic	mg/kg	[NT]	[NT]	11383-2	109%
Cadmium	mg/kg	[NT]	[NT]	11383-2	100%
Chromium	mg/kg	[NT]	[NT]	11383-2	108%
Lead	mg/kg	[NT]	[NT]	11383-2	102%
Mercury	mg/kg	[NT]	[NT]	11383-2	86%
Nickel	mg/kg	[NT]	[NT]	11383-2	103%

Report Comments:

Asbestos analysed by: Not applicable for this job

INS: Insufficient sample for this test

NT: Not tested

PQL: Practical Quantitation Limit

RPD: Relative Percent Difference

NA: Test not required

LCS: Laboratory Control Sample

NR: Not requested

<: Less than

>: Greater than

Quality Control Definitions

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

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

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

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

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

Laboratory Acceptance Criteria:

Duplicates: <5xPQL - any RPD is acceptable;

>5xPQL - 0-50% RPD is acceptable.

Matrix Spikes and LCS: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.

Surrogates: Generally 60-140% is acceptable.



REPORT OF ANALYSIS

Page: 1 of 3

Report No. RN619175

Client	: JBS ENVIRONMENTAL P/L SUITE 2 595 GARDENERS ROAD MASCOT NSW 2020	Job No.	: JBSE01/070528/1
		Quote No.	: QT-00782
		Order No.	:
		Date Sampled	: 24-MAY-2007
		Date Received	: 28-MAY-2007
Attention	: CATHY ROBERTS	Sampled By	: CLIENT
Project Name	:		
Your Client Services Manager	: BRIAN WOODWARD	Phone	: (02) 94490151

Lab Reg No.	Sample Ref	Sample Description
N07/020689	QA1A	SOIL PARK RESIDENTIAL CLASSIFICATION PROJECT 40289

Lab Reg No.	Sample Reference	Units	N07/020689 QA1A				Method
Poly Aromatic Hydrocarbons							
Naphthalene	mg/kg	< 1					NGCMS_1111
Acenaphthylene	mg/kg	< 1					NGCMS_1111
Acenaphthene	mg/kg	< 1					NGCMS_1111
Fluorene	mg/kg	< 1					NGCMS_1111
Phenanthrene	mg/kg	< 1					NGCMS_1111
Anthracene	mg/kg	< 1					NGCMS_1111
Fluoranthene	mg/kg	< 1					NGCMS_1111
Pyrene	mg/kg	< 1					NGCMS_1111
Benz(a)anthracene	mg/kg	< 1					NGCMS_1111
Chrysene	mg/kg	< 1					NGCMS_1111
Benzo(b)&(k)fluoranthene	mg/kg	< 2					NGCMS_1111
Benzo(a)pyrene	mg/kg	< 1					NGCMS_1111
Indeno(1,2,3-cd)pyrene	mg/kg	< 1					NGCMS_1111
Dibenz(ah)anthracene	mg/kg	< 1					NGCMS_1111
Benzo(ghi)perylene	mg/kg	< 1					NGCMS_1111
Organochlorine (OC) Pesticides							
HCB	mg/kg	< 0.01					NR_19
Heptachlor	mg/kg	< 0.01					NR_19
Heptachlor epoxide	mg/kg	< 0.01					NR_19
Aldrin	mg/kg	< 0.01					NR_19
gamma-BHC (Lindane)	mg/kg	< 0.01					NR_19
alpha-BHC	mg/kg	< 0.01					NR_19
beta-BHC	mg/kg	< 0.01					NR_19
delta-BHC	mg/kg	< 0.01					NR_19
trans-Chlordane	mg/kg	< 0.01					NR_19
cis-Chlordane	mg/kg	< 0.01					NR_19
Oxychlordane	mg/kg	< 0.01					NR_19
Dieldrin	mg/kg	< 0.01					NR_19
pp-DDE	mg/kg	< 0.01					NR_19
pp-DDD	mg/kg	< 0.01					NR_19

This report is issued in accordance with NATA's accreditation requirements

1 Suakin Street, Pymble NSW 2073 Tel: +61 2 9449 0111 Fax: +61 2 9449 1653 www.measurement.gov.au

REPORT OF ANALYSIS

Page: 2 of 3
Report No. RN619175

Lab Reg No.		N07/020689				
Sample Reference		QA1A				
	Units					Method
Organochlorine (OC) Pesticides						
pp-DDT	mg/kg	< 0.01				NR_19
Endrin	mg/kg	< 0.01				NR_19
Endrin Aldehyde	mg/kg	< 0.01				NR_19
Endrin Ketone	mg/kg	< 0.01				NR_19
alpha-Endosulfan	mg/kg	< 0.01				NR_19
beta-Endosulfan	mg/kg	< 0.01				NR_19
Endosulfan Sulfate	mg/kg	< 0.01				NR_19
Methoxychlor	mg/kg	< 0.01				NR_19
BTEX						
Benzene	mg/kg	< 0.5				NGCMS_1121
Toluene	mg/kg	< 0.5				NGCMS_1121
Ethyl Benzene	mg/kg	< 0.5				NGCMS_1121
m, p - Xylene	mg/kg	< 1				NGCMS_1121
o - Xylene	mg/kg	< 0.5				NGCMS_1121
PCB Aroclors						
Aroclor 1016	mg/kg	< 0.1				NR_19
Aroclor 1221	mg/kg	< 0.1				NR_19
Aroclor 1232	mg/kg	< 0.1				NR_19
Aroclor 1242	mg/kg	< 0.1				NR_19
Aroclor 1248	mg/kg	< 0.1				NR_19
Aroclor 1254	mg/kg	< 0.1				NR_19
Aroclor 1260	mg/kg	< 0.1				NR_19
Total PCB's (as above)	mg/kg	< 0.1				NR_19
Total Petroleum Hydrocarbons						
TPH C6 - C9	mg/kg	< 25				NGCMS_1121
TPH C10 - C14	mg/kg	< 50				NGCMS_1112
TPH C15 - C28	mg/kg	130				NGCMS_1112
TPH C29 - C36	mg/kg	140				NGCMS_1112
Surrogate						
Surrogate semivolatile Rec.	%	89				
Surrogate volatile Rec	%	76				
Surrogate OC Rec.	%	99				NR_19
Dates						
Date extracted		29-MAY-2007				
Date analysed		29-MAY-2007				



