

25 November 2010

TRUenergy Tallawarra  
Level 33, 385 Bourke Street  
MELBOURNE VIC 3000

**Attention: Anthony Savenkov**

Dear Anthony

**RE: SLAG SAMPLING AND TESTING (STOCKPILED ON ASH POND 1&2)  
TALLAWARRA LANDS, YALLAH BAY ROAD, YALLAH**

## **1 INTRODUCTION**

At the request of TRUenergy Tallawarra, Coffey Environments Australia Pty Ltd (Coffey) carried out sampling and testing of a slag stockpile that is currently located within the area of former Ash Ponds 1&2, at the above site. We understand that the slag comprises steel furnace slag originally sourced from Australian Steel Making Services (ASMS) and was brought to the site from a road construction project at Dunmore where it had originally been used as a subgrade material. Apparently the subgrade was later found to be unsuitable and TRUenergy Tallawarra accepted the material for use on the site on access roads along Ash Ponds 1 and 2. The quantity of material brought to the site is not known, but would be expected to be several thousand cubic metres.

The objective of the slag sampling and testing was to assess the potential for widespread contamination of the slag material that was brought to the Tallawarra Lands site for use in the Ash Pond areas which may later be used for recreational open space or commercial/industrial landuse.

## **2 SCOPE OF WORK**

The following scope of work was carried out:

- Collection of 10 samples of the slag from the main slag stockpile;
- Analysis of the 10 samples for a suite of potential chemicals of concern including:
  - heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc)
  - Total Petroleum Hydrocarbons (TPH)
  - Benzene, Toluene, Ethylbenzene, Xylene (BTEX)
  - Polycyclic Aromatic Hydrocarbons (PAH)
  - Organochlorine pesticides (OCP)
  - Organophosphate pesticides (OPP)
  - Polychlorinated biphenyl's (PCB)
  - Asbestos
- Providing this letter report with the results of the work carried out, comparison of the results to guidelines for recreational open space and commercial/industrial landuse and assessing the likelihood for the slag to have widespread impact with contaminants.

## **3 FIELDWORK**

An environmental scientist from our Wollongong Office carried out fieldwork on 18 November 2010.

Observations were made of the main slag stockpile which comprised a pale grey steel furnace slag (sandy gravel). A trace of geofabric was noted in places. No other apparent visual evidence of potential contamination was noted such as odours, staining or waste materials.

Samples of the slag were collected from locations across the stockpile, from the stockpile surface and designated 'Slag 1' to 'Slag 10'. Soil samples were collected with a new pair of nitrile gloves, replaced between samples. Clean 250mL glass jars were filled with slag to the brim and immediately sealed with Teflon lined caps to lower the potential for loss of volatile contaminants. A sub sample was also collected in zip lock bags for asbestos analysis. Samples were then labelled and placed directly into ice filled chests.

Soil samples for chemical analysis were collected in duplicate into tightly sealed plastic bags. The headspace air above each sample was measured with a Mini Rae 2000 Photoionisation Detector (PID) fitted with a 10.6eV lamp and calibrated with isobutylene gas at a concentration of 100ppm. This instrument allows rapid, semi quantitative analysis of ionisable volatile organic compounds in the soil.

## **4 LABORATORY ANALYSIS**

Ten (10) slag samples were tested for the analytes described in Section 0.

For quality control purposes one blind coded duplicate sample designated QA1 (duplicate of Slag 1) was collected and analysed for TPH, BTEX, PAH, OCP, OPP, PCB and heavy metals.

The samples were transported to SGS Environmental Services Pty Ltd (SGS) in Sydney, a laboratory who is NATA accredited for the analysis performed. Copies of the chain of custody are included with the original laboratory report which is attached.

## **5 RESULTS**

### **5.1 Quality Assurance/ Quality Control**

Coffey assessed the data against predetermined Data Quality Objectives (DQOs) and Data Quality Indicators (DQIs) (completeness, comparability, representativeness, precision and accuracy) for both field and laboratory procedures and results.

Based on our assessment, it is considered that the data collected for this assessment is adequate and generally meets the DQOs and DQIs.

### **5.2 Assessment Criteria**

To assess the significance of chemical concentrations for both recreational open space and commercial/industrial landuse, the results have been compared to the following references:

- NSW DEC (2006) Guidelines for the NSW Site Auditor Scheme (2nd Edition);
- National Environment Protection (Assessment of Contamination) Measure (NEPM); and
- NSW EPA (1994) Guidelines for Assessing Service Station Sites.

The results have been compared to:

- NEHF E – Parks, recreational open space, playing field, including secondary schools; and
- NEHF F – Commercial Industrial

We note that the slag is not a sandy loam material that would be used as a growing medium and therefore comparison of results to phytotoxicity based criteria is not considered applicable.

NSW DEC (2006) states that there are currently no national or NSW DEC endorsed guidelines relating to human health or environmental investigation of material containing asbestos on sites. For this site, Coffey adopted a conservative criterion for asbestos of no detectable asbestos present in soils. Other risk based assessment criteria can be used if asbestos is detected.

The laboratory test results for soil are summarised in Table LR1. Original laboratory reports are also attached.

### **5.3 Comparison of Results to Assessment Criteria**

No exceedences above the adopted assessment criteria were recorded in the samples tested.

The PID screening results recorded values ranging between 0.9ppm and 2.2ppm, which are considered to be negligible and suggest that volatile contaminants are not present in the samples. These correlated well with the observations and laboratory results.

## **6 CONCLUSIONS AND RECOMMENDATIONS**

The results of sampling and analysis of the slag did not record evidence of potential contamination, with results below criteria for both recreational open space and commercial/industrial landuse.

Based on the results of this assessment, it appears that the likelihood of the slag stockpile having widespread contamination that would preclude it from being used in the ash pond areas for use on access roads is low.

We note that some steel making slag products can be alkaline in nature and should be used with caution in sensitive areas if there is potential for them to impact on the pH of receiving waterways or water bodies. We recommend you contact slag suppliers such as ASMS regarding advice in relation to these issues.

## 7 LIMITATIONS

The results of the assessment reported are limited to the slag stockpile assessed.

The findings within this letter are the result of discreet/specific sampling methodologies used in accordance with normal practices and standards. To the best of our knowledge they represent a reasonable interpretation of the general conditions of the slag stockpile tested. Under no circumstances, however, can it be considered that these findings represent the actual state of the stockpile at all points and the possibility that other, as yet unidentified, contamination being present cannot be precluded.

It is the nature of contamination assessments that the degree of variability in site conditions cannot be known completely and no sampling and analysis program can eliminate all uncertainty concerning the condition of the area assessed. Professional judgement must be exercised in the collection and interpretation of the data.

This work has been conducted in good faith in accordance with our understanding of the requirements of TRUenergy Tallawarra and general accepted practice for environmental consulting.

We draw your attention to the enclosed sheet entitled "Important Information About Your Coffey Environmental Report" which should be read in conjunction with the report.

\* \* \*

We trust the information provided in this letter is suitable for your current requirements. If you have any questions please do not hesitate to contact the undersigned.

For and on behalf of Coffey Environments Australia Pty Ltd



MANUEL FERNANDEZ  
Associate Environmental Engineer

Attachments:

Important Information About Your Coffey Environmental Report  
Figure 1 - Approximate Sample Locations  
Table LR1 - Summary of Laboratory Results  
Laboratory Reports

## Important information about your **Coffey** Environmental Report

Uncertainties as to what lies below the ground on potentially contaminated sites can lead to remediation costs blow outs, reduction in the value of the land and to delays in the redevelopment of land. These uncertainties are an inherent part of dealing with land contamination. The following notes have been prepared by Coffey to help you interpret and understand the limitations of your report.

### **Your report has been written for a specific purpose**

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Your report has been developed on the basis of a specific purpose as understood by Coffey and applies only to the site or area investigated. For example, the purpose of your report may be:

- To assess the environmental effects of an on-going operation.
- To provide due diligence on behalf of a property vendor.
- To provide due diligence on behalf of a property purchaser.
- To provide information related to redevelopment of the site due to a proposed change in use, for example, industrial use to a residential use.
- To assess the existing baseline environmental, and sometimes geological and hydrological conditions or constraints of a site prior to an activity which may alter the sites environmental, geological or hydrological condition.

For each purpose, a specific approach to the assessment of potential soil and groundwater contamination is required. In most cases, a key objective is to identify, and if possible, quantify risks that both recognised and unrecognised contamination pose to the proposed activity. Such risks may be both financial (for example, clean up costs or limitations to the site use) and physical (for example, potential health risks to users of the site or the general public).

