AUSTRALIAN GEOTECHNICAL

GEOTECHNICAL & ENVIRONMENTAL SERVICES

DETAILED SITE INVESTIGATION

Prepared For: Architecture Design Studio Pty Ltd
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Executive summary

This executive summary presents a synopsis of the Detailed Site Investigation Assessment for 2 Percy Street, Auburn. The site is proposed for use as a private education institution.

The object of the Detailed Site Investigation was to ascertain whether the site presents a risk to human health and/or the environment arising from any past/present activities at the site or neighboring properties. Laboratory testing was undertaken to re-inforce the results of the desktop study. The scope of work included a documentary review and summary of previous reporting carried out at the site by Aargus Pty Ltd, a site investigation, chemical analyses of Twenty-One (21) soils samples together with preparation of this report.

The Preliminary Site Investigation prepared by Aargus, Ref: ES5840 dated 13th July 2014) indicated that the site was utilised industrial/warehouse purposes from 1930 to 1951. Between 1951 and 1972, the building structures were demolished and the northern portion of the site was likely to be used as car parking area. Sometime between 1972 and 1994, a new warehouse building was constructed in the eastern portion of the site. An office building adjoining to the warehouse to the south was constructed after 2005.

The site historical review prepared by Aargus indicated the following areas of potential environmental concern:

- Potential importation of uncontrolled fill that may contain various contaminants;
- Current or past use of pesticides;
- Chemicals used for training purposes;
- Substation area within the warehouse;
- Metal degradation in storage area;
- Car park areas where leaks and spills from cars may have occurred;
- Former historical activities (multiple industrial processes); and
- Previous potential asbestos based building materials.

Aargus therefore recommended a Detailed Site Investigation (DSI) be carried out to confirm the presence and extent of contamination in order to determine the suitability of the site for the proposed development and to address the data gaps identified.

Search of Protection of the Environment Operations Public Register (POEO) revealed no licensed and delicensed premises in the vicinity (200m) of the subject site.

An intrusive soil investigation was conducted on the site. A total of fifteen (15) boreholes were excavated across the site in a systematic based pattern. Soil samples

were collected from each of the borehole location. Selected samples were analysed for a range of analytes outlined within the Preliminary Site Investigation prepared by Aargus. These samples were selected based on site observations (odour, staining etc), and their position within the borehole (i.e. fill or natural).

Twenty-One (21) soil samples were recovered and sent to a NATA accredited laboratory for analysis. Test results revealed levels of heavy metals are well below the adopted assessment criteria (HILs (A) and EIL), and levels of polychlorinated biphenyl (PCB), Total Petroleum Hydrocarbons (TPH), Polycyclic Aromatic Hydrocarbons (PAH), organochlorin pesticides (OCP), Phenols, Cyanides and Asbestos below the practical quantitation limit, and therefore interpreted to be not present on site.

The results of the chemical analyses indicate that the site does not present a risk to human health or the environment in a 'standard residential with garden/accessible soil' setting and is considered suitable for the private education institution.

This report is a Detailed Site Investigation with laboratory testing undertaken. Whilst the study indicated the site to be free of contamination, it is possible that contaminated soils may be present between sampling locations.

The data quality objectives of the report have been fulfilled. Therefore, the findings of this report, and the results of the chemical analyses, do not indicate that the site poses a risk to human health or the environment and no further investigation is needed.

It should be noted that any soils requiring removal from the site must initially be classified in accordance with the NSW waste classification guidelines.

1.0 INTRODUCTION

1.1 Overview

Australian Geotechnical (AG) have undertaken a Detailed Site Investigation with testing and analysis as requested by Luiza Campos at the site; 2 Percy Street, Auburn. This report has been prepared to determine assess the suitability of the site for subdivision work and construction based on its current condition and the findings of this investigation.

2.0 SCOPE OF WORK

The following scope of work was conducted:

- Review of desktop study report carried out by Aargus of the following to assist in identification of potential contamination issues:
  - Data from Environment Protection Authority
  - Data from the Protection of the Environment Operations Public Register (POEO)
  - Current and past zoning of the land
- Review of soils and geological maps.
- Site Inspection by a representative from AG to ascertain current activities, and any visible signs of contamination.
- Collection of soil samples according to a sampling plan.
- Chemical analysis by a NATA accredited laboratory.
- Assessment of the results of the chemical analysis against the appropriate guidelines.
- Preparation of a Detailed Site Investigation Report.

3.0 SITE DESCRIPTION

The subject site is irregular in shape. The site is legally defined as Lot 14-21 in Section 1 of DP 2647, Lot 1 in DP 721683 and Lot 1 in DP 76735 (2 Percy Street). The site is bounded by low density residential allotments to the north, Percy Street, then Parramatta Auburn Netball Association and Wyatt Park to the east, Railway then warehouse/industrial to the south with Gelibolu Parade, then Railway situated to the west. The site encompasses a total area of approximately 7,325m^2.

At the time of the site inspection, the following observations were made:

- The site is currently being used for commercial purposes
- The site comprised an office building, a warehouse building and a car park area;
- A two-storey office building with a small garden is located at the southern corner of the site;

- The office building appears to be constructed from concrete;
- The warehouse building is adjacent to the office building to the north which encompasses approximately 50% of the total site area. The warehouse building is used for training purposes which contains a workshop, classrooms, offices, storage area (timber and metal), storage rooms (for files, chemicals and equipment), a sand pit, and four large above ground detention tank;
- The warehouse is completely concrete covered;
  Three sedimentation basins were located along the northern boundary of the area;
- Vegetation on site was in good condition and well maintained;
- Car park is situated at the west of site which is utilised of parking, outdoor training and storage purpose. This area is concrete covered except for a garden bed along the northern and western boundary.
- Concrete slabs were generally in good condition with minor cracks and staining noticed;
- No surface standing water was noticed at the site;
- There were no indicators of underground storage tanks within the site;