Danny Slee, Section Manager
Organics - NSW
Accreditation No. 198

4-JUN-2007

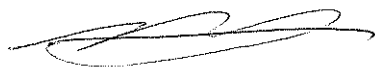
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National Measurement Institute

REPORT OF ANALYSIS

Page: 3 of 3
Report No. RN619175

Lab Reg No.		N07/020689				
Sample Reference		QA1A				
	Units					Method
Trace Elements						
Arsenic	mg/kg	6				NT2_49
Cadmium	mg/kg	0.68				NT2_49
Chromium	mg/kg	5.3				NT2_49
Lead	mg/kg	130				NT2_49
Mercury	mg/kg	< 0.2				NT2_49
Nickel	mg/kg	8.6				NT2_49
Total Solids	%	94.1				NT2_49



Jim Huang, Analyst
Inorganics - NSW
Accreditation No. 198

4-JUN-2007

All results are expressed on a dry weight basis.



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This report shall not be reproduced except in full.
Results relate only to the sample(s) tested.

This Report supersedes reports: RN618435 RN619137

CHAIN OF CUSTODY



PROJECT NO.: 40289						LABORATORY BATCH NO.																	
PROJECT NAME Park Residential Classification						SAMPLERS Mike Parker																	
SEND REPORT TO: Cathy Roberts						SEND INVOICE TO: Amy Worth						PHONE: 8338 1011						EMAIL: croberts@jbsgroup.com.au					
DATE NEEDED BY: Standard TAT						QC LEVEL: NEPM 1999 (✓)						m.parker@jbsgroup.com.au											
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:																							

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	6 metals	TPH	BTEX	PAHs	OCs	PCBs	TCPPs	6 metals	TPH	PAHs	asbestos	EnviroLab	EnviroLab Services 54 French Rd Willoughby NSW 2068 Ph: 9958 5801	NOTES
1	TP1/0.2	Soil	24/5/07	17		✓	✓	✓	✓	✓	✓							Job No: 11383	5
2	TP1/1.0					✓	✓	✓	✓	✓	✓							Date received: 25/5/07	5
3	TP2/2.0																	Received by: AJ	hold
4	TP1/3.0																	Time: 4:30pm	hold
5	TP2/0.2					✓	✓	✓	✓	✓	✓							Temp: Cool/Ambient	
6	TP2/1.0																	Security: Intact/Broken (None)	5
7	TP2/2.0					✓	✓	✓	✓	✓	✓	✓	✓	✓					hold
8	TP2/3.0																		12
9	TP3/0.2					✓	✓	✓	✓	✓	✓	✓	✓	✓					hold
10	TP3/1.0																		12
11	TP3/2.0																		hold
12	TP3/3.0					✓	✓	✓	✓	✓	✓								hold
13	TP4/0.2					✓	✓	✓	✓	✓	✓								5
14	TP4/1.0					✓	✓	✓	✓	✓	✓								5
15	TP4/2.0					✓	✓	✓	✓	✓	✓								5
16	TP4/3.0																		hold
17	TP5/0.2					✓	✓	✓	✓	✓	✓								hold
18	TP5/1.0					✓	✓	✓	✓	✓	✓								5

RELINQUISHED BY:		METHOD OF SHIPMENT:		RECEIVED BY:		FOR RECEIVING LAB USE ONLY:	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME: Julie	DATE: 25/5/07	COOLER SEAL - Yes..... No..... Intact..... Broken.....	
OF:		TRANSPORT CO.		OF: EnviroLab		COOLER TEMP deg C	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME:	DATE:	COOLER SEAL - Yes..... No..... Intact..... Broken.....	
OF:		TRANSPORT CO.		OF:		COOLER TEMP deg C	

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Presvd.; C = Sodium Hydroxide Presvd; VC = Hydrochloric Acid Presvd Vial; VS = Sulfuric Acid Presvd Vial; S = Sulfuric Acid Presvd; Z = Zinc Presvd; E = EDTA Presvd; ST = Sterile Bottle; O = Other

CHAIN OF CUSTODY



PROJECT NO.: 40289						LABORATORY BATCH NO.																	
PROJECT NAME: Park Residential Classification						SAMPLERS: Mike Parker																	
SEND REPORT TO: Cathy Roberts						SEND INVOICE TO: Amy Worth						PHONE: 8338 1011						EMAIL: croberts@jbsgroup.com.au					
DATE NEEDED BY: Standard TAT						QC LEVEL: NEPM 1999 (✓)						m.parker@jbsgroup.com.au											
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:																							

SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH	6 metals	TPH	BTEX	PAHS	OCs	PBS	TCDF	6 metals	PAHS	NOTES
19	TP5/2.0	Soil	24/5/07	17		✓	✓	✓	✓	✓	✓				
20	TP5/3.0														hold . S
21	TP6/0.2					✓	✓	✓	✓	✓	✓				S
22	TP6/1.0														hold
23	TP6/2.0														hold
24	TP6/3.0					✓	✓	✓	✓	✓	✓				S
25	TP7/1.0		25/5/07			✓	✓	✓	✓	✓	✓	✓	✓		12
26	TP7/2.0					✓	✓	✓	✓	✓	✓				S
27	TP7/3.0					✓	✓	✓	✓	✓	✓				hold .
28	TP8/1.0					✓	✓	✓	✓	✓	✓				S
29	TP8/2.0														hold
30	TP8/3.0					✓	✓	✓	✓	✓	✓				S
31	TP9/0.2					✓	✓	✓	✓	✓	✓	✓	✓		12
32	TP9/1.0														hold
33	TP9/2.0					✓	✓	✓	✓	✓	✓				S
34	TP9/3.0														hold .
35	TP10/1.0					✓	✓	✓	✓	✓	✓				S
36	TP10/1.0					✓	✓	✓	✓	✓	✓				S