### **Scope of Investigations**

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The work was conducted, and the report has been prepared, in response to specific instructions from the client to whom this report is addressed, within practical time and budgetary constraints, and in reliance on certain data and information made available to Coffey. The analyses, evaluations, opinions and conclusions presented in this report are based on those instructions, requirements, data or information, and they could change if such instructions etc. are in fact inaccurate or incomplete.

### **Subsurface conditions can change**

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Subsurface conditions are created by natural processes and the activity of man and may change with time. For example, groundwater levels can vary with time, fill may be placed on a site and pollutants may migrate with time. Because a report is based on conditions which existed at the time of the subsurface exploration, decisions should not be based on a report whose adequacy may have been affected by time. Consult Coffey to be advised how time may have impacted on the project and/or on the property.

### **Interpretation of factual data**

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Environmental site assessments identify actual subsurface conditions only at those points where samples are taken and when they are taken. Data derived from indirect field measurements and sometimes other reports on the site are interpreted by geologists, engineers or scientists to provide an opinion about overall site conditions, their likely impact with respect to the report purpose and recommended actions. Actual conditions may differ from those inferred to exist, because no professional, no matter how well qualified, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than assumed based on the facts obtained. Nothing can be done to change the actual site conditions which exist, but steps can be taken to reduce the impact of unexpected conditions. For this reason, parties involved with land acquisition, management and/or redevelopment should retain the services of Coffey through the development and use of the site to identify variances, conduct additional tests if required, and recommend solutions to unexpected conditions or other problems encountered on site.

## Important information about your **Coffey** Environmental Report

### **Your report will only give preliminary recommendations**

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Your report is based on the assumption that the site conditions as revealed through selective point sampling are indicative of actual conditions throughout an area. This assumption cannot be substantiated until project implementation has commenced and therefore your report recommendations can only be regarded as preliminary. Only Coffey, who prepared the report, is fully familiar with the background information needed to assess whether or not the report's recommendations are valid and whether or not changes should be considered with redevelopment or on-going use of the site. If another party undertakes the implementation of the recommendations of this report there is a risk that the report will be misinterpreted and Coffey cannot be held responsible for such misinterpretation.

### **Your report is prepared for specific purposes and persons**

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To avoid misuse of the information contained in your report it is recommended that you confer with Coffey before passing your report on to another party who may not be familiar with the background and the purpose of the report. In particular, a due diligence report for a property vendor may not be suitable for satisfying the needs of a purchaser. Your report should not be applied for any purpose other than that originally specified at the time the report was issued.

### **Interpretation by other professionals**

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Costly problems can occur when other professionals develop their plans based on misinterpretations of a report. To help avoid misinterpretations, retain Coffey to work with other professionals who are affected by the report. Have Coffey explain the report implications to professionals affected by them and then review plans and specifications produced to see how they have incorporated the report findings.

### **Data should not be separated from the report**

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The report as a whole presents the findings of the site assessment and the report should not be copied in part or altered in any way. Logs, figures, laboratory data, drawings, etc. are customarily included in our reports and are developed by scientists, engineers or geologists based on their interpretation of field logs (assembled by field personnel), field testing and laboratory evaluation of field samples. This information should not under any circumstances be redrawn for inclusion in other documents or separated from the report in any way.

### **Contact Coffey for additional assistance**

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Coffey is familiar with a variety of techniques and approaches that can be used to help reduce risks for all parties to land development and land use. It is common that not all approaches will be necessarily dealt with in your environmental site assessment report due to concepts proposed at that time. As a project progresses through planning and design toward construction and/or maintenance, speak with Coffey to develop alternative approaches to problems that may be of genuine benefit both in time and cost.

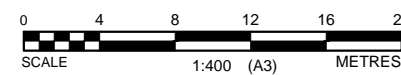
### **Responsibility**

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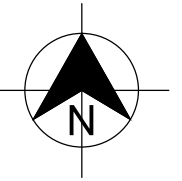
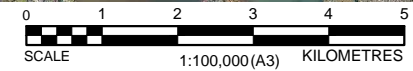
Environmental reporting relies on interpretation of factual information based on judgement and opinion and has a level of uncertainty attached to it, which is far less exact than other design disciplines. This has often resulted in claims being lodged against consultants, which are unfounded. To help prevent this problem, a number of clauses have been developed for use in contracts, reports and other documents. Responsibility clauses do not transfer appropriate liabilities from Coffey to other parties but are included to identify where Coffey's responsibilities begin and end. Their use is intended to help all parties involved to recognise their individual responsibilities. Read all documents from Coffey closely and do not hesitate to ask any questions you may have.



THIS IS ONE INTERPRETATION ONLY  
OTHER INTERPRETATIONS ARE POSSIBLE.



LOCATION OF  
SLAG STOCKPILE



NOTE:  
ALL LOCATIONS ARE APPROXIMATE.  
DIMENSIONS IN METRES.

Coffey Environments Australia Pty Ltd ©

**DRAFT**

Rev	Date	Revision Details	Drn
A	24.11.10	ISSUE	LZ

**LEGEND**

SLAG # x APPROXIMATE LOCATION OF SLAG SAMPLE

**coffey environments**  
SPECIALISTS IN ENVIRONMENTAL, SOCIAL AND SAFETY PERFORMANCE

126 Trenerry Crescent  
Abbotsford VIC 3067  
Ph: (03) 9473 1400  
Fax: (03) 9473 1450

Client:  
**TRUEnergy Tallawarra**

Project:  
SLAG SAMPLING & ANALYSIS

Location:  
TALLAWARRA LANDS, YALLAH BAY RD  
YALLAH, NSW

Drawing Title:  
**APPROXIMATE SAMPLE LOCATIONS**

Drawn LZ	Date 24.11.10
Project - Drawing No. ENAUWOLL04009AB-L02	Figure No. Rev. 1 A

**TABLE LR1:**  
**SUMMARY OF LABORATORY RESULTS FOR SOIL SAMPLES**  
**Heavy Metals, TPH, BTEX, PAH, OCP, OPP, PCB and Asbestos**  
**(All results in mg/kg)**

Sample ID	THRESHOLD CONCENTRATIONS		Slag 1	QA1	Slag 2	Slag 3	Slag 4	Slag 5	Slag 6	Slag 7	Slag 8	Slag 9	Slag 10
			Soil	(Duplicate of Slag 1)	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date of Sampling	HIL (NEHF E)	HIL (NEHF F)	18/11/2010	18/11/2010	18/11/2010	18/11/2010	18/11/2010	18/11/2010	18/11/2010	18/11/2010	18/11/2010	18/11/2010	18/11/2010
Depth (m)			-	-	-	-	-	-	-	-	-	-	-
<b>HEAVY METALS</b>													
Arsenic	200 <sup>1</sup>	500 <sup>2</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Cadmium	40 <sup>1</sup>	100 <sup>2</sup>	1.6	1.4	2	1.9	1.9	1.8	1.8	1.5	1.9	1.9	1.6
Chromium	240,000 <sup>1a</sup>	600,000 <sup>2a</sup>	340	370	350	350	370	350	400	390	390	370	370
Copper	2,000 <sup>1</sup>	5,000 <sup>2</sup>	13	19	11	9.9	10	9.7	13	9	10	11	15
Lead	600 <sup>1</sup>	1,500 <sup>2</sup>	7	7	8	8	8	8	8	7	8	8	7
Nickel	600 <sup>1</sup>	3,000 <sup>2</sup>	4.4	4.7	10	12	8	9.2	6.4	4.5	7.3	10	5.2
Zinc	14,000 <sup>1</sup>	35,000 <sup>2</sup>	37	25	42	32	43	42	37	34	36	31	33
Mercury	30 <sup>1b</sup>	75 <sup>2b</sup>	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
<b>TOTAL PETROLEUM HYDROCARBONS</b>													
C6 - C9 Fraction	65 <sup>3</sup>	65 <sup>3</sup>	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C10 - C14 Fraction			<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C15 - C28 Fraction			<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
C29 - C36 Fraction			<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Total C10-C36	1,000 <sup>3</sup>	1,000 <sup>3</sup>	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
<b>BTEX</b>													
Benzene	1 <sup>3</sup>	1 <sup>3</sup>	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	130 <sup>3</sup>	130 <sup>3</sup>	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	50 <sup>3</sup>	50 <sup>3</sup>	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylene	25 <sup>3</sup>	25 <sup>3</sup>	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
<b>POLYCYCLIC AROMATIC HYDROCARBONS</b>													
Benzo(a)pyrene	2 <sup>1</sup>	5 <sup>2</sup>	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total PAH	40 <sup>1</sup>	100 <sup>2</sup>	<1.60	<1.60	<1.60	<1.60	<1.60	<1.60	<1.60	<1.60	<1.60	<1.60	<1.60
<b>ORGANOCHLORINE PESTICIDES</b>													
Heptachlor	20 <sup>1</sup>	50 <sup>2</sup>	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chlordane	100 <sup>1</sup>	250 <sup>2</sup>	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin + Dieldrin	20 <sup>1</sup>	50 <sup>2</sup>	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
DDT + DDE + DDD	400 <sup>1</sup>	1,000 <sup>2</sup>	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Other OCP			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
<b>ORGANOPHOSPHOROUS PESTICIDES</b>													
Total OPP	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<b>POLYCHLORINATED BIPHENYLS</b>													
Total PCB	20 <sup>1</sup>	50 <sup>2</sup>	<0.90	<0.90	<0.90	<0.90	<0.90	<0.90	<0.90	<0.90	<0.90	<0.90	<0.90
<b>ASBESTOS</b>													
	ND <sup>3</sup>	ND <sup>3</sup>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