4.0 SITE HISTORY

In order to ascertain the site history, a documentary review of past and present land use at the subject site and the surrounding area has been undertaken as follows:

4.1 Previous Land Use and Review of Historical Photographs

Aerial Photographs were obtained by Aargus from the NSW Department of Lands Office. The aerial photographs were reviewed to assess the likely past uses of the site with the findings summarised below;

1930 – *"The resolution of the photo is poor. However, the majority of the site appeared to be vacant, with the exception of two warehouse/retail buildings structures located along the northern boundary of the site"*

1951 - *"The site comprised of a number of structures in the northern portion that appeared to be used for warehouse/industrial purpose. One large warehouse building was located in the north- east portion of the site. The southern portion of the site remains vacant"*

1972 – *"The site appears to be unsealed vacant area with the northern portion of the site is likely to be used as a car park"*

1994 – *"The eastern portion of the site was occupied by a large rectangular warehouse building with open space, possibly yards and landscaping, at the southern and western portions of the site"*

2005 – *"The site layout appeared to be similar to that observed in the 1994 photo"*

2014 – *"The site layout appeared to be similar to that observed in the 2004 photo with the exception a building extension that occupies the vacant area in the southern portion of the site"*

4.2 Search of Contaminated Land Management Register (NSW EPA)

A summary of the search of the NSW EPA Contaminated Land Management record of notices for the Auburn area can be found. No notices have been issued to the subject site. Furthermore, the listed sites on the register are situated at such a distance (greater than 200m), that they are not believed to have provided a potential contamination risk to the subject property.

4.3 Search of Protection of the Environment Operations Public Register (POEO) of Licensed and Delicensed Premises

A search of the POEO public register of licensed and delicensed premises (DECC) indicated that no licensed or delicensed premises were located within the immediate surrounding area of the site (within 200m).

5.0 SITE CONDITION AND SURROUNDING ENVIRONMENT

A site investigation was conducted on 26th April 2017. The field observations are summarized in the table below:

Table 1 – Summary of Field Observations

Parameter	Observation
Visible observations on soil contamination	No visible evidence of contamination was observed. No staining of the soils or odours was documented.
Presence of drums, fill or waste materials	None observed. No visible indicators of underground fuel tanks (bowsers or venting pipes)
Presence of fill	Fill was present
Flood potential	Not evident.
Relevant sensitive environments	The nearest down-gradient watercourse is Haslams Creek, approximately 1km north-east of the site, that eventually discharges into the Parramatta River.

6.0 AREAS OF ENVIRONMENTAL CONCERN

Based on the site inspection, site history, previous reporting by Aargus and review of available information from the desktop study, the potential Areas of Environmental Concern (AEC) and their associated Contaminants of Concern (CoCs) for the site were identified. These are summarised in table 2 below;

Table 2 – Summary of Areas of Environmental Concern

Potential AEC	Potentially contaminating activity	Potential CoCs
Entire site	Importation of fill material from unknown origin.	Metals, TPH, BTEX, PAH, OCP, PCB, Phenols, Cyanides, Asbestos
	Potential for pesticides to have been sprayed or injected on or underneath concrete slabs or sealed surfaces.	Metals, OCP
	Previous site activities	Metals, OCP, PCB, Phenols, PAH, VOC, BTEX, TPH, Cyanides
Car parking areas	Leaks from vehicles, Leaks from facilities attached to the underground sedimentation basins and Storage of metals, timbers, petroleum gas cylinders and empty painting drums	Metals, PAH, BTEX, TPH
Building Structures	Potential Asbestos/Fibro, Potential chemicals use for training purpose and the substation.	Asbestos
Onsite drainage line	Leaks from drainage	Metals, TPH, BTEX, PAH,

7.0 SAMPLING & ANALYSIS PLAN AND SAMPLING METHODOLOGY

Sampling and analysis was undertaken in order to assess the nature, location and likely distribution of any contamination present at the subject site specifically within areas identified in table 2 above, and also any potential risk posed to human health or the environment. Test results were compared to the relevant New South Wales Environment Protection Authority (NSW EPA) criteria. The values obtained from chemical testing will be compared to NEPM 2013, HIL Table 1A, column A.

The guidelines produced by NSW EPA, 1995 'Sampling Design Guidelines for Contaminated Sites', state that a minimum of Ninteen (19) sampling locations is required for a site with an area of 7,325m^2. However, only Fifteen (15) borehole locations could be excavated across the site in an approximate grid pattern due to restricted access to the soil (see Figure 1) with concrete coring required in some locations in order to sample subsurface material. Twenty-one (21) samples were sent to a NATA accredited laboratory. Samples were selected based on site observations (odour, staining etc), and their position within the borehole (i.e. fill or natural).

7.1 Sampling Methodology

Each sample location was excavated utilizing a 4WD mounted drill rig and hand auger equipment to a depth of up to 2.0 metres. The sample was collected directly from the auger using a stainless-steel trowel, which had been decontaminated prior to use to prevent cross contamination occurring.

The samples were placed in 250g laboratory prepared glass jars which were capped using Teflon-sealed screw caps and then placed in a chilled container. The sample jars were transported to our office and placed in a refrigerator.

The following day the samples were forwarded to SGS environmental for analysis along with a Chain of Custody which was subsequently returned to confirm the receipt of all samples.

8.0 FIELD QUALITY ASSURANCE AND QUALITY CONTROL

The field sampling was undertaken by AG. A Geotechnical Consultant from AG sampled from the test locations and supervised excavation of each borehole.