RELINQUISHED BY:		METHOD OF SHIPMENT:		RECEIVED BY:		FOR RECEIVING LAB USE ONLY:	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME: Julie	DATE: 25/5/07	COOLER SEAL - Yes..... No..... Intact..... Broken.....	
OF:		TRANSPORT CO.		OF: Envirolab		COOLER TEMP..... deg C	
NAME:	DATE:	CONSIGNMENT NOTE NO.		NAME:	DATE:	COOLER SEAL - Yes..... No..... Intact..... Broken.....	
OF:		TRANSPORT CO.		OF:		COOLER TEMP..... deg C	

Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsrd.; C = Sodium Hydroxide Prsrd; VC = Hydrochloric Acid Prsrd Vial; VS = Sulfuric Acid Prsrd Vial; S = Sulfuric Acid Prsrd; Z = Zinc Prsrd; E = EDTA Prsrd; ST = Sterile Bottle; O = Other



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Attachment 3 – 95% Upper Confidence Level (Average) Calculations

Park Residential Material Classification
95% Upper Confidence Level_{Average} Calculation For
Arsenic in gravelly silty sands

Parameter	Normal Distribution	Lognormal Distribution	Recommended Distribution	Units
Analyte threshold	500	500	500	mg/kg
UCL _{average}	12.08	19.49	12.08	mg/kg
No. of samples	9	9	9	
Mean	8.32	6.50	8.32	mg/kg
Estimated Mean	8.32	8.68	8.32	mg/kg
Standard deviation	6.06	2.20	6.06	mg/kg
Suggested no. of extra samples needed	1	1	1	
Distribution	-	-	normal	

Distribution Test Summary Using Coefficient Of Variation

Distribution test result (as per NSW EPA guidelines) - normal

Distribution test result (as per Gilbert) - normal

The statistical analysis indicates that there is a 95% probability that the arithmetic average concentration of the contamination will not exceed **12.0787** mg/kg

Data Entered By:

Checked By:

References: NSW EPA, *Contaminated Sites, Sampling Design Guidelines*, September 1995
Gilbert, R.O., 1987, *Statistical Methods For Environmental Pollution Monitoring*,
Van Nostrand Reinhold, New York

Note: Where the laboratory reported a result below the method detection limit, a value of half the detection limit was substituted for the purposes of statistical calculation. This is regarded as normal practice by the NSW EPA. Gilbert (1987) also indicates that this is common practice on pages 177 to 178 of the text.

Park Residential Material Classification
95% Upper Confidence Level_{Average} Calculation For
Benzo(a)pyrene in gravelly silty sands

Parameter	Normal Distribution	Lognormal Distribution	Recommended Distribution	Units
Analyte threshold	1	1	1	mg/kg
UCL _{average}	1.49	14.70	1.49	mg/kg
No. of samples	9	9	9	
Mean	1.05	0.64	1.05	mg/kg
Estimated Mean	1.05	1.48	1.05	mg/kg
Standard deviation	0.71	4.09	0.71	mg/kg
Suggested no. of extra samples needed	1401	810	1401	
Distribution	-	-	normal	

Distribution Test Summary Using Coefficient Of Variation

Distribution test result (as per NSW EPA guidelines) - normal

Distribution test result (as per Gilbert) - lognormal

The statistical analysis indicates that there is a 95% probability that the arithmetic average concentration of the contamination will not exceed **1.4872** mg/kg

Data Entered By:

Checked By:

References: NSW EPA, *Contaminated Sites, Sampling Design Guidelines*, September 1995
Gilbert, R.O., 1987, *Statistical Methods For Environmental Pollution Monitoring*,
Van Nostrand Reinhold, New York

Note: Where the laboratory reported a result below the method detection limit, a value of half the detection limit was substituted for the purposes of statistical calculation. This is regarded as normal practice by the NSW EPA. Gilbert (1987) also indicates that this is common practice on pages 177 to 178 of the text.

Park Residential Material Classification
95% Upper Confidence Level_{Average} Calculation For
Cadmium in gravelly silty sands

Parameter	Normal Distribution	Lognormal Distribution	Recommended Distribution	Units
Analyte threshold	100	100	100	mg/kg
UCL _{average}	2.38	3.45	2.38	mg/kg
No. of samples	9	9	9	
Mean	1.57	1.20	1.57	mg/kg
Estimated Mean	1.57	1.58	1.57	mg/kg
Standard deviation	1.31	2.16	1.31	mg/kg
Suggested no. of extra samples needed	1	1	1	
Distribution	-	-	normal	

Distribution Test Summary Using Coefficient Of Variation

Distribution test result (as per NSW EPA guidelines) - normal

Distribution test result (as per Gilbert) - normal

The statistical analysis indicates that there is a 95% probability that the arithmetic average concentration of the contamination will not exceed **2.3778** mg/kg

Data Entered By:

Checked By:

References: NSW EPA, *Contaminated Sites, Sampling Design Guidelines*, September 1995
 Gilbert, R.O., 1987, *Statistical Methods For Environmental Pollution Monitoring*, Van Nostrand Reinhold, New York

Note: Where the laboratory reported a result below the method detection limit, a value of half the detection limit was substituted for the purposes of statistical calculation. This is regarded as normal practice by the NSW EPA. Gilbert (1987) also indicates that this is common practice on pages 177 to 178 of the text.