**NOTES:**

**Concentration exceeds the Human Health Investigation Levels (HIL)**

<sup>1</sup> Based on NSW DEC (2006), Guidelines for the NSW Site Auditor Scheme 2nd Edition and NEPM (1999) (NEHF - E - Recreationa Open Space)

<sup>2</sup> Based on NSW DEC (2006), Guidelines for the NSW Site Auditor Scheme 2nd Edition and NEPM (1999) (NEHF - F - Commercial/Industrial)

<sup>a</sup> Based on Chromium III

<sup>b</sup> Based on Inorganic Mercury

<sup>2</sup> Based on NSW EPA (1994), Guidelines for Assessing Service Station Sites

<sup>3</sup> On the advice of the NSW Department of Health, the NSW EPA have advised NSW Site Auditors

(Site Auditors Meeting 1 March 2000) that "no asbestos in the soil at the surface is permitted".

The phrase 'at the surface' has not been defined.

ND Not Detected

<sup>1</sup> Not Analysed

LOR Limits of Reporting

See original laboratory reports for detection limits

## ANALYTICAL REPORT

23 November 2010

**Coffey Environments Pty Ltd**

118 Auburn Street  
Wollongong  
NSW 2500

**Attention: Manuel Fernandez**

Your Reference: ENAUWOLL04009AB

Our Reference: SE83318

Samples: 11 Soils

Received: 19/11/2010

Preliminary Report Sent: Not Issued

These samples were analysed in accordance with your written instructions.

For and on Behalf of:

SGS ENVIRONMENTAL SERVICES

Sample Receipt:

Angela Mamalicos

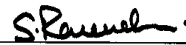
AU.SampleReceipt.Sydney@sgs.com

Production Manager:

Huong Crawford

Huong.Crawford@sgs.com

*Results Approved and/or Authorised by:*



**Ravee Sivasubramaniam**  
Asbestos Signatory



**Ly Kim Ha**  
Organics Signatory



**Huong Crawford**  
Metals Signatory



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BTEX in Soil Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-1 Slag 1 Soil 18/11/2010	SE83318-2 Slag 2 Soil 18/11/2010	SE83318-3 Slag 3 Soil 18/11/2010	SE83318-4 Slag 4 Soil 18/11/2010	SE83318-5 Slag 5 Soil 18/11/2010
Date Extracted (BTEX)		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Date Analysed (BTEX)		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Benzene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
BTEX Surrogate (%)	%	95	95	91	86	77

BTEX in Soil Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-6 Slag 6 Soil 18/11/2010	SE83318-7 Slag 7 Soil 18/11/2010	SE83318-8 Slag 8 Soil 18/11/2010	SE83318-9 Slag 9 Soil 18/11/2010	SE83318-10 Slag 10 Soil 18/11/2010
Date Extracted (BTEX)		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Date Analysed (BTEX)		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Benzene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
BTEX Surrogate (%)	%	74	75	82	78	83

BTEX in Soil Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-1 1 QA1 Soil 18/11/2010
Date Extracted (BTEX)		22/11/2010
Date Analysed (BTEX)		22/11/2010
Benzene	mg/kg	<0.1
Toluene	mg/kg	<0.1
Ethylbenzene	mg/kg	<0.1
Total Xylenes	mg/kg	<0.3
BTEX Surrogate (%)	%	83



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WORLD RECOGNISED  
ACCREDITATION

SGS Australia Pty Ltd  
ABN 44 000 964 278

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t +61 (0)2 8594 0400 f +61 (0)2 8594 0499 www.au.sgs.com

TRH in soil with C6-C9 by P/T Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-1 Slag 1 Soil 18/11/2010	SE83318-2 Slag 2 Soil 18/11/2010	SE83318-3 Slag 3 Soil 18/11/2010	SE83318-4 Slag 4 Soil 18/11/2010	SE83318-5 Slag 5 Soil 18/11/2010
Date Extracted (TRH C6-C9 PT)		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Date Analysed (TRH C6-C9 PT)		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
TRH C <sub>6</sub> - C <sub>9</sub> P&T	mg/kg	<20	<20	<20	<20	<20
Date Extracted (TRH C10-C36)		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Date Analysed (TRH C10-C36)		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	<20	<20	<20	<20	<20
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	<50	<50	<50	<50	<50
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	<50	<50	<50	<50	<50

TRH in soil with C6-C9 by P/T Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-6 Slag 6 Soil 18/11/2010	SE83318-7 Slag 7 Soil 18/11/2010	SE83318-8 Slag 8 Soil 18/11/2010	SE83318-9 Slag 9 Soil 18/11/2010	SE83318-10 Slag 10 Soil 18/11/2010
Date Extracted (TRH C6-C9 PT)		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Date Analysed (TRH C6-C9 PT)		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
TRH C <sub>6</sub> - C <sub>9</sub> P&T	mg/kg	<20	<20	<20	<20	<20
Date Extracted (TRH C10-C36)		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Date Analysed (TRH C10-C36)		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	<20	<20	<20	<20	<20
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	<50	<50	<50	<50	<50
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	<50	<50	<50	<50	<50

TRH in soil with C6-C9 by P/T Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-1 1 QA1 Soil 18/11/2010
Date Extracted (TRH C6-C9 PT)		22/11/2010
Date Analysed (TRH C6-C9 PT)		22/11/2010
TRH C <sub>6</sub> - C <sub>9</sub> P&T	mg/kg	<20
Date Extracted (TRH C10-C36)		22/11/2010
Date Analysed (TRH C10-C36)		22/11/2010
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	<20
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	<50
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	<50

PAHs in Soil Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-1 Slag 1 Soil 18/11/2010	SE83318-2 Slag 2 Soil 18/11/2010	SE83318-3 Slag 3 Soil 18/11/2010	SE83318-4 Slag 4 Soil 18/11/2010	SE83318-5 Slag 5 Soil 18/11/2010
Date Extracted		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Date Analysed		23/11/2010	23/11/2010	23/11/2010	23/11/2010	23/11/2010
Naphthalene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Acenaphthylene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Acenaphthene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Fluorene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Phenanthrene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Anthracene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Fluoranthene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Pyrene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo[a]anthracene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Chrysene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo[b]fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo[k]fluoranthene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo[a]pyrene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Indeno[123-cd]pyrene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Dibenzo[ah]anthracene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo[ghi]perylene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Total PAHs (sum)	mg/kg	<2	<2	<2	<2	<2
Nitrobenzene-d5	%	120	120	118	114	118
2-Fluorobiphenyl	%	98	100	98	94	98
<i>p</i> -Terphenyl-d14	%	80	82	78	78	80



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PAHs in Soil Our Reference:	UNITS	SE83318-6	SE83318-7	SE83318-8	SE83318-9	SE83318-10
Your Reference	-----	Slag 6	Slag 7	Slag 8	Slag 9	Slag 10
Sample Matrix	-----	Soil	Soil	Soil	Soil	Soil
Date Sampled		18/11/2010	18/11/2010	18/11/2010	18/11/2010	18/11/2010
Date Extracted		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Date Analysed		23/11/2010	23/11/2010	23/11/2010	23/11/2010	23/11/2010
Naphthalene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Acenaphthylene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Acenaphthene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Fluorene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Phenanthrene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Anthracene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Fluoranthene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Pyrene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo[a]anthracene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Chrysene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo[b]fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo[k]fluoranthene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo[a]pyrene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Indeno[123-cd]pyrene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Dibenzo[ah]anthracene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo[ghi]perylene	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
Total PAHs (sum)	mg/kg	<2	<2	<2	<2	<2
Nitrobenzene-d5	%	120	118	118	116	126
2-Fluorobiphenyl	%	98	98	96	96	104
<i>p</i> -Terphenyl-d14	%	82	80	78	78	86