8.1 Decontamination Procedures

Soil samples were collected using a stainless steel trowel. The trowel was decontaminated between sampling events using the following procedure:

1) Soil was removed from the trowel by scrubbing with a brush

2) The trowel was washed with phosphate free detergent in a bucket

3) The trowel was then rinsed in distilled water in another bucket

4) Steps 2 and 3 were repeated

5) The trowel was then dried with a clean disposable towel

9.0 LABORATORY QUALITY ASSURANCE AND QUALITY CONTROL

9.1 Laboratory Accreditation

SGS Australia Pty Ltd is accredited by the National Association of Testing Authorities (NATA) for the analysis carried out and are also accredited for compliance with ISO/IEC 17025.

9.2 Sample Holding Times

The holding times for samples at SGS are presented in the table below, along with the allowable holding time, detailed in Schedule B (3) of the National Environment Protection (Assessment of Site Contamination) Measure (NEPM, 2013):

Table 3 – Holding Times

Laboratory	Analyte	Date Sampled	Date Received	Date of Extraction/ Analysis	Holding Time	Allowable Holding Time
SGS						
	Metals	25-04-17	26-04-17	28-04-17	3 days	6 months*
	Organochloride Pesticides (OCP)	25-04-17	26-04-17	28-04-17	3 days	14 days
	Organophosphorus Pesticides (OPP)	25-04-17	26-04-17	28-04-17	3 days	14 days
	Total Petroleum Hydrocarbons (TPH), PAH, BTEX & PCB	25-04-17	26-04-17	28-04-17	3 days	14 days

Note 1: (*) Metals excludes Mercury which has a holding time of 28 days.
Note 2: The soil sample analyses were conducted within the relevant allowable holding time.

9.3 Analytical Methods Used and Practical Quantitation Limits

The analytical methods and practical quantitation limits (PQL)/level of reporting (LOR) used by SGS are indicated on the test certificates located in Appendix B.

9.4 Laboratory Quality Control

SGS carry out in-house Quality Control testing. This provides the laboratory information regarding the accuracy of testing carried out. The RPD (relative percent difference) results for SGS are within the acceptance criteria adopted by the laboratory (see QC attached). The results met the criteria and are tabulated below:

Table 4 – RPDs

Laboratory	QC Type	QC Outliners Occur	QC Acceptance Criteria
SGS	Laboratory Blanks	No	Achieved
SGS	Laboratory Duplicates	No	Achieved

SGS	Matrix Spikes	No	Achieved
SGS	Surrogate Spikes	No	Achieved

10.0 QUALITY ASSESSMENET AND QUALITY CONTROL DATA EVALUATION

Quality Assessment and Quality Control have been achieved through the following procedures.

10.1 Document Completeness

- Preparation of chain of custody records;
- Laboratory confirmation of receipt of intact samples and relevant chain of custody;
- Laboratory provision of NATA accredited results certificates.

10.2 Data Completeness

- Analysis of contaminants of concern;
- Split samples within numbers recommended by NEPM.

10.3 Data Representativeness

This is achieved by the following:

- Representative sampling of potential contaminants based on the site history and site activities;
- Sufficient split sample numbers complying with NEPM;
- Adequate laboratory internal QA and QC methods complying with NEPM.

10.4 Data Comparability

- Use of consistent sampling personnel and methodologies;
- Use of NATA accredited laboratories;
- Use of consistent test methods between selected laboratories;
- Use of consistent test methods between samples;
- Acceptable RPD between original samples and split sample results.

10.5 Data Precision and Accuracy

- The use of NATA accredited laboratories – a requirement of which is adequately trained and experienced staff;
- The use of appropriate and validated laboratory test methods;
- The analysis of duplicate and split samples;
- Acceptable RPD for split samples overall;

- Acceptable laboratory performance based on results of blank, matrix spike, control, and surrogate samples

10.6 Data Evaluation

Based on the above information regarding quality assurance and quality control, it is considered that the quality objectives for field procedures and laboratory results are reliable for this assessment.

Table 5 – Data Evaluation Summary

Data Quality Objectives	Field Considerations	Laboratory Considerations	QC Acceptance Criteria
Completeness	Achieved	Achieved	Achieved
Comparability	Achieved	Achieved	Achieved
Representativeness	Achieved	Achieved	Achieved
Precision	Achieved	Achieved	Achieved
Accuracy	Achieved	Achieved	Achieved

11.0 BASIS FOR ASSESSMENT CRITERIA

The Assessment criteria used in this investigation have been obtained from the following guideline documents:

- The National Environment Protection (Assessment of Site Contamination) Measure (NEPM, 2013). This document presents risk-based Health Investigation Levels based on a variety of exposure settings for a number of organic and inorganic contaminants. To assess the risk to human health the results of the laboratory analysis are compared against the Health Investigation Levels (HIL) for the exposure setting; 'standard residential with garden/accessible soil' ('A') which is considered suitable for children's day care centres, preschools and primary schools.

- Ecological Investigation Levels (EILs) for metals are applicable for assessing the risk to terrestrial ecosystems.

Table 6 – Basis of Assessment

Contaminant	Assessment Criteria (mg/kg)			Guidelines
	Health Based Investigation Level (HIL'A')	Ecological Investigation Levels (EIL's)	NSW EPA Threshold Concentrations	
***Inorganics* (Heavy Metals)**				
Arsenic (total)	100	20		NEPM (2013)
Cadmium	20	3		NEPM (2013)
Chromium (vI)	100	400		NEPM (2013)

Copper	6000	100		NEPM (2013)
Lead	300	600		NEPM (2013)
Mercury	40	1		NEPM (2013)
Nickel	400	60		NEPM (2013)
Zinc	7400	200		NEPM (2013)
Organics				
TPH				
C10 to C36			1000	NSW EPA, DECC
Benzene	0.5	50		2009 & NEPM
Toulene	160	85		(2013)
Ethylbenzene	55	70		NEPM (2013)
Xylene	40	105		NEPM (2013)
Phenol	3000			NEPM (2013)
PAH	300			NEPM (2013)
OCP				NEPM (2013)
Aldrin +	6			NEPM (2013)
Dieldrin	50			NEPM (2013)
Chlordane	6			NEPM (2013)
Heptachlor	240			
DDD+DDE+DDT				
OPP				
Diazinon	-			See Note (a)
Ethion	-			See Note (a)
Fenitrothion	-			See Note (a)
PCB	1			
Asbestos	0.01%	-	-	NEPM (2013)
Cyanides	200	-	-	NEPM (2013)

Note (a): As yet a guideline relating to Organophosphate Pesticides (OPP) in soils has not been published. If contaminant levels had been detected a site specific threshold concentration would have been derived, however, as no contaminant levels were detected this was not required.