Park Residential Material Classification
95% Upper Confidence Level_{Average} Calculation For
Chromium in gravelly silty sands

Parameter	Normal Distribution	Lognormal Distribution	Recommended Distribution	Units
Analyte threshold	1900	1900	1900	mg/kg
UCL _{average}	8.10	8.39	8.10	mg/kg
No. of samples	9	9	9	
Mean	7.10	6.93	7.10	mg/kg
Estimated Mean	7.10	#REF!	7.10	mg/kg
Standard deviation	1.62	1.27	1.62	mg/kg
Suggested no. of extra samples needed	1	1	1	
Distribution	-	-	normal	

Distribution Test Summary Using Coefficient Of Variation

Distribution test result (as per NSW EPA guidelines) - normal
 Distribution test result (as per Gilbert) - normal

The statistical analysis indicates that there is a 95% probability that the arithmetic average concentration of the contamination will not exceed **8.1033** mg/kg

Data Entered By:
 Checked By:

References: NSW EPA, *Contaminated Sites, Sampling Design Guidelines*, September 1995
 Gilbert, R.O., 1987, *Statistical Methods For Environmental Pollution Monitoring*, Van Nostrand Reinhold, New York

Note: Where the laboratory reported a result below the method detection limit, a value of half the detection limit was substituted for the purposes of statistical calculation. This is regarded as normal practice by the NSW EPA. Gilbert (1987) also indicates that this is common practice on pages 177 to 178 of the text.

Park Residential Material Classification
95% Upper Confidence Level_{Average} Calculation For
Lead in gravelly silty sands

Parameter	Normal Distribution	Lognormal Distribution	Recommended Distribution	Units
Analyte threshold	1500	1500	1500	mg/kg
UCL _{average}	241.70	670.82	241.70	mg/kg
No. of samples	9	9	9	
Mean	138.78	80.79	138.78	mg/kg
Estimated Mean	138.78	142.56	138.78	mg/kg
Standard deviation	166.05	3.13	166.05	mg/kg
Suggested no. of extra samples needed	1	1	1	
Distribution	-	-	normal	

Distribution Test Summary Using Coefficient Of Variation

Distribution test result (as per NSW EPA guidelines) - normal

Distribution test result (as per Gilbert) - lognormal

The statistical analysis indicates that there is a 95% probability that the arithmetic average concentration of the contamination will not exceed **241.7030** mg/kg

Data Entered By:

Checked By:

References: NSW EPA, *Contaminated Sites, Sampling Design Guidelines*, September 1995
 Gilbert, R.O., 1987, *Statistical Methods For Environmental Pollution Monitoring*,
 Van Nostrand Reinhold, New York

Note: Where the laboratory reported a result below the method detection limit, a value of half the detection limit was substituted for the purposes of statistical calculation. This is regarded as normal practice by the NSW EPA. Gilbert (1987) also indicates that this is common practice on pages 177 to 178 of the text.

Park Residential Material Classification
95% Upper Confidence Level_{Average} Calculation For
Mercury in gravelly silty sands

Parameter	Normal Distribution	Lognormal Distribution	Recommended Distribution	Units
Analyte threshold	50	50	50	mg/kg
UCL _{average}	0.46	0.59	0.46	mg/kg
No. of samples	9	9	9	
Mean	0.36	0.31	0.36	mg/kg
Estimated Mean	0.36	0.37	0.36	mg/kg
Standard deviation	0.17	1.76	0.17	mg/kg
Suggested no. of extra samples needed	1	1	1	
Distribution	-	-	normal	

Distribution Test Summary Using Coefficient Of Variation

Distribution test result (as per NSW EPA guidelines) - normal

Distribution test result (as per Gilbert) - normal

The statistical analysis indicates that there is a 95% probability that the arithmetic average concentration of the contamination will not exceed **0.4622** mg/kg

Data Entered By:

Checked By:

References: NSW EPA, *Contaminated Sites, Sampling Design Guidelines*, September 1995
 Gilbert, R.O., 1987, *Statistical Methods For Environmental Pollution Monitoring*,
 Van Nostrand Reinhold, New York

Note: Where the laboratory reported a result below the method detection limit, a value of half the detection limit was substituted for the purposes of statistical calculation. This is regarded as normal practice by the NSW EPA. Gilbert (1987) also indicates that this is common practice on pages 177 to 178 of the text.

Park Residential Classification
95% Upper Confidence Level_{Average} Calculation For
Nickel in gravelly silty sands

Parameter	Normal Distribution	Lognormal Distribution	Recommended Distribution	Units
Analyte threshold	1050	1050	1050	mg/kg
UCL _{average}	14.44	17.90	14.44	mg/kg
No. of samples	9	9	9	
Mean	10.53	9.00	10.53	mg/kg
Estimated Mean	10.53	10.72	10.53	mg/kg
Standard deviation	6.30	1.81	6.30	mg/kg
Suggested no. of extra samples needed	1	1	1	
Distribution	-	-	normal	

Distribution Test Summary Using Coefficient Of Variation

Distribution test result (as per NSW EPA guidelines) - normal

Distribution test result (as per Gilbert) - normal

The statistical analysis indicates that there is a 95% probability that the arithmetic average concentration of the contamination will not exceed **14.4407** mg/kg

Data Entered By:

Checked By:

References: NSW EPA, *Contaminated Sites, Sampling Design Guidelines*, September 1995
 Gilbert, R.O., 1987, *Statistical Methods For Environmental Pollution Monitoring*,
 Van Nostrand Reinhold, New York

Note: Where the laboratory reported a result below the method detection limit, a value of half the detection limit was substituted for the purposes of statistical calculation. This is regarded as normal practice by the NSW EPA. Gilbert (1987) also indicates that this is common practice on pages 177 to 178 of the text.