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PAHs in Soil Our Reference:	UNITS	SE83318-1 1
Your Reference	-----	QA1
Sample Matrix	-----	Soil
Date Sampled		18/11/2010
Date Extracted		22/11/2010
Date Analysed		23/11/2010
Naphthalene	mg/kg	<0.10
Acenaphthylene	mg/kg	<0.10
Acenaphthene	mg/kg	<0.10
Fluorene	mg/kg	<0.10
Phenanthrene	mg/kg	<0.10
Anthracene	mg/kg	<0.10
Fluoranthene	mg/kg	<0.10
Pyrene	mg/kg	<0.10
Benzo[a]anthracene	mg/kg	<0.10
Chrysene	mg/kg	<0.10
Benzo[b]fluoranthene	mg/kg	<0.1
Benzo[k]fluoranthene	mg/kg	<0.10
Benzo[a]pyrene	mg/kg	<0.10
Indeno[123-cd]pyrene	mg/kg	<0.10
Dibenzo[ah]anthracene	mg/kg	<0.10
Benzo[ghi]perylene	mg/kg	<0.10
Total PAHs (sum)	mg/kg	<2
Nitrobenzene-d5	%	114
2-Fluorobiphenyl	%	92
<i>p</i> -Terphenyl- <i>d</i> 14	%	76



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OC Pesticides in Soil Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-1 Slag 1 Soil 18/11/2010	SE83318-2 Slag 2 Soil 18/11/2010	SE83318-3 Slag 3 Soil 18/11/2010	SE83318-4 Slag 4 Soil 18/11/2010	SE83318-5 Slag 5 Soil 18/11/2010
Date Extracted		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Date Analysed		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>alpha</i> -BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>gamma</i> -BHC (Lindane)	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
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>beta</i> -BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>delta</i> -BHC	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
<i>o,p</i> -DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>alpha</i> -Endosulfan	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>trans</i> -Chlordane ( <i>gamma</i> )	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>cis</i> -Chlordane ( <i>alpha</i> )	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>trans</i> -Nonachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>p,p</i> -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
<i>o,p</i> -DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>o,p</i> -DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>beta</i> -Endosulfan	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>p,p</i> -DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>p,p</i> -DDT	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
Endrin Aldehyde	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
Endrin Ketone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
2,4,5,6-Tetrachloro-m-xylene ( <i>Surrogate</i> )	%	117	119	122	119	122



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OC Pesticides in Soil Our Reference:	UNITS	SE83318-6	SE83318-7	SE83318-8	SE83318-9	SE83318-10
Your Reference	-----	Slag 6	Slag 7	Slag 8	Slag 9	Slag 10
Sample Matrix	-----	Soil	Soil	Soil	Soil	Soil
Date Sampled		18/11/2010	18/11/2010	18/11/2010	18/11/2010	18/11/2010
Date Extracted		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Date Analysed		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>alpha</i> -BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>gamma</i> -BHC (Lindane)	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
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>beta</i> -BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>delta</i> -BHC	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
<i>o,p</i> -DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>alpha</i> -Endosulfan	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>trans</i> -Chlordane ( <i>gamma</i> )	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>cis</i> -Chlordane ( <i>alpha</i> )	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>trans</i> -Nonachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>p,p</i> -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
<i>o,p</i> -DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>o,p</i> -DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>beta</i> -Endosulfan	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>p,p</i> -DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<i>p,p</i> -DDT	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
Endrin Aldehyde	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
Endrin Ketone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
2,4,5,6-Tetrachloro-m-xylene ( <i>Surrogate</i> )	%	125	123	121	121	123



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OC Pesticides in Soil		
Our Reference:	UNITS	SE83318-1
Your Reference	-----	1
Sample Matrix	-----	QA1
Date Sampled		Soil
		18/11/2010
Date Extracted		22/11/2010
Date Analysed		22/11/2010
HCB	mg/kg	<0.1
<i>alpha</i> -BHC	mg/kg	<0.1
<i>gamma</i> -BHC (Lindane)	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
Aldrin	mg/kg	<0.1
<i>beta</i> -BHC	mg/kg	<0.1
<i>delta</i> -BHC	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
<i>o,p</i> -DDE	mg/kg	<0.1
<i>alpha</i> -Endosulfan	mg/kg	<0.1
<i>trans</i> -Chlordane ( <i>gamma</i> )	mg/kg	<0.1
<i>cis</i> -Chlordane ( <i>alpha</i> )	mg/kg	<0.1
<i>trans</i> -Nonachlor	mg/kg	<0.1
<i>p,p</i> -DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
<i>o,p</i> -DDD	mg/kg	<0.1
<i>o,p</i> -DDT	mg/kg	<0.1
<i>beta</i> -Endosulfan	mg/kg	<0.1
<i>p,p</i> -DDD	mg/kg	<0.1
<i>p,p</i> -DDT	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Endrin Ketone	mg/kg	<0.1
2,4,5,6-Tetrachloro-m-xylene ( <i>Surrogate</i> )	%	121



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OP Pesticides in Soil by GCMS Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-1 Slag 1 Soil 18/11/2010	SE83318-2 Slag 2 Soil 18/11/2010	SE83318-3 Slag 3 Soil 18/11/2010	SE83318-4 Slag 4 Soil 18/11/2010	SE83318-5 Slag 5 Soil 18/11/2010
Date Extracted		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Date Analysed		23/11/2010	23/11/2010	23/11/2010	23/11/2010	23/11/2010
Dichlorvos	mg/kg	<1	<1	<1	<1	<1
Dimethoate	mg/kg	<1	<1	<1	<1	<1
Diazinon	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorpyrifos-ethyl	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Bromofos-ethyl	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl	mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20
2-fluorobiphenyl (Surr)	%	98	100	98	94	98
d14-p-Terphenyl (Surr)	%	80	82	78	78	80

OP Pesticides in Soil by GCMS Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-6 Slag 6 Soil 18/11/2010	SE83318-7 Slag 7 Soil 18/11/2010	SE83318-8 Slag 8 Soil 18/11/2010	SE83318-9 Slag 9 Soil 18/11/2010	SE83318-10 Slag 10 Soil 18/11/2010
Date Extracted		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Date Analysed		23/11/2010	23/11/2010	23/11/2010	23/11/2010	23/11/2010
Dichlorvos	mg/kg	<1	<1	<1	<1	<1
Dimethoate	mg/kg	<1	<1	<1	<1	<1
Diazinon	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorpyrifos-ethyl	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Bromofos-ethyl	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl	mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20
2-fluorobiphenyl (Surr)	%	98	98	96	96	104
d14-p-Terphenyl (Surr)	%	82	80	78	78	86



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OP Pesticides in Soil by GCMS Our Reference:	UNITS	SE83318-1 1
Your Reference	-----	QA1
Sample Matrix	-----	Soil
Date Sampled		18/11/2010
Date Extracted		22/11/2010
Date Analysed		23/11/2010
Dichlorvos	mg/kg	<1
Dimethoate	mg/kg	<1
Diazinon	mg/kg	<0.5
Fenitrothion	mg/kg	<0.2
Malathion	mg/kg	<0.20
Chlorpyrifos-ethyl	mg/kg	<0.2
Parathion-ethyl	mg/kg	<0.2
Bromofos-ethyl	mg/kg	<0.2
Methidathion	mg/kg	<0.5
Ethion	mg/kg	<0.2
Azinphos-methyl	mg/kg	<0.20
2-fluorobiphenyl (Surr)	%	92
d14-p-Terphenyl (Surr)	%	76



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PCBs in Soil Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-1 Slag 1 Soil 18/11/2010	SE83318-2 Slag 2 Soil 18/11/2010	SE83318-3 Slag 3 Soil 18/11/2010	SE83318-4 Slag 4 Soil 18/11/2010	SE83318-5 Slag 5 Soil 18/11/2010
Date Extracted		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Date Analysed		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1262	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1268	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive PCB	mg/kg	<0.90	<0.90	<0.90	<0.90	<0.90
PCB_Surrogate 1	%	117	119	122	119	122

PCBs in Soil Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-6 Slag 6 Soil 18/11/2010	SE83318-7 Slag 7 Soil 18/11/2010	SE83318-8 Slag 8 Soil 18/11/2010	SE83318-9 Slag 9 Soil 18/11/2010	SE83318-10 Slag 10 Soil 18/11/2010
Date Extracted		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Date Analysed		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1262	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1268	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive PCB	mg/kg	<0.90	<0.90	<0.90	<0.90	<0.90
PCB_Surrogate 1	%	125	123	121	121	123