12.0 LABORATORY TEST RESULTS

Test results are tabulated and presented below (Tables 7, 8, 9 and 10) along with the relevant assessment criteria. Laboratory test certificates are located in Appendix B

Table 7 – Heavy Metal Test Results

			Heavy Metals (mg/kg)							
Location	Sample No.	Depth (m)	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
BH1	E1	0.1-0.3	10	<0.3	18	11	29	<0.05	5.8	54
BH1	E2	0.5-0.8	8	<0.3	15	15	43	<0.05	7.9	190

BH2	E3	0.0-0.2	8	<0.3	11	11	30	<0.05	11	110
BH3	E4	0.05-0.3	3	<0.3	7.1	8.6	24	<0.05	4.1	32
BH4	E5	0.1-0.3	4	<0.3	7.5	9.0	23	<0.05	4.3	30
BH5	E6	0.0-0.2	10	0.4	26	42	57	<0.05	26	160
BH6	E7	0.1-0.2	7	<0.3	9.4	9.7	22	<0.05	4.7	38
BH7	E8	0.4-0.8	10	<0.3	11	9.4	27	<0.05	4.6	38
BH7	E9	1.5-1.7	6	<0.3	10	21	14	<0.05	4.6	77
BH8	E10	0.3-0.6	10	<0.3	12	9.6	14	<0.05	1.4	15
BH8	E11	0.7-1.0	9	<0.3	10	9.1	14	<0.05	1.0	11
BH9	E12	0.2-0.4	10	<0.3	6.6	12	13	<0.05	1.6	20
BH9	E13	0.7-0.9	17	<0.3	4.8	13	7	<0.05	1.4	19
BH10	E14	0.2-0.3	10	<0.3	6.4	11	13	<0.05	1.5	17
BH11	E15	0.1-0.4	7	<0.3	2.9	11	7	<0.05	1.4	14
BH12	E16	0.0-0.2	9	<0.3	21	12	14	<0.05	2.1	15
BH13	E17	0.1-0.3	9	<0.3	5.5	16	11	<0.05	2.3	26
BH14	E18	0.0-0.2	<3	<0.3	5.5	1.7	8	<0.05	2.0	13
BH14	E19	0.5-0.7	<3	<0.3	5.0	1.8	7	<0.05	1.4	11
BH15	E20	0.0-0.3	8	<0.3	4.7	15	9	<0.05	2.3	25
BH15	E21	0.5-0.7	9	<0.3	20	12	13	<0.05	2.0	15
Practical Quantitation Limit (PQL)			3	0.3	0.3	0.5	1	0.01	0.5	0.5
Number of Samples			21	21	21	21	21	21	21	21
95% Upper Confidence Level			**17.1**	**0.32**	**15.2**	**18.6**	**23.3**	**0.05**	**14.2**	**105.1**
NEPM Health Investigation Level HILs (A)			100	20	100	1000	300	15	600	7400
NEPM Ecological Investigation Level EIL			20	3	400	100	600	1	60	200

Note (A): For statistical assessment sample concentrations, less than the PQL are considered equal to the PQL.

Table 8: Organochlorine Pesticides (OCP), Cyanides & PCB Test Results

Sample ID			OCP (mg/kg)						PCB mg/kg	Cyanides mg/kg	Phenols mg/kg
Location	Sample No.	Depth (m)	Aldrin	Dieldrin	Heptachlor	DDD	DDE	DDT			
BH1	E1	0.1-0.3	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<1	-	-
BH1	E2	0.5-0.8	-	-	-	-	-	-	-	-	<0.1
BH2	E3	0.0-0.2	-	-	-	-	-	-	<1	-	-
BH3	E4	0.05-0.3	-	-	-	-	-	-	-	<0.5	-
BH4	E5	0.1-0.3	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	-	-	0.2

BH5	E6	0.0-0.2	-	-	-	-	-	-	-	<0.5	-
BH6	E7	0.1-0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	-	-	-
BH7	E8	0.4-0.8	-	-	-	-	-	-	<1	-	-
BH7	E9	1.5-1.7	-	-	-	-	-	-	-	-	0.5
BH8	E11	0.7-1.0	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<1	<0.5	<0.1
BH9	E13	0.7-0.9	-	-	-	-	-	-	<1	-	0.1
BH10	E14	0.2-0.3	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	-	-	-
BH11	E15	0.1-0.4	-	-	-	-	-	-	<1	-	-
BH12	E16	0.0-0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	-	-	-
BH13	E17	0.1-0.3	-	-	-	-	-	-	-	<0.5	<0.1
BH14	E19	0.5-0.7	-	-	-	-	-	-	-	<0.5	<0.1
BH15	E20	0.0-0.3	-	-	-	-	-	-	<1	-	-
BH15	E21	0.5-0.7	<0.1	<0.2	<0.1	<0.1	0.2	<0.1	-	-	-
Practical Quantitation Limit			0.1	0.1	0.1	0.1	0.1	0.1	1	0.5	0.1
Number of Samples			Non Detect								
Mean											
Standard Deviation											
Coefficient of Variation											
95% Upper Confidence Level										0.5	0.55
NEPM Health Based Investigation Level (2013)			10[a]	10[a]	10	200[b]	200[b]	200[b]	1	200	3000