Park Residential Material Classification
95% Upper Confidence Level_{Average} Calculation For
Total PAHs in gravelly silty sands

Parameter	Normal Distribution	Lognormal Distribution	Recommended Distribution	Units
Analyte threshold	200	200	200	mg/kg
UCL _{average}	18.87	138.51	18.87	mg/kg
No. of samples	9	9	9	
Mean	13.41	8.63	13.41	mg/kg
Estimated Mean	13.41	18.13	13.41	mg/kg
Standard deviation	8.81	3.74	8.81	mg/kg
Suggested no. of extra samples needed	1	1	1	
Distribution	-	-	normal	

Distribution Test Summary Using Coefficient Of Variation

Distribution test result (as per NSW EPA guidelines) - normal

Distribution test result (as per Gilbert) - lognormal

The statistical analysis indicates that there is a 95% probability that the arithmetic average concentration of the contamination will not exceed **18.8697** mg/kg

Data Entered By:

Checked By:

References: NSW EPA, *Contaminated Sites, Sampling Design Guidelines*, September 1995
Gilbert, R.O., 1987, *Statistical Methods For Environmental Pollution Monitoring*,
Van Nostrand Reinhold, New York

Note: Where the laboratory reported a result below the method detection limit, a value of half the detection limit was substituted for the purposes of statistical calculation. This is regarded as normal practice by the NSW EPA. Gilbert (1987) also indicates that this is common practice on pages 177 to 178 of the text.

Park Residential Material Classification
95% Upper Confidence Level_{Average} Calculation For
TPH C₁₀-C₃₆ in gravelly silty sands

Parameter	Normal Distribution	Lognormal Distribution	Recommended Distribution	Units
Analyte threshold	5000	5000	5000	mg/kg
UCL _{average}	167.89	165.53	167.89	mg/kg
No. of samples	9	9	9	
Mean	140.00	135.60	140.00	mg/kg
Estimated Mean	140.00	#REF!	140.00	mg/kg
Standard deviation	45.00	1.28	45.00	mg/kg
Suggested no. of extra samples needed	1	1	1	
Distribution	-	-	normal	

Distribution Test Summary Using Coefficient Of Variation

Distribution test result (as per NSW EPA guidelines) - normal

Distribution test result (as per Gilbert) - normal

The statistical analysis indicates that there is a 95% probability that the arithmetic average concentration of the contamination will not exceed **167.8932** mg/kg

Data Entered By:

Checked By:

References: NSW EPA, *Contaminated Sites, Sampling Design Guidelines*, September 1995
Gilbert, R.O., 1987, *Statistical Methods For Environmental Pollution Monitoring*,
Van Nostrand Reinhold, New York

Note: Where the laboratory reported a result below the method detection limit, a value of half the detection limit was substituted for the purposes of statistical calculation. This is regarded as normal practice by the NSW EPA. Gilbert (1987) also indicates that this is common practice on pages 177 to 178 of the text.

Park Residential Material Classification
95% Upper Confidence Level_{Average} Calculation For
Arsenic in the dredged alluvial sands

Parameter	Normal Distribution	Lognormal Distribution	Recommended Distribution	Units
Analyte threshold	500	500	500	mg/kg
UCL _{average}	3.52	3.63	3.52	mg/kg
No. of samples	11	11	11	
Mean	2.77	2.54	2.77	mg/kg
Estimated Mean	2.77	2.79	2.77	mg/kg
Standard deviation	1.37	1.51	1.37	mg/kg
Suggested no. of extra samples needed	1	1	1	
Distribution	-	-	normal	

Distribution Test Summary Using Coefficient Of Variation

Distribution test result (as per NSW EPA guidelines) - normal

Distribution test result (as per Gilbert) - normal

The statistical analysis indicates that there is a 95% probability that the arithmetic average concentration of the contamination will not exceed **3.5189** mg/kg

Data Entered By:

Checked By:

References: NSW EPA, *Contaminated Sites, Sampling Design Guidelines*, September 1995
 Gilbert, R.O., 1987, *Statistical Methods For Environmental Pollution Monitoring*,
 Van Nostrand Reinhold, New York

Note: Where the laboratory reported a result below the method detection limit, a value of half the detection limit was substituted for the purposes of statistical calculation. This is regarded as normal practice by the NSW EPA. Gilbert (1987) also indicates that this is common practice on pages 177 to 178 of the text.

Park Residential Material Classification
95% Upper Confidence Level_{Average} Calculation For
Benzo(a)pyrene in the dredged alluvial sands

Parameter	Normal Distribution	Lognormal Distribution	Recommended Distribution	Units
Analyte threshold	1	1	1	mg/kg
UCL _{average}	0.15	0.14	0.14	mg/kg
No. of samples	11	11	11	
Mean	0.08	0.04	0.04	mg/kg
Estimated Mean	0.08	0.06	0.06	mg/kg
Standard deviation	0.14	2.55	2.55	mg/kg
Suggested no. of extra samples needed	1	44	44	
Distribution	-	-	lognormal	

Distribution Test Summary Using Coefficient Of Variation

Distribution test result (as per NSW EPA guidelines) - lognormal
 Distribution test result (as per Gilbert) - normal

The statistical analysis indicates that there is a 95% probability that the arithmetic average concentration of the contamination will not exceed **0.1445** mg/kg

Data Entered By:

Checked By:

References: NSW EPA, *Contaminated Sites, Sampling Design Guidelines*, September 1995
 Gilbert, R.O., 1987, *Statistical Methods For Environmental Pollution Monitoring*, Van Nostrand Reinhold, New York

Note: Where the laboratory reported a result below the method detection limit, a value of half the detection limit was substituted for the purposes of statistical calculation. This is regarded as normal practice by the NSW EPA. Gilbert (1987) also indicates that this is common practice on pages 177 to 178 of the text.

Park Residential Material Classification
95% Upper Confidence Level^{Average} Calculation For
Chromium in the dredged alluvial sands

Parameter	Normal Distribution	Lognormal Distribution	Recommended Distribution	Units
Analyte threshold	1900	1900	1900	mg/kg
UCL _{average}	1.50	1.65	1.50	mg/kg
No. of samples	11	11	11	
Mean	1.32	1.27	1.32	mg/kg
Estimated Mean	1.32	1.35	1.32	mg/kg
Standard deviation	0.33	1.40	0.33	mg/kg
Suggested no. of extra samples needed	1	1	1	
Distribution	-	-	normal	

Distribution Test Summary Using Coefficient Of Variation

Distribution test result (as per NSW EPA guidelines) - normal

Distribution test result (as per Gilbert) - normal

The statistical analysis indicates that there is a 95% probability that the arithmetic average concentration of the contamination will not exceed **1.4975** mg/kg

Data Entered By:

Checked By:

References: NSW EPA, *Contaminated Sites, Sampling Design Guidelines*, September 1995
 Gilbert, R.O., 1987, *Statistical Methods For Environmental Pollution Monitoring*,
 Van Nostrand Reinhold, New York

Note: Where the laboratory reported a result below the method detection limit, a value of half the detection limit was substituted for the purposes of statistical calculation. This is regarded as normal practice by the NSW EPA. Gilbert (1987) also indicates that this is common practice on pages 177 to 178 of the text.