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PCBs in Soil Our Reference:	UNITS	SE83318-1 1
Your Reference	-----	QA1
Sample Matrix	-----	Soil
Date Sampled		18/11/2010
Date Extracted		22/11/2010
Date Analysed		22/11/2010
Arochlor 1016	mg/kg	<0.1
Arochlor 1221	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
Arochlor 1262	mg/kg	<0.1
Arochlor 1268	mg/kg	<0.1
Total Positive PCB	mg/kg	<0.90
PCB_Surrogate 1	%	121



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Metals in Soil by ICP-OES Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-1 Slag 1 Soil 18/11/2010	SE83318-2 Slag 2 Soil 18/11/2010	SE83318-3 Slag 3 Soil 18/11/2010	SE83318-4 Slag 4 Soil 18/11/2010	SE83318-5 Slag 5 Soil 18/11/2010
Date Extracted (Metals)		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Date Analysed (Metals)		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Arsenic	mg/kg	<3	<3	<3	<3	<3
Cadmium	mg/kg	1.6	2.0	1.9	1.9	1.8
Chromium	mg/kg	340	350	350	370	350
Copper	mg/kg	13	11	9.9	10	9.7
Lead	mg/kg	7	8	8	8	8
Nickel	mg/kg	4.4	10	12	8.0	9.2
Zinc	mg/kg	37	42	32	43	42

Metals in Soil by ICP-OES Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-6 Slag 6 Soil 18/11/2010	SE83318-7 Slag 7 Soil 18/11/2010	SE83318-8 Slag 8 Soil 18/11/2010	SE83318-9 Slag 9 Soil 18/11/2010	SE83318-10 Slag 10 Soil 18/11/2010
Date Extracted (Metals)		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Date Analysed (Metals)		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Arsenic	mg/kg	<3	<3	<3	<3	<3
Cadmium	mg/kg	1.8	1.5	1.9	1.9	1.6
Chromium	mg/kg	400	390	390	370	370
Copper	mg/kg	13	9.0	10	11	15
Lead	mg/kg	8	7	8	8	7
Nickel	mg/kg	6.4	4.5	7.3	10	5.2
Zinc	mg/kg	37	34	36	31	33



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Metals in Soil by ICP-OES		
Our Reference:	UNITS	SE83318-1
Your Reference	-----	1
Sample Matrix	-----	QA1
Date Sampled		Soil
		18/11/2010
Date Extracted (Metals)		22/11/2010
Date Analysed (Metals)		22/11/2010
Arsenic	mg/kg	<3
Cadmium	mg/kg	1.4
Chromium	mg/kg	370
Copper	mg/kg	19
Lead	mg/kg	7
Nickel	mg/kg	4.7
Zinc	mg/kg	25



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Mercury Cold Vapor/Hg Analyser Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-1 Slag 1 Soil 18/11/2010	SE83318-2 Slag 2 Soil 18/11/2010	SE83318-3 Slag 3 Soil 18/11/2010	SE83318-4 Slag 4 Soil 18/11/2010	SE83318-5 Slag 5 Soil 18/11/2010
Date Extracted (Mercury)		23/11/2010	23/11/2010	23/11/2010	23/11/2010	23/11/2010
Date Analysed (Mercury)		23/11/2010	23/11/2010	23/11/2010	23/11/2010	23/11/2010
Mercury	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05

Mercury Cold Vapor/Hg Analyser Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-6 Slag 6 Soil 18/11/2010	SE83318-7 Slag 7 Soil 18/11/2010	SE83318-8 Slag 8 Soil 18/11/2010	SE83318-9 Slag 9 Soil 18/11/2010	SE83318-10 Slag 10 Soil 18/11/2010
Date Extracted (Mercury)		23/11/2010	23/11/2010	23/11/2010	23/11/2010	23/11/2010
Date Analysed (Mercury)		23/11/2010	23/11/2010	23/11/2010	23/11/2010	23/11/2010
Mercury	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05

Mercury Cold Vapor/Hg Analyser Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-1 1 QA1 Soil 18/11/2010
Date Extracted (Mercury)		23/11/2010
Date Analysed (Mercury)		23/11/2010
Mercury	mg/kg	<0.05



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Asbestos ID in soil Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-1 Slag 1 Soil 18/11/2010	SE83318-2 Slag 2 Soil 18/11/2010	SE83318-3 Slag 3 Soil 18/11/2010	SE83318-4 Slag 4 Soil 18/11/2010	SE83318-5 Slag 5 Soil 18/11/2010
Date Analysed		23/11/2010	23/11/2010	23/11/2010	23/11/2010	23/11/2010
Sample Description		18g Soil,rocks	28g Soil,rocks	32g Soil,rocks	35g Soil,rocks	39g Soil,rocks
Asbestos ID in soil	-	No asbestos detected Organic fibres detected*	No asbestos detected Organic fibres detected*	No asbestos detected Organic fibres detected*	No asbestos detected Organic fibres detected*	No asbestos detected Organic fibres detected*

Asbestos ID in soil Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-6 Slag 6 Soil 18/11/2010	SE83318-7 Slag 7 Soil 18/11/2010	SE83318-8 Slag 8 Soil 18/11/2010	SE83318-9 Slag 9 Soil 18/11/2010	SE83318-10 Slag 10 Soil 18/11/2010
Date Analysed		23/11/2010	23/11/2010	23/11/2010	23/11/2010	23/11/2010
Sample Description		35g Soil,rocks	36g Soil,rocks	38g Soil,rocks	25g Soil,rocks	23g Soil,rocks
Asbestos ID in soil	-	No asbestos detected Organic fibres detected*	No asbestos detected Organic fibres detected*	No asbestos detected Organic fibres detected*	No asbestos detected Organic fibres detected*	No asbestos detected Organic fibres detected*

Asbestos ID in soil Our Reference: Your Reference Sample Matrix Date Sampled	UNITS ----- -----	SE83318-1 1 QA1 Soil 18/11/2010
Date Analysed		23/11/2010
Sample Description		17g Soil,rocks
Asbestos ID in soil	-	No asbestos detected Organic fibres detected*



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Moisture						
Our Reference:	UNITS	SE83318-1	SE83318-2	SE83318-3	SE83318-4	SE83318-5
Your Reference	-----	Slag 1	Slag 2	Slag 3	Slag 4	Slag 5
Sample Matrix	-----	Soil	Soil	Soil	Soil	Soil
Date Sampled		18/11/2010	18/11/2010	18/11/2010	18/11/2010	18/11/2010
Date Analysed (moisture)		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Moisture	%	2	2	<1	2	1

Moisture						
Our Reference:	UNITS	SE83318-6	SE83318-7	SE83318-8	SE83318-9	SE83318-10
Your Reference	-----	Slag 6	Slag 7	Slag 8	Slag 9	Slag 10
Sample Matrix	-----	Soil	Soil	Soil	Soil	Soil
Date Sampled		18/11/2010	18/11/2010	18/11/2010	18/11/2010	18/11/2010
Date Analysed (moisture)		22/11/2010	22/11/2010	22/11/2010	22/11/2010	22/11/2010
Moisture	%	4	2	2	2	3

Moisture		
Our Reference:	UNITS	SE83318-1
Your Reference	-----	QA1
Sample Matrix	-----	Soil
Date Sampled		18/11/2010
Date Analysed (moisture)		22/11/2010
Moisture	%	2

Method ID	Methodology Summary
<b>SEO-018</b>	BTEX / C6-C9 Hydrocarbons - Soil samples are extracted with methanol, purged and concentrated by a purge and trap apparatus, and then analysed using GC/MS technique. Water samples undergo the same analysis without the extraction step. Based on USEPA 5030B and 8260B.
<b>SEO-020</b>	Total Recoverable Hydrocarbons - determined by solvent extraction with dichloromethane / acetone for soils and dichloromethane for waters, followed by instrumentation analysis using GC/FID. Where applicable Solid Phase Extraction Manifold technique is used for aliphatic / aromatic fractionation.
<b>SEO-030</b>	Polynuclear Aromatic Hydrocarbons - determined by solvent extraction with dichloromethane / acetone for soils and dichloromethane for waters, followed by instrumentation analysis using GC/MS SIM mode.
<b>SEO-005</b>	OC/OP/PCB - Determination of a suite of Organchlorine Pesticides, Chlorinated Organo-phosphorus Pesticides and Polychlorinated Biphenyls (PCB's) by liquid-liquid extraction using dichloromethane for waters, or mechanical extraction using acetone / hexane for soils, followed by instrumentation analysis using GC/ECD. Based on USEPA 8081/8082.
<b>AN420</b>	Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates, and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD/FID technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
<b>SEM-010</b>	Determination of elements by ICP-OES following appropriate sample preparation / digestion process. Based on USEPA 6010C / APHA 21st Edition, 3120B.
<b>SEM-005</b>	Mercury - determined by Cold-Vapour AAS following appropriate sample preparation or digestion process. Based on APHA 21st Edition, 3112B.
<b>AN602</b>	Analysed using in house method AN602 - Qualitative identification of Asbestos Fibres, Synthetic Mineral Fibres and Organic Fibres in bulk samples (including building materials and soils) using Polarised Light Microscopy and Dispersion Staining Techniques. Our NATA Accreditation does not currently cover the identification of Synthetic Mineral Fibres and Organic Fibres, however, according to new NATA requirements, the reporting of these fibres is compulsory if detected.
<b>AN002</b>	Preparation of soils, sediments and sludges undergo analysis by either air drying, compositing, subsampling and 1:5 soil water extraction where required. Moisture content is determined by drying the sample at 105 ± 5°C.