Note (a): Aldrin + Dieldrin, Note (b): DDD + DDE + DDT

Table 9: Total Petroleum Hydrocarbon (TPH) Test Results

Location	Sample No.	Depth (m)	TPH (mg/kg)				Benzene (mg/kg)	Toulene (mg/kg)	Ethlyben-zene (mg/kg)	Xylene (mg/kg)
			C10-C14	C15-C28	C29-C36	Total				
BH1	E1	0.1-0.3	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3
BH1	E2	0.5-0.8	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3
BH2	E3	0.0-0.2	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3
BH3	E4	0.05-0.3	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3
BH4	E5	0.1-0.3	<20	110	<45	<210	<0.1	<0.1	<0.1	<0.3
BH5	E6	0.0-0.2	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3
BH6	E7	0.1-0.2	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3
BH7	E8	0.4-0.8	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3
BH7	E9	1.5-1.7	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3

BH8	E10	0.3-0.6	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3
BH8	E11	0.7-1.0	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3
BH9	E12	0.2-0.4	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3
BH9	E13	0.7-0.9	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3
BH10	E14	0.2-0.3	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3
BH11	E15	0.1-0.4	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3
BH12	E16	0.0-0.2	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3
BH13	E17	0.1-0.3	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3
BH14	E18	0.0-0.2	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3
BH14	E19	0.5-0.7	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3
BH15	E20	0.0-0.3	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3
BH15	E21	0.5-0.7	<20	<45	<45	<210	<0.1	<0.1	<0.1	<0.3
Practical Quantitation Limit (PQL)			20	45	45	210	0.1	0.1	0.1	0.3
Number of Samples			Non Detect							
Mean										
Standard Deviation										
Coefficient of Variation										
95% Upper Confidence Level										
NEPM Health Based Investigation Level (2013)							0.5	160	55	40
NSW EPA (DECC) Threshold Concentrations 2009 ('Guidelines for Assessing Service Station Sites')						1000				

Table 10: Asbestos Test Results

Sample ID	Depth (m)	Asbestos Detected	Type of Asbestos
E1	0.1-0.3	No	NA
E2	0.5-0.8	No	NA
E3	0.0-0.2	No	NA
E4	0.05-0.3	No	NA
E5	0.1-0.3	No	NA
E6	0.0-0.2	No	NA
E7	0.1-0.2	No	NA
E8	0.4-0.8	No	NA
E9	1.5-1.7	No	NA
E11	0.7-1.0	No	NA
E13	0.7-0.9	No	NA
E16	0.0-0.2	No	NA
E18	0.0-0.2	No	NA
E20	0.0-0.3	No	NA

12.1 Heavy Metals

Heavy metal concentrations for Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel and Zinc are presented in Table 7. The concentrations of all metals were well below the relevant assessment criteria (HILs A and EIL). Therefore, the heavy metal concentrations, present in the fill and natural soil layer are not considered likely to pose a risk to human health or the environment under a 'standard residential with garden/accessible soil' setting.

12.2 Organochlorine Pesticides (OCP), Cyanide, Phenols and PCB

The OCP, Cyanide, Phenols and PCB concentrations, presented in Table 8, were less than the relevant assessment criteria adopted, and therefore the chemical analyses indicate that the site is not contaminated with OCP, Cyanide, Phenols and PCB.

12.3 Total Petroleum Hydrocarbons (TPH), Polycyclic Aromatic Hydrocarbons (PAH) and BTEX

The TPH, PAH and BTEX concentrations, presented in Table 9, were less than the relevant assessment criteria adopted, and therefore the chemical analyses indicate that the site is not contaminated with TPH, PAH or BTEX.

12.4 Asbestos Test Results

The Asbestos test results are presented in table 10. No asbestos was detected within (fill) samples obtained from site, hence indicating the site is not contaminated with asbestos.

13.0 SITE CHARACTERISATION

As can be seen in the previous Section 12.0 (Laboratory Test Results) the samples analyzed revealed levels below the practical quantitation limit, and therefore interpreted to be not present on site. Therefore, the results of the chemical analyses indicate that the site does not present a risk to human health or the environment in a 'standard residential with garden/accessible soil' setting.

The site is characterized as follows, as a result of the information obtained through this assessment:

- The site is proposed for use as a private education institution;
- However, the low concentrations/absence of all chemicals analyzed in this assessment, the soil profile encountered, and the environmental features present infer that the site does not pose a risk to human health or to the environment.

14.0 VALIDATION

A systematic sampling methodology was chosen for this site, this was done to:

- Select statistically unbiased sampling locations
- Provide sampling locations at regular intervals, spaced evenly across the site.

The samples collected were compared against the Health Investigation Levels (HIL) for the exposure setting; 'standard residential with garden/accessible soil' ('A'). The 95% upper confidence limit (UCL) average was also compared to the HIL and EIL guidelines.

All results obtained from samples collected were below the maximum values for each contaminant tested. The 95% UCL for all contaminants were also below the maximum value.

15.0 CONCLUSION AND RECOMMENDATIONS

The conclusion of this Stage 2 Contamination Assessment is as follows:

- The site is proposed for use as a private education institution;
- The results of the chemical analyses for the soils beneath the subject site do not indicate that the site has been contaminated by the past or present activity.

- Validation of building footprints and disturbed areas will need to be carried out post demolition and site cleanup in order to satisfy sampling densities and contaminants of concern.

- Environmental supervision during stripping of the site should be carried out to confirm no un expected finds present within grassed areas, under building slabs etc.

- The data quality objectives of the report have been fulfilled.

- Any soils requiring removal from the site must initially be classified in accordance with the NSW waste classification guidelines.