Park Residential Material Classification
95% Upper Confidence Level_{Average} Calculation For
Lead in the dredged alluvial sands

Parameter	Normal Distribution	Lognormal Distribution	Recommended Distribution	Units
Analyte threshold	1500	1500	1500	mg/kg
UCL _{average}	2.84	3.30	2.84	mg/kg
No. of samples	11	11	11	
Mean	2.23	1.96	2.23	mg/kg
Estimated Mean	2.23	2.27	2.23	mg/kg
Standard deviation	1.13	1.70	1.13	mg/kg
Suggested no. of extra samples needed	1	1	1	
Distribution	-	-	normal	

Distribution Test Summary Using Coefficient Of Variation

Distribution test result (as per NSW EPA guidelines) - normal

Distribution test result (as per Gilbert) - normal

The statistical analysis indicates that there is a 95% probability that the arithmetic average concentration of the contamination will not exceed **2.8446** mg/kg

Data Entered By:

Checked By:

References: NSW EPA, *Contaminated Sites, Sampling Design Guidelines*, September 1995
Gilbert, R.O., 1987, *Statistical Methods For Environmental Pollution Monitoring*,
Van Nostrand Reinhold, New York

Note: Where the laboratory reported a result below the method detection limit, a value of half the detection limit was substituted for the purposes of statistical calculation. This is regarded as normal practice by the NSW EPA. Gilbert (1987) also indicates that this is common practice on pages 177 to 178 of the text.

Park Residential Material Classification
95% Upper Confidence Level_{Average} Calculation For
Total PAHs in the dredged alluvial sands

Parameter	Normal Distribution	Lognormal Distribution	Recommended Distribution	Units
Analyte threshold	200	200	200	mg/kg
UCL _{average}	2.77	3.14	3.14	mg/kg
No. of samples	11	11	11	
Mean	1.54	0.96	0.96	mg/kg
Estimated Mean	1.54	1.38	1.38	mg/kg
Standard deviation	2.25	2.44	2.44	mg/kg
Suggested no. of extra samples needed	1	1	1	
Distribution	-	-	lognormal	

Distribution Test Summary Using Coefficient Of Variation

Distribution test result (as per NSW EPA guidelines) - lognormal
 Distribution test result (as per Gilbert) - normal

The statistical analysis indicates that there is a 95% probability that the arithmetic average concentration of the contamination will not exceed **3.1447** mg/kg

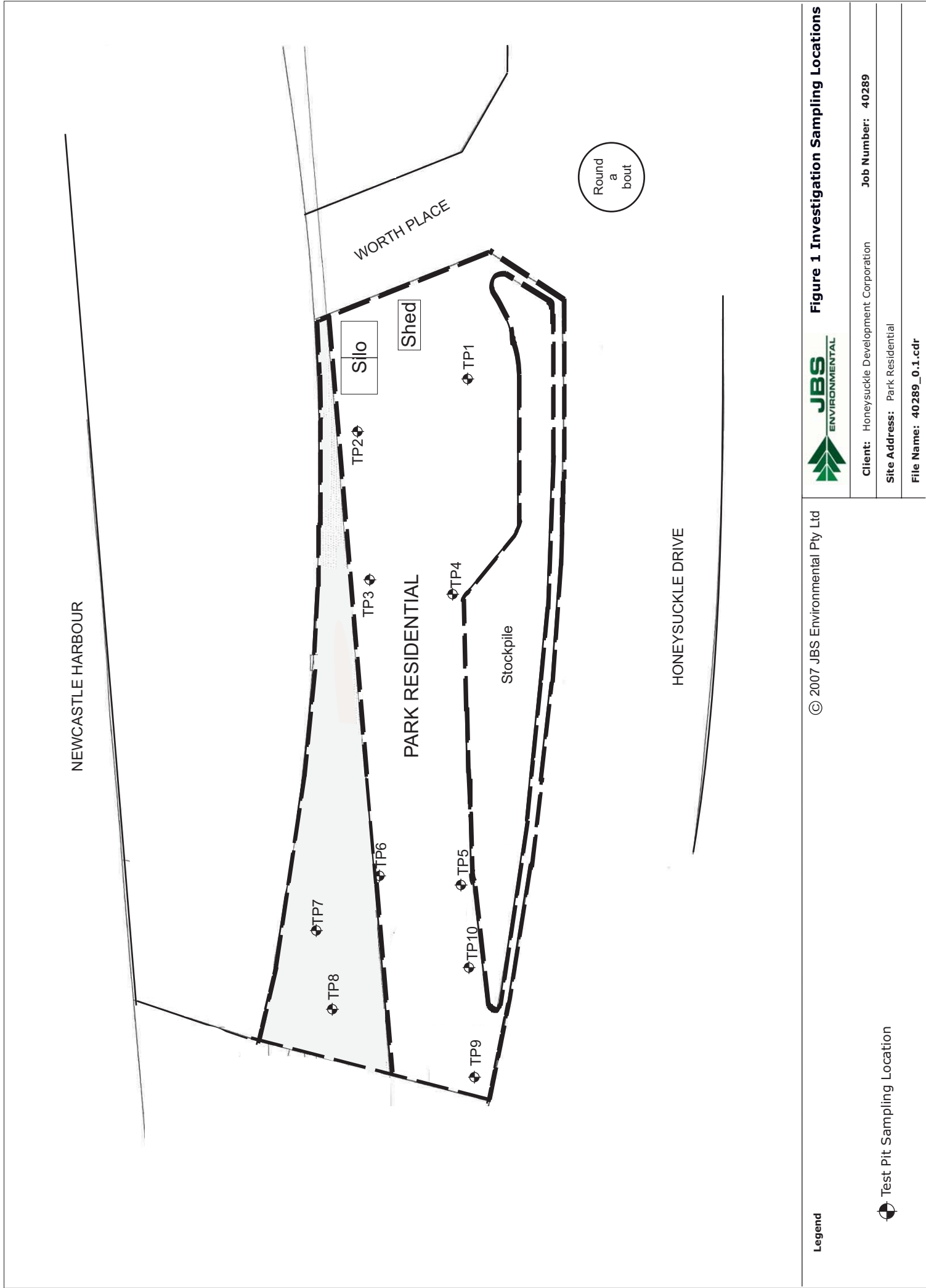
Data Entered By:

Checked By:

References: NSW EPA, *Contaminated Sites, Sampling Design Guidelines*, September 1995
 Gilbert, R.O., 1987, *Statistical Methods For Environmental Pollution Monitoring*, Van Nostrand Reinhold, New York

Note: Where the laboratory reported a result below the method detection limit, a value of half the detection limit was substituted for the purposes of statistical calculation. This is regarded as normal practice by the NSW EPA. Gilbert (1987) also indicates that this is common practice on pages 177 to 178 of the text.

Attachment 4 – Sample Investigation Locations



© 2007 JBS Environmental Pty Ltd	JBS ENVIRONMENTAL			Figure 1 Investigation Sampling Locations	
	Client: Honeysuckle Development Corporation			Job Number: 40289	
	Site Address: Park Residential				
	File Name: 40289_0.1.cdr				

Attachment 5 – Borehole Logs



Borehole No.: TP1

Location: Park Residential

Project: Park Residential Waste Classification

Total Hole Depth: 3.0 m

Driller and Co.: Tim - A.C. Excavations

Project No.: 40289

Longitude: NA

Drill Method: Test Pitting

Client: Honeysuckle Development Corporation

Latitude: NA

Log By: Mike Parker

Project Manager: Cathy Roberts

Date: 24 May 2007

Bore Diameter: NA

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		Fill Silty sand, grey brown, homogenous, dry, soft, non plastic, very loose, fine shell fragments, well sorted, rootlets	TP1/0.2	D			
		Fill Backfilled alluvial sand, yellow, homogenous, dry, loose, fine to medium grained, well sorted, shell fragments					
1.0			TP1/1.0	D			
		Fill As above. Increase in moisture, grain size and shell concentration					
2.0			TP1/2.0	D			
		Fill As above. Moist to wet, increase in shell concentration					
3.0			TP1/3.0	D			
		End of investigation at 3.0 m					

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		



Borehole No.: TP2

Location: Park Residential

Project: Park Residential Waste Classification

Total Hole Depth: 3.0 m

Driller and Co.: Tim - A.C. Excavations

Project No.: 40289

Longitude: NA

Drill Method: Test Pitting

Client: Honeysuckle Development Corporation

Latitude: NA

Log By: Mike Parker

Project Manager: Cathy Roberts

Date: 24 May 2007

Bore Diameter: NA

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		Fill Gravelly silty sand, grey brown, heterogenous, dry, soft, very loose, coarse slag gravels, poorly sorted, rootlets	TP2/0.2	D			
		Fill Backfilled alluvial sand, yellow, homogenous, damp, loose, well sorted, fine shell fragments	TP2/1.0	D			
1.0							
		Fill As above. Increase in grain size, moisture, and concentration of shell fragments	TP2/2.0	D			
2.0							
		Fill As above. Moist to wet, increase in concentration of shell fragments	TP2/3.0	D			
3.0		End of investigation at 3.0 m					

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		



Borehole No.: TP3

Location: Park Residential

Project: Park Residential Waste Classification

Total Hole Depth: 3.0 m

Driller and Co.: Tim - A.C. Excavations

Project No.: 40289

Longitude: NA

Drill Method: Test Pitting

Client: Honeysuckle Development Corporation

Latitude: NA

Log By: Mike Parker

Project Manager: Cathy Roberts

Date: 24 May 2007

Bore Diameter: NA

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		Fill Gravelly, silty sand, grey-brown, heterogenous, dry, soft, very loose, fine to coarse gravels of slag, poorly sorted, rootlets	TP3/0.2	D			
		Fill Backfilled alluvial sand, yellow, homogenous, damp, loose, well sorted, fine shell fragments					
1.0			TP3/1.0	D			
		Fill As above. Increase in moisture and concentration of shell fragments					
2.0			TP3/2.0	D			
		Fill As above. Moist, increase in concentration of shell fragments					
3.0		End of investigation at 3.0 m	TP3/3.0	D			

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		



Borehole No.: TP4

Location: Park Residential

Project: Park Residential Waste Classification

Total Hole Depth: 3.0 m

Driller and Co.: Tim - A.C. Excavations

Project No.: 40289

Longitude: NA

Drill Method: Test Pitting

Client: Honeysuckle Development Corporation

Latitude: NA

Log By: Mike Parker

Project Manager: Cathy Roberts

Date: 24 May 2007

Bore Diameter: NA

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		Fill Gravelly, silty sand, brown, heterogenous, dry, fine to coarse slag gravels, poorly sorted, fine to medium grained	TP4/0.2	D			
		Fill Backfilled alluvial sand, yellow, homogenous, damp, loose, well graded, fine shell fragments, increase in moisture and shell fragments with depth	TP4/1.0	D			
1.0							
2.0			TP4/2.0	D			
3.0		Sandy Clay Organic, dark brown to black, homogenous, moist to wet, moderate to high plasticity	TP4/3.0	D			
		End of investigation at 3.0 m					