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QUALITY CONTROL	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
BTEX in Soil								
Date Extracted (BTEX)				22/11/10	SE83318-3	22/11/2010    22/11/2010	LCS	22/11/10
Date Analysed (BTEX)				22/11/10	SE83318-3	22/11/2010    22/11/2010	LCS	22/11/10
Benzene	mg/kg	0.1	SEO-018	<0.1	SE83318-3	<0.1    <0.1	LCS	85%
Toluene	mg/kg	0.1	SEO-018	<0.1	SE83318-3	<0.1    <0.1	LCS	85%
Ethylbenzene	mg/kg	0.1	SEO-018	<0.1	SE83318-3	<0.1    <0.1	LCS	85%
Total Xylenes	mg/kg	0.3	SEO-018	<0.3	SE83318-3	<0.3    <0.3	LCS	96%
BTEX Surrogate (%)	%	0	SEO-018	92	SE83318-3	91    78    RPD: 15	LCS	95%

QUALITY CONTROL	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
TRH in soil with C6-C9 by P/T								
Date Extracted (TRH C6-C9 PT)				22/11/10	SE83318-3	22/11/2010    22/11/2010	LCS	22/11/10
Date Analysed (TRH C6-C9 PT)				22/11/10	SE83318-3	22/11/2010    22/11/2010	LCS	22/11/10
TRH C <sub>6</sub> - C <sub>9</sub> P&T	mg/kg	20	SEO-018	<20	SE83318-3	<20    <20	LCS	95%
Date Extracted (TRH C10-C36)				22/11/2010	SE83318-3	22/11/2010    22/11/2010	[NR]	[NR]
Date Analysed (TRH C10-C36)				22/11/2010	SE83318-3	22/11/2010    22/11/2010	[NR]	[NR]
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	20	SEO-020	<20	SE83318-3	<20    [N/T]	[NR]	[NR]
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	50	SEO-020	<50	SE83318-3	<50    [N/T]	[NR]	[NR]
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	50	SEO-020	<50	SE83318-3	<50    [N/T]	[NR]	[NR]



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QUALITY CONTROL	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
PAHs in Soil								
Date Extracted				22/11/10	SE83318-1	22/11/2010    22/11/2010	SE83318-3	22/11/10
Date Analysed				23/11/10	SE83318-1	23/11/2010    23/11/2010	SE83318-3	23/11/10
Naphthalene	mg/kg	0.1	SEO-030	<0.10	SE83318-1	<0.10    <0.10	SE83318-3	94%
Acenaphthylene	mg/kg	0.1	SEO-030	<0.10	SE83318-1	<0.10    <0.10	SE83318-3	102%
Acenaphthene	mg/kg	0.1	SEO-030	<0.10	SE83318-1	<0.10    <0.10	SE83318-3	114%
Fluorene	mg/kg	0.1	SEO-030	<0.10	SE83318-1	<0.10    <0.10	[NR]	[NR]
Phenanthrene	mg/kg	0.1	SEO-030	<0.10	SE83318-1	<0.10    <0.10	SE83318-3	105%
Anthracene	mg/kg	0.1	SEO-030	<0.10	SE83318-1	<0.10    <0.10	SE83318-3	127%
Fluoranthene	mg/kg	0.1	SEO-030	<0.10	SE83318-1	<0.10    <0.10	SE83318-3	111%
Pyrene	mg/kg	0.1	SEO-030	<0.10	SE83318-1	<0.10    <0.10	SE83318-3	117%
Benzo[a]anthracene	mg/kg	0.1	SEO-030	<0.10	SE83318-1	<0.10    <0.10	[NR]	[NR]
Chrysene	mg/kg	0.1	SEO-030	<0.10	SE83318-1	<0.10    <0.10	[NR]	[NR]
Benzo[b]fluoranthene	mg/kg	0.1	SEO-030	<0.1	SE83318-1	<0.1    <0.1	[NR]	[NR]
Benzo[k]fluoranthene	mg/kg	0.1	SEO-030	<0.10	SE83318-1	<0.10    <0.10	[NR]	[NR]
Benzo[a]pyrene	mg/kg	0.1	SEO-030	<0.10	SE83318-1	<0.10    <0.10	SE83318-3	116%
Indeno[123-cd]pyrene	mg/kg	0.1	SEO-030	<0.10	SE83318-1	<0.10    <0.10	[NR]	[NR]
Dibenzo[ah]anthracene	mg/kg	0.1	SEO-030	<0.10	SE83318-1	<0.10    <0.10	[NR]	[NR]
Benzo[ghi]perylene	mg/kg	0.1	SEO-030	<0.10	SE83318-1	<0.10    <0.10	[NR]	[NR]
Total PAHs (sum)	mg/kg	1.6	SEO-030	<2	SE83318-1	<2    <2	[NR]	[NR]
Nitrobenzene-d5	%	0	SEO-030	126	SE83318-1	120    124    RPD: 3	SE83318-3	124%
2-Fluorobiphenyl	%	0	SEO-030	100	SE83318-1	98    102    RPD: 4	SE83318-3	102%
p -Terphenyl-d14	%	0	SEO-030	88	SE83318-1	80    84    RPD: 5	SE83318-3	84%



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QUALITY CONTROL	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
OC Pesticides in Soil								
Date Extracted				22/11/2010	SE83318-5	22/11/2010    22/11/2010	SE83318-6	22/11/2010
Date Analysed				22/11/2010	SE83318-5	22/11/2010    22/11/2010	SE83318-6	22/11/2010
HCB	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
<i>alpha</i> -BHC	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
gamma-BHC (Lindane)	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
Heptachlor	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	SE83318-6	124%
Aldrin	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	SE83318-6	119%
<i>beta</i> -BHC	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
<i>delta</i> -BHC	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	SE83318-6	103%
Heptachlor Epoxide	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
<i>o,p</i> -DDE	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
<i>alpha</i> -Endosulfan	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
<i>trans</i> -Chlordane ( <i>gamma</i> )	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
<i>cis</i> -Chlordane ( <i>alpha</i> )	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
<i>trans</i> -Nonachlor	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
<i>p,p</i> -DDE	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
Dieldrin	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	SE83318-6	119%
Endrin	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	SE83318-6	127%
<i>o,p</i> -DDD	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
<i>o,p</i> -DDT	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
<i>beta</i> -Endosulfan	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
<i>p,p</i> -DDD	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
<i>p,p</i> -DDT	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	SE83318-6	84%
Endosulfan Sulphate	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
Methoxychlor	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
Endrin Ketone	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
2,4,5,6-Tetrachloro-m-xylene ( <i>Surrogate</i> )	%	0	SEO-005	107	SE83318-5	122    121    RPD: 1	SE83318-6	122%