The findings of this Detailed Site Investigation, and the results of the chemical analyses, does not indicate that the site poses a risk to human health or the environment, therefore the site is considered suitable for the proposed private education institution.

This report was carried out in accordance with current NSW EPA guidelines, however, it is possible that contaminated soils may be present between sampling locations.

Should you have any queries, please do not hesitate to contact the undersigned.

For and on behalf of
Australian Geotechnical Pty Ltd

N. Smith
Principal

References

Contaminated Sites – Guidelines for Assessing Service Stations. NSW Environment Protection Authority (EPA) 1994

Contaminated Sites – Guidelines for Consultants Reporting on Contaminated Sites. NSW Environment Protection Authority (EPA) 2000.

Contaminated Sites – Sampling Design Guidelines. NSW Environment Protection Authority (EPA) 1995

National Environment Protection (Assessment of Site Contamination) Measure – National Environmental Protection Council 2013.

Limitations

Australian Geotechnical Pty Ltd (AG) has performed its services for this project in accordance with current industry codes and practices.

When assessing the nature and extent of contamination, this type of investigation (as per our commission) is not designed or capable of locating all ground conditions, (which can vary even over short distances). The advice given in this report assumes that the test results are representative of the overall ground conditions. However, it should be noted that actual conditions in some parts of the site might differ from those found. If excavations reveal ground conditions significantly different from those shown in our findings, AG must be consulted. The actual presence of contaminated material at the site may potentially differ from that referred to or inferred herein, since no sampling program, no matter how complete, can reveal all anomalies and hot spots that may be present. Furthermore, our opinions and judgments expressed herein, which are based on our analysis of current industry codes and practices, should not be interpreted as legal opinions.

The scope and the period of AG services are described in the report and are subject to restrictions and limitations. AG did not perform a complete assessment of all possible conditions or circumstances that may exist at the Site. If a service is not expressly indicated, do not assume it has been provided. If a matter is not addressed, do not assume that any determination has been made by AG in regards to it.

Where data has been supplied by the client or a third party, it is assumed that the information is correct unless otherwise stated. No responsibility is accepted by AG for incomplete or inaccurate data supplied by others.

Any drawings or figures presented in this report should be considered only as pictorial evidence of our work. Therefore, unless otherwise stated, any dimensions should not be used for accurate calculations or dimensioning.

APPENDIX A

FIGURES

Bore Hole Location Plan and Logs

AUSTRALIAN GEOTECHNICAL

Borehole Locations

2 Percy Street, Auburn

APPENDIX B

LABORATORY TEST CERTIFICATES

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Nathan Smith
Client	AUSTRALIAN GEOTECHNICAL PTY LTD
Address	2 SHIRLEY STREET ROSEHILL NSW 2144
Telephone	(Not specified)
Facsimile	(Not specified)
Email	nathan@austgeo.com.au
Project	**AG170**
Order Number	**AG170**
Samples	21

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE164553 R0**
Date Received	26/4/2017
Date Reported	3/5/2017

COMMENTS

Accredited for compliance with ISO/IEC 17025-Testing. NATA accredited laboratory 2562(4354).

No respirable fibres detected in all soil samples using trace analysis technique.

Sample #1-9, 11, 13, 15-16, 18, 20: A portion of the sample supplied has been sub-sampled for asbestos according to SGS In-house procedures.
We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied.
SGS Environment, Health and Safety recommends supplying approximately 50-100g of sample in a separate container.

Asbestos analysed by Approved Identifier Ravee Sivasubramaniam .

SIGNATORIES

Dong Liang
Metals/Inorganics Team Leader

Kamrul Ahsan
Senior Chemist

Ly Kim Ha
Organic Section Head

Ravee Sivasubramaniam
Hygiene Team Leader

Shane McDermott
Senior Laboratory Technician

VOC's in Soil [AN433] Tested: 28/4/2017

PARAMETER	UOM	LOR	E1 SOIL - 26/4/2017 SE164553.001	E2 SOIL - 26/4/2017 SE164553.002	E3 SOIL - 26/4/2017 SE164553.003	E4 SOIL - 26/4/2017 SE164553.004	E5 SOIL - 26/4/2017 SE164553.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	E6 SOIL - 26/4/2017 SE164553.006	E7 SOIL - 26/4/2017 SE164553.007	E8 SOIL - 26/4/2017 SE164553.008	E9 SOIL - 26/4/2017 SE164553.009	E10 SOIL - 26/4/2017 SE164553.010
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	E11 SOIL - 26/4/2017 SE164553.011	E12 SOIL - 26/4/2017 SE164553.012	E13 SOIL - 26/4/2017 SE164553.013	E14 SOIL - 26/4/2017 SE164553.014	E15 SOIL - 26/4/2017 SE164553.015
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	E16 SOIL - 26/4/2017 SE164553.016	E17 SOIL - 26/4/2017 SE164553.017	E18 SOIL - 26/4/2017 SE164553.018	E19 SOIL - 26/4/2017 SE164553.019	E20 SOIL - 26/4/2017 SE164553.020
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

VOC's in Soil [AN433] Tested: 28/4/2017 (continued)

PARAMETER	UOM	LOR	E21 SOIL - 26/4/2017 SE164553.021
Benzene	mg/kg	0.1	<0.1
Toluene	mg/kg	0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2
o-xylene	mg/kg	0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 28/4/2017