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		



Borehole No.: TP5

Location: Park Residential

Project: Park Residential Waste Classification

Total Hole Depth: 3.0 m

Driller and Co.: Tim - A.C. Excavations

Project No.: 40289

Longitude: NA

Drill Method: Test Pitting

Client: Honeysuckle Development Corporation

Latitude: NA

Log By: Mike Parker

Project Manager: Cathy Roberts

Date: 24 May 2007

Bore Diameter: NA

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		Fill Gravelly silty sand, grey to brown, homogenous, dry, very loose, fine gravels of slag and stone, well sorted	TP5/0.2	D			
1.0		Fill Backfilled alluvial sand, yellow, homogenous, damp, loose, well sorted, fine shell fragments	TP5/1.0	D			
2.0		Fill As above. Increase in concentration of shell fragments and increase in moisture content	TP5/2.0	D			
3.0		End of investigation at 3.0 m	TP5/3.0	D			

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		



Borehole No.: TP6

Location: Park Residential

Project: Park Residential Waste Classification

Total Hole Depth: 3.0 m

Driller and Co.: Tim - A.C. Excavations

Project No.: 40289

Longitude: NA

Drill Method: Test Pitting

Client: Honeysuckle Development Corporation

Latitude: NA

Log By: Mike Parker

Project Manager: Cathy Roberts

Date: 24 May 2007

Bore Diameter: NA

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		Fill Gravelly, silty sand, grey to brown, heterogenous, dry, very loose, fine gravels of slag and stone, poorly sorted	TP6/0.2	D			
		Fill Backfilled alluvial sand, yellow, homogenous, damp, loose, well sorted, fine shell fragments					
1.0			TP6/1.0	D			
2.0		Fill As above. Increase in moisture, grain size and shell fragmentation	TP6/2.0	D			
3.0		End of investigation at 3.0 m	TP6/3.0	D			

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		



Borehole No.: TP7

Location: Park Residential

Project: Park Residential Waste Classification

Total Hole Depth: 3.0 m

Driller and Co.: Arthur - A.C. Excavations

Project No.: 40189

Longitude: NA

Drill Method: Test Pitting

Client: Honeysuckle Development Corporation

Latitude: NA

Log By: Mike Parker

Project Manager: Cathy Roberts

Date: 25 May 2007

Bore Diameter: NA

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		Fill Backfilled alluvial sand, yellow, homogenous, dry, loose, fine shell fragments, well sorted, rootlets at surface					
1.0			TP7/1.0	D			
2.0		Fill As above. Damp, increase in grain size					
			TP7/2.0	D			
3.0		Fill As above. Moist, increase in grain size and shell fragmentation					
			TP7/3.0	D			
		End of investigation at 3.0 m					

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		



Borehole No.: TP8

Location: Park Residential

Project: Park Residential Waste Classification

Total Hole Depth: 3.0 m

Driller and Co.: Arthur - A.C. Excavations

Project No.: 40189

Longitude: NA

Drill Method: Test Pitting

Client: Honeysuckle Development Corporation

Latitude: NA

Log By: Mike Parker

Project Manager: Cathy Roberts

Date: 25 May 2007

Bore Diameter: NA

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		Fill Backfilled alluvial sand, yellow, homogenous, dry, loose, well sorted, fine to medium grained, fine shell fragments					
1.0			TP8/1.0	D			
2.0		Fill Sandy clay, dark grey, homogenous, moist, soft, high plasticity, little sand, slag gravels and railway ballast	TP8/2.0	D			
3.0		Fill Clayey sand, grey to yellow, homogenous, damp to moist, soft, moderate plasticity, moderately dense, well sorted sands, minor slag gravels	TP8/3.0	D			
		End of investigation at 3.0 m					

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		



Borehole No.: TP9

Location: Park Residential

Project: Park Residential Waste Classification

Total Hole Depth: 3.0 m

Driller and Co.: Arthur - A.C. Excavations

Project No.: 40189

Longitude: NA

Drill Method: Test Pitting

Client: Honeysuckle Development Corporation

Latitude: NA

Log By: Mike Parker

Project Manager: Cathy Roberts

Date: 25 May 2007

Bore Diameter: NA

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		Fill Backfilled sand, grey, homogenous, dry, very loose, well sorted, fine grained	TP9/0.2	D			
		Fill Slag gravels and cobbles, dark grey, moist, loose					
		Fill Backfilled alluvial sand, yellow, homogenous, dry to damp, loose, well sorted, fine grained, fine shell fragments	TP9/1.0	D			
1.0							
		Fill As above. Increase in moisture content, grain size and concentration of shell fragments	TP9/2.0	D			
2.0							
			TP9/3.0	D			
3.0		End of investigation at 3.0 m					

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		



Borehole No.: TP10

Location: Park Residential

Project: Park Residential Waste Classification

Total Hole Depth: 3.0 m

Driller and Co.: Arthur - A.C. Excavations

Project No.: 40189

Longitude: NA

Drill Method: Test Pitting

Client: Honeysuckle Development Corporation

Latitude: NA

Log By: Mike Parker

Project Manager: Cathy Roberts

Date: 25 May 2007

Bore Diameter: NA

SUBSURFACE PROFILE			SAMPLE				Well Completion Details
Depth	Visual	Description	Number	Condition	PID (ppm)	Observations	
0.0		Ground Surface					
		Fill Sand, grey, homogenous, dry, soft, very loose, well sorted, fine grained, trace of gravels, rootlets	TP10/0.2	D			
		Fill Backfilled alluvial sand, yellow, homogenous, dry, ver loose, fine shell fragments, well sorted					
1.0			TP10/1.0	D			
2.0		Fill As above. Increase in moisture content, grain size and concentration of shell fragments	TP10/2.0	D			
3.0		End of investigation at 3.0 m	TP10/3.0	D			

Sample Method	Sample Condition		
HA - Hand Auger SFA - Solid Flight Auger HFA - Hollow Flight Auger PT - Push Tubing	U - undisturbed tube sample D - disturbed sample CS - core sample		