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QUALITY CONTROL	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
OP Pesticides in Soil by GCMS								
Date Extracted				22/11/10	SE83318-1	22/11/2010    22/11/2010	SE83318-4	22/11/10
Date Analysed				23/11/10	SE83318-1	23/11/2010    23/11/2010	SE83318-4	23/11/10
Dichlorvos	mg/kg	1	AN420	<1	SE83318-1	<1    <1	SE83318-4	98%
Dimethoate	mg/kg	1	AN420	<1	SE83318-1	<1    <1	[NR]	[NR]
Diazinon	mg/kg	0.5	AN420	<0.5	SE83318-1	<0.5    <0.5	SE83318-4	89%
Fenitrothion	mg/kg	0.2	AN420	<0.2	SE83318-1	<0.2    <0.2	[NR]	[NR]
Malathion	mg/kg	0.2	AN420	<0.20	SE83318-1	<0.20    <0.20	[NR]	[NR]
Chlorpyrifos-ethyl	mg/kg	0.2	AN420	<0.2	SE83318-1	<0.2    <0.2	SE83318-4	104%
Parathion-ethyl	mg/kg	0.2	AN420	<0.2	SE83318-1	<0.2    <0.2	[NR]	[NR]
Bromofos-ethyl	mg/kg	0.2	AN420	<0.2	SE83318-1	<0.2    <0.2	[NR]	[NR]
Methidathion	mg/kg	0.5	AN420	<0.5	SE83318-1	<0.5    <0.5	[NR]	[NR]
Ethion	mg/kg	0.2	AN420	<0.2	SE83318-1	<0.2    <0.2	SE83318-4	120%
Azinphos-methyl	mg/kg	0.2	AN420	<0.20	SE83318-1	<0.20    <0.20	[NR]	[NR]
2-fluorobiphenyl (Surr)	%	0	AN420	100	SE83318-1	98    102    RPD: 4	SE83318-4	104%
d14-p-Terphenyl (Surr)	%	0	AN420	88	SE83318-1	80    84    RPD: 5	SE83318-4	96%

QUALITY CONTROL	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
PCBs in Soil								
Date Extracted				22/11/2010	SE83318-5	22/11/2010    22/11/2010	SE83318-7	22/11/2010
Date Analysed				22/11/2010	SE83318-5	22/11/2010    22/11/2010	SE83318-7	22/11/2010
Arochlor 1016	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
Arochlor 1260	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	SE83318-7	95%
Arochlor 1262	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
Arochlor 1268	mg/kg	0.1	SEO-005	<0.1	SE83318-5	<0.1    <0.1	[NR]	[NR]
Total Positive PCB	mg/kg	0.9	SEO-005	<0.90	SE83318-5	<0.90    <0.90	[NR]	[NR]
PCB_Surrogate 1	%	0	SEO-005	107	SE83318-5	122    121    RPD: 1	SE83318-7	123%



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QUALITY CONTROL	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
Metals in Soil by ICP-OES								
Date Extracted (Metals)				22/11/2010	SE83318-1	22/11/2010    22/11/2010	SE83318-2	22/11/2010
Date Analysed (Metals)				22/11/2010	SE83318-1	22/11/2010    22/11/2010	SE83318-2	22/11/2010
Arsenic	mg/kg	3	SEM-010	<3	SE83318-1	<3    <3	SE83318-2	73%
Cadmium	mg/kg	0.3	SEM-010	<0.3	SE83318-1	1.6    1.6    RPD: 0	SE83318-2	105%
Chromium	mg/kg	0.3	SEM-010	<0.3	SE83318-1	340    360    RPD: 6	SE83318-2	105%
Copper	mg/kg	0.5	SEM-010	<0.5	SE83318-1	13    17    RPD: 27	SE83318-2	99%
Lead	mg/kg	1	SEM-010	<1	SE83318-1	7    7    RPD: 0	SE83318-2	101%
Nickel	mg/kg	0.5	SEM-010	<0.5	SE83318-1	4.4    5.3    RPD: 19	SE83318-2	103%
Zinc	mg/kg	0.5	SEM-010	<0.5	SE83318-1	37    30    RPD: 21	SE83318-2	79%

QUALITY CONTROL	UNITS	LOR	METHOD	Blank	Duplicate Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
Mercury Cold Vapor/Hg Analyser								
Date Extracted (Mercury)				23/11/2010	SE83318-1	23/11/2010    23/11/2010	SE83318-2	23/11/2010
Date Analysed (Mercury)				23/11/2010	SE83318-1	23/11/2010    23/11/2010	SE83318-2	23/11/2010
Mercury	mg/kg	0.05	SEM-005	<0.05	SE83318-1	<0.05    <0.05	SE83318-2	84%

QUALITY CONTROL	UNITS	LOR	METHOD	Blank
Asbestos ID in soil				
Date Analysed				[NT]

QUALITY CONTROL	UNITS	LOR	METHOD	Blank
Moisture				
Date Analysed (moisture)				[NT]
Moisture	%	1	AN002	<1

QUALITY CONTROL	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Matrix Spike % Recovery Duplicate + %RPD
TRH in soil with C6-C9 by P/T					
Date Extracted (TRH C6-C9 PT)		SE83318-1	22/11/2010    22/11/2010	[NR]	[NR]
Date Analysed (TRH C6-C9 PT)		SE83318-1	22/11/2010    22/11/2010	[NR]	[NR]



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QUALITY CONTROL	UNITS	Dup. Sm#	Duplicate	Spike Sm#	Matrix Spike % Recovery
TRH in soil with C6-C9 by P/T			Base + Duplicate + %RPD		Duplicate + %RPD
Date Extracted (TRH C10-C36)		SE83318-1	22/11/2010    22/11/2010	SE83318-2	22/11/2010
Date Analysed (TRH C10-C36)		SE83318-1	22/11/2010    22/11/2010	SE83318-2	22/11/2010
TRH C10 - C14	mg/kg	SE83318-1	<20    <20	SE83318-2	121%
TRH C15 - C28	mg/kg	SE83318-1	<50    <50	SE83318-2	120%
TRH C29 - C36	mg/kg	SE83318-1	<50    <50	SE83318-2	88%

QUALITY CONTROL	UNITS	Dup. Sm#	Duplicate
PAHs in Soil			Base + Duplicate + %RPD
Date Extracted		SE83318-1 1	22/11/2010    22/11/2010
Date Analysed		SE83318-1 1	23/11/2010    23/11/2010
Naphthalene	mg/kg	SE83318-1 1	<0.10    <0.10
Acenaphthylene	mg/kg	SE83318-1 1	<0.10    <0.10
Acenaphthene	mg/kg	SE83318-1 1	<0.10    <0.10
Fluorene	mg/kg	SE83318-1 1	<0.10    <0.10
Phenanthrene	mg/kg	SE83318-1 1	<0.10    <0.10
Anthracene	mg/kg	SE83318-1 1	<0.10    <0.10
Fluoranthene	mg/kg	SE83318-1 1	<0.10    <0.10
Pyrene	mg/kg	SE83318-1 1	<0.10    <0.10
Benzo[a]anthracene	mg/kg	SE83318-1 1	<0.10    <0.10
Chrysene	mg/kg	SE83318-1 1	<0.10    <0.10
Benzo[b]fluoranthene	mg/kg	SE83318-1 1	<0.1    <0.1
Benzo[k]fluoranthene	mg/kg	SE83318-1 1	<0.10    <0.10
Benzo[a]pyrene	mg/kg	SE83318-1 1	<0.10    <0.10
Indeno[123-cd]pyrene	mg/kg	SE83318-1 1	<0.10    <0.10



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QUALITY CONTROL	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
PAHs in Soil			
Dibenzo[ah]anthracene	mg/kg	SE83318-1 1	<0.10    <0.10
Benzo[ghi]perylene	mg/kg	SE83318-1 1	<0.10    <0.10
Total PAHs (sum)	mg/kg	SE83318-1 1	<2    <2
Nitrobenzene-d5	%	SE83318-1 1	114    110    RPD: 4
2-Fluorobiphenyl	%	SE83318-1 1	92    96    RPD: 4
<i>p</i> -Terphenyl- <i>d</i> 14	%	SE83318-1 1	76    82    RPD: 8

QUALITY CONTROL	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD
OP Pesticides in Soil by GCMS			
Date Extracted		SE83318-1 1	22/11/2010    22/11/2010
Date Analysed		SE83318-1 1	23/11/2010    23/11/2010
Dichlorvos	mg/kg	SE83318-1 1	<1    <1
Dimethoate	mg/kg	SE83318-1 1	<1    <1
Diazinon	mg/kg	SE83318-1 1	<0.5    <0.5
Fenitrothion	mg/kg	SE83318-1 1	<0.2    <0.2
Malathion	mg/kg	SE83318-1 1	<0.20    <0.20
Chlorpyrifos-ethyl	mg/kg	SE83318-1 1	<0.2    <0.2
Parathion-ethyl	mg/kg	SE83318-1 1	<0.2    <0.2
Bromofos-ethyl	mg/kg	SE83318-1 1	<0.2    <0.2
Methidathion	mg/kg	SE83318-1 1	<0.5    <0.5
Ethion	mg/kg	SE83318-1 1	<0.2    <0.2
Azinphos-methyl	mg/kg	SE83318-1 1	<0.20    <0.20
2-fluorobiphenyl (Surr)	%	SE83318-1 1	92    96    RPD: 4