PARAMETER	UOM	LOR	E1 SOIL - 26/4/2017 SE164553.001	E2 SOIL - 26/4/2017 SE164553.002	E3 SOIL - 26/4/2017 SE164553.003	E4 SOIL - 26/4/2017 SE164553.004	E5 SOIL - 26/4/2017 SE164553.005
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	E6 SOIL - 26/4/2017 SE164553.006	E7 SOIL - 26/4/2017 SE164553.007	E8 SOIL - 26/4/2017 SE164553.008	E9 SOIL - 26/4/2017 SE164553.009	E10 SOIL - 26/4/2017 SE164553.010
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	E11 SOIL - 26/4/2017 SE164553.011	E12 SOIL - 26/4/2017 SE164553.012	E13 SOIL - 26/4/2017 SE164553.013	E14 SOIL - 26/4/2017 SE164553.014	E15 SOIL - 26/4/2017 SE164553.015
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	E16 SOIL - 26/4/2017 SE164553.016	E17 SOIL - 26/4/2017 SE164553.017	E18 SOIL - 26/4/2017 SE164553.018	E19 SOIL - 26/4/2017 SE164553.019	E20 SOIL - 26/4/2017 SE164553.020
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	E21 SOIL - 26/4/2017 SE164553.021
TRH C6-C9	mg/kg	20	<20
Benzene (F0)	mg/kg	0.1	<0.1
TRH C6-C10	mg/kg	25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 1/5/2017

PARAMETER	UOM	LOR	E1 SOIL - 26/4/2017 SE164553.001	E2 SOIL - 26/4/2017 SE164553.002	E3 SOIL - 26/4/2017 SE164553.003	E4 SOIL - 26/4/2017 SE164553.004	E5 SOIL - 26/4/2017 SE164553.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	**110**
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16 (F2)	mg/kg	25	<25	<25	<25	<25	**45**
TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	<25	<25	<25	<25	**45**
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	**99**
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	**110**
TRH C10-C40 Total	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	E6 SOIL - 26/4/2017 SE164553.006	E7 SOIL - 26/4/2017 SE164553.007	E8 SOIL - 26/4/2017 SE164553.008	E9 SOIL - 26/4/2017 SE164553.009	E10 SOIL - 26/4/2017 SE164553.010
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	**70**	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16 (F2)	mg/kg	25	<25	<25	<25	**25**	<25
TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH C10-C40 Total	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	E11 SOIL - 26/4/2017 SE164553.011	E12 SOIL - 26/4/2017 SE164553.012	E13 SOIL - 26/4/2017 SE164553.013	E14 SOIL - 26/4/2017 SE164553.014	E15 SOIL - 26/4/2017 SE164553.015
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16 (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH C10-C40 Total	mg/kg	210	<210	<210	<210	<210	<210

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 1/5/2017 (continued)

PARAMETER	UOM	LOR	E16 SOIL - 26/4/2017 SE164553.016	E17 SOIL - 26/4/2017 SE164553.017	E18 SOIL - 26/4/2017 SE164553.018	E19 SOIL - 26/4/2017 SE164553.019	E20 SOIL - 26/4/2017 SE164553.020
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16 (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH C10-C40 Total	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	E21 SOIL - 26/4/2017 SE164553.021
TRH C10-C14	mg/kg	20	<20
TRH C15-C28	mg/kg	45	<45
TRH C29-C36	mg/kg	45	<45
TRH C37-C40	mg/kg	100	<100
TRH >C10-C16 (F2)	mg/kg	25	<25
TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120
TRH C10-C36 Total	mg/kg	110	<110
TRH C10-C40 Total	mg/kg	210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 1/5/2017

PARAMETER	UOM	LOR	E1 SOIL - 26/4/2017 SE164553.001	E2 SOIL - 26/4/2017 SE164553.002	E3 SOIL - 26/4/2017 SE164553.003	E4 SOIL - 26/4/2017 SE164553.004	E5 SOIL - 26/4/2017 SE164553.005
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	**0.1**	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	**0.1**	<0.1	**0.1**	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	E6 SOIL - 26/4/2017 SE164553.006	E7 SOIL - 26/4/2017 SE164553.007	E8 SOIL - 26/4/2017 SE164553.008	E9 SOIL - 26/4/2017 SE164553.009	E10 SOIL - 26/4/2017 SE164553.010
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	**0.2**	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	**0.2**	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	**0.3**	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	**0.1**	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	**0.1**	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	**0.1**	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	**0.1**	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	**1.2**	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	**1.2**	<0.8	<0.8	<0.8	<0.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 1/5/2017 (continued)

PARAMETER	UOM	LOR	E11 SOIL - 26/4/2017 SE164553.011	E12 SOIL - 26/4/2017 SE164553.012	E13 SOIL - 26/4/2017 SE164553.013	E14 SOIL - 26/4/2017 SE164553.014	E15 SOIL - 26/4/2017 SE164553.015
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	E16 SOIL - 26/4/2017 SE164553.016	E17 SOIL - 26/4/2017 SE164553.017	E18 SOIL - 26/4/2017 SE164553.018	E19 SOIL - 26/4/2017 SE164553.019	E20 SOIL - 26/4/2017 SE164553.020
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 1/5/2017 (continued)

PARAMETER	UOM	LOR	E21 SOIL - 26/4/2017 SE164553.021
Naphthalene	mg/kg	0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1
Fluorene	mg/kg	0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1
Anthracene	mg/kg	0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1
Pyrene	mg/kg	0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1
Chrysene	mg/kg	0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8

OC Pesticides in Soil [AN420] Tested: 1/5/2017

PARAMETER	UOM	LOR	E1 SOIL - 26/4/2017 SE164553.001	E3 SOIL - 26/4/2017 SE164553.003	E5 SOIL - 26/4/2017 SE164553.005	E7 SOIL - 26/4/2017 SE164553.007	E11 SOIL - 26/4/2017 SE164553.011
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

OC Pesticides in Soil [AN420] Tested: 1/5/2017 (continued)

PARAMETER	UOM	LOR	E14 SOIL - 26/4/2017 SE164553.014	E16 SOIL - 26/4/2017 SE164553.016	E21 SOIL - 26/4/2017 SE164553.021
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1