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QUALITY CONTROL	UNITS	Dup. Sm#	Duplicate
OP Pesticides in Soil by GCMS			Base + Duplicate + %RPD
d14-p-Terphenyl (Surr)	%	SE83318-1 1	76    82    RPD: 8

QUALITY CONTROL	UNITS	Dup. Sm#	Duplicate
TRH in soil with C6-C9 by P/T			Base + Duplicate + %RPD
Date Extracted (TRH C6-C9 PT)		SE83318-1 1	22/11/2010    22/11/2010
Date Analysed (TRH C6-C9 PT)		SE83318-1 1	22/11/2010    22/11/2010
TRH C6 - C9 P&T	mg/kg	SE83318-1 1	<20    [N/T]
Date Extracted (TRH C10-C36)		SE83318-1 1	22/11/2010    22/11/2010
Date Analysed (TRH C10-C36)		SE83318-1 1	22/11/2010    22/11/2010
TRH C10 - C14	mg/kg	SE83318-1 1	<20    <20
TRH C15 - C28	mg/kg	SE83318-1 1	<50    <50
TRH C29 - C36	mg/kg	SE83318-1 1	<50    <50



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**Result Codes**

[INS] : Insufficient Sample for this test	[RPD] : Relative Percentage Difference
[NR] : Not Requested	* : Not part of NATA Accreditation
[NT] : Not tested	[N/A] : Not Applicable
[LOR] : Limit of reporting	

**Report Comments**

Sampled by the client

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos-containing bulk materials using polarised light microscopy.

This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

No respirable fibres detected using trace analysis technique.

Asbestos analysed by Approved Identifier Ravee Sivasubramaniam.

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

Date Organics extraction commenced:

NATA Corporate Accreditation No. 2562, Site No 4354

Note: Test results are not corrected for recovery (excluding Air-toxics and Dioxins/Furans\*)

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([www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm)). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues established therein.

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**Quality Control Protocol**

**Method Blank:** An analyte free matrix to which all reagents are added in the same volume or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. A method blank is prepared every 20 samples.

**Duplicate:** A separate portion of a sample being analysed that is treated the same as the other samples in the batch. One duplicate is processed at least every 10 samples.

**Surrogate Spike:** An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are added to samples before extraction to monitor extraction efficiency and percent recovery in each sample.

**Internal Standard:** Added to all samples requiring analysis for organics (where relevant) or metals by ICP after the extraction/digestion process; the compounds/elements serve to give a standard of retention time and/or response, which is invariant from run-to-run with the instruments.

**Laboratory Control Sample:** A known matrix spiked with compound(s) representative of the target analytes. It is used to document laboratory performance. When the results of the matrix spike analysis indicates a potential problem due to the sample matrix itself, the LCS results are used to verify that the laboratory can perform the analysis in a clean matrix.

**Matrix Spike:** An aliquot of sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

**Quality Acceptance Criteria**

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: <http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-09.pdf>



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## Client Details

Requested By : **Manuel Fernandez**  
 Client : Coffey Environments Pty Ltd  
 Contact : Manuel Fernandez  
 Address : 118 Auburn Street  
 Wollongong NSW 2500

Email : manuel\_fernandez@coffey.com  
 Telephone : 02 4201 1400  
 Facsimile : 02 4201 1401

Project : ENAUWOLL04009AB  
 Order Number : 28903  
 Samples : 11 Soils

## Laboratory Details

Laboratory : SGS Environmental Services  
 Manager : Edward Ibrahim  
 Address : Unit 16, 33 Maddox Street  
 Alexandria NSW 2015

Email : au.samplereceipt.sydney@sgs.com  
 Telephone : 61 2 8594 0400  
 Facsimile : 61 2 8594 0499

Report No : **SE83318**  
 No. of Samples : 11  
 Due Date : 23/11/2010

Date Instructions Received : 19/11/2010  
 Sample Receipt Date : 19/11/2010

Samples received in good order	: YES	Samples received in correct container:	YES
Samples received without headspace	: YES	Sufficient quantity supplied	: YES
Upon receipt sample temperature	: Cool	Cooling Method	: Ice Pack
Sample containers provided by	: Other Lab	Samples clearly Labelled	: YES
Turnaround time requested	: 2 Days	Completed documentation received	: YES

Samples will be held for 1 month for water samples and 3 months for soil samples from date of receipt of samples, unless otherwise instructed.

## Comments

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

**The signed chain of custody will be returned to you with the original report.**



**SAMPLE RECEIPT ADVICE (SRA) - continued**

Client : Coffey Environments Pty Ltd  
 Project : ENAUWOLL04009AB

Report No : SE83318

**Summary of Samples and Requested Analysis**

The table below represents SGS Environmental Service's understanding and interpretation of the customer supplied sample request.

Please indicate ASAP if your request differs from these details.

Testing shall commence immediately as per this table, unless the customer intervenes with a correction prior to testing.

Note that a small X in the table below indicates some testing has not been requested in the package.

Sample No.	Description	Metals Prep. soil 8 HM	BTEX in Soil	TRH in soil with C6-C9 by P/T	PAHs in Soil	OC Pesticides in Soil	OP Pesticides in Soil by GCMS	PCBs in Soil	Metals in Soil by ICP-OES	Mercury Cold Vapor/Hg Analyser	Asbestos ID in soil	Moisture
1	Slag 1	X	X	X	X	X	X	X	X	X	X	X
2	Slag 2	X	X	X	X	X	X	X	X	X	X	X
3	Slag 3	X	X	X	X	X	X	X	X	X	X	X
4	Slag 4	X	X	X	X	X	X	X	X	X	X	X
5	Slag 5	X	X	X	X	X	X	X	X	X	X	X
6	Slag 6	X	X	X	X	X	X	X	X	X	X	X
7	Slag 7	X	X	X	X	X	X	X	X	X	X	X
8	Slag 8	X	X	X	X	X	X	X	X	X	X	X
9	Slag 9	X	X	X	X	X	X	X	X	X	X	X
10	Slag 10	X	X	X	X	X	X	X	X	X	X	X
11	QA1	X	X	X	X	X	X	X	X	X	X	X

Sample No.	Description
1	Slag 1
2	Slag 2



**SAMPLE RECEIPT ADVICE (SRA) - continued**

Client : Coffey Environments Pty Ltd  
Project : ENAUWOLL04009AB

Report No : SE83318

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Sample No.	Description
3	Slag 3
4	Slag 4
5	Slag 5
6	Slag 6
7	Slag 7
8	Slag 8
9	Slag 9
10	Slag 10
11	QA1



Chain of Custody

Laboratory Quotation / Order No:

Job No: ENV00000000000000000000

Sheet 1 of 1

No: 28903

Dispatch to: **SGS**  
(Address & Phone No.)

16133 Madox St, Alexandria

Sampled by:

Chris Appelkamp

Consigning Officer:

Chris Appelkamp

Date Dispatched:

19/11/10

Attention:

Sample Receipt

Project Manager:  
(report results to)

Manuel Fernandez

Courier Service:

N&B

Consignment Note No:

339990

Relinquished by:

Date:

Time:

Received by:

CO

Date:

Time:

Comments	Sample Matrix	Container Type and Preservative	Sample No.	Date Sampled	Analyses Required						Sample Condition on Receipt
					PAHs	TPHs <sup>BTEX</sup>	MAHs = BTEX	Metals: **	SVOC*	Asbestos	
			1	18/11/10	/	/	/	/	/	/	
			2		/	/	/	/	/	/	
			3		/	/	/	/	/	/	
			4		/	/	/	/	/	/	
			5		/	/	/	/	/	/	
			6		/	/	/	/	/	/	
			7		/	/	/	/	/	/	
			8		/	/	/	/	/	/	
			9		/	/	/	/	/	/	
			10		/	/	/	/	/	/	
			11		/	/	/	/	/	/	

1 Slag 1  
 2 Slag 2  
 3 Slag 3  
 4 Slag 4  
 5 Slag 5  
 6 Slag 6  
 7 Slag 7  
 8 Slag 8  
 9 Slag 9  
 10 Slag 10  
 11 Slag 11

Received: 19/11/10  
 11450  
 Storage Location: 5107-504 1832  
 51-27328



Special Laboratory Instructions: **SVOC = OCP/OPP/PCB/PAH**  
**Metals = As, Cd, Cr, Cu, Pb, Hg, Ni, Zn**

Turnaround Required: **Results by 23/11/10 48hr Turnaround**

JOB NUMBER MUST BE REFERENCED ON ALL SUBSEQUENT PAGES

Copies: WHITE: Sign on release.

YELLOW: If dispatched to Interstate Lab, Lab to sign on receipt and fax back to Coffey.

BLUE: To be returned with results.