PCBs in Soil [AN420] Tested: 1/5/2017

PARAMETER	UOM	LOR	E1 SOIL - 26/4/2017 SE164553.001	E4 SOIL - 26/4/2017 SE164553.004	E8 SOIL - 26/4/2017 SE164553.008	E11 SOIL - 26/4/2017 SE164553.011	E13 SOIL - 26/4/2017 SE164553.013
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PARAMETER	UOM	LOR	E15 SOIL - 26/4/2017 SE164553.015	E20 SOIL - 26/4/2017 SE164553.020
Arochlor 1016	mg/kg	0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1

pH in soil (1:5) [AN101] Tested: 2/5/2017

PARAMETER	UOM	LOR	E1 SOIL - 26/4/2017 SE164553.001	E2 SOIL - 26/4/2017 SE164553.002	E3 SOIL - 26/4/2017 SE164553.003	E4 SOIL - 26/4/2017 SE164553.004	E5 SOIL - 26/4/2017 SE164553.005
pH	pH Units	-	6.3	7.7	7.0	6.8	6.6

PARAMETER	UOM	LOR	E6 SOIL - 26/4/2017 SE164553.006	E7 SOIL - 26/4/2017 SE164553.007	E8 SOIL - 26/4/2017 SE164553.008	E9 SOIL - 26/4/2017 SE164553.009	E10 SOIL - 26/4/2017 SE164553.010
pH	pH Units	-	8.3	6.6	6.5	8.2	4.4

PARAMETER	UOM	LOR	E11 SOIL - 26/4/2017 SE164553.011	E12 SOIL - 26/4/2017 SE164553.012	E13 SOIL - 26/4/2017 SE164553.013	E14 SOIL - 26/4/2017 SE164553.014	E15 SOIL - 26/4/2017 SE164553.015
pH	pH Units	-	4.3	4.7	6.2	4.8	6.2

PARAMETER	UOM	LOR	E16 SOIL - 26/4/2017 SE164553.016	E17 SOIL - 26/4/2017 SE164553.017	E18 SOIL - 26/4/2017 SE164553.018	E19 SOIL - 26/4/2017 SE164553.019	E20 SOIL - 26/4/2017 SE164553.020
pH	pH Units	-	5.1	5.6	9.1	8.9	6.1

PARAMETER	UOM	LOR	E21 SOIL - 26/4/2017 SE164553.021
pH	pH Units	-	5.0

Conductivity and TDS by Calculation - Soil [AN106] Tested: 2/5/2017

PARAMETER	UOM	LOR	E1 SOIL - 26/4/2017 SE164553.001	E2 SOIL - 26/4/2017 SE164553.002	E3 SOIL - 26/4/2017 SE164553.003	E4 SOIL - 26/4/2017 SE164553.004	E5 SOIL - 26/4/2017 SE164553.005
Conductivity of Extract (1:5 dry sample basis)	µS/cm	1	210	73	62	30	33

PARAMETER	UOM	LOR	E6 SOIL - 26/4/2017 SE164553.006	E7 SOIL - 26/4/2017 SE164553.007	E8 SOIL - 26/4/2017 SE164553.008	E9 SOIL - 26/4/2017 SE164553.009	E10 SOIL - 26/4/2017 SE164553.010
Conductivity of Extract (1:5 dry sample basis)	µS/cm	1	150	37	33	71	420

PARAMETER	UOM	LOR	E11 SOIL - 26/4/2017 SE164553.011	E12 SOIL - 26/4/2017 SE164553.012	E13 SOIL - 26/4/2017 SE164553.013	E14 SOIL - 26/4/2017 SE164553.014	E15 SOIL - 26/4/2017 SE164553.015
Conductivity of Extract (1:5 dry sample basis)	µS/cm	1	390	300	59	270	71

PARAMETER	UOM	LOR	E16 SOIL - 26/4/2017 SE164553.016	E17 SOIL - 26/4/2017 SE164553.017	E18 SOIL - 26/4/2017 SE164553.018	E19 SOIL - 26/4/2017 SE164553.019	E20 SOIL - 26/4/2017 SE164553.020
Conductivity of Extract (1:5 dry sample basis)	µS/cm	1	250	150	58	210	39

PARAMETER	UOM	LOR	E21 SOIL - 26/4/2017 SE164553.021
Conductivity of Extract (1:5 dry sample basis)	µS/cm	1	290

Total Phenolics in Soil [AN289] Tested: 2/5/2017

PARAMETER	UOM	LOR	E2 SOIL - 26/4/2017 SE164553.002	E5 SOIL - 26/4/2017 SE164553.005	E9 SOIL - 26/4/2017 SE164553.009	E11 SOIL - 26/4/2017 SE164553.011	E13 SOIL - 26/4/2017 SE164553.013
Total Phenols	mg/kg	0.1	<0.1	**0.2**	**0.5**	<0.1	**0.1**

PARAMETER	UOM	LOR	E17 SOIL - 26/4/2017 SE164553.017	E19 SOIL - 26/4/2017 SE164553.019
Total Phenols	mg/kg	0.1	<0.1	<0.1

Total Cyanide in soil by Discrete Analyser (Aquakem) [AN077/AN287] Tested: 2/5/2017

PARAMETER	UOM	LOR	E3 SOIL - 26/4/2017 SE164553.003	E6 SOIL - 26/4/2017 SE164553.006	E11 SOIL - 26/4/2017 SE164553.011	E17 SOIL - 26/4/2017 SE164553.017	E19 SOIL - 26/4/2017 SE164553.019
Total Cyanide	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 1/5/2017

PARAMETER	UOM	LOR	E1 SOIL - 26/4/2017 SE164553.001	E2 SOIL - 26/4/2017 SE164553.002	E3 SOIL - 26/4/2017 SE164553.003	E4 SOIL - 26/4/2017 SE164553.004	E5 SOIL - 26/4/2017 SE164553.005
Arsenic, As	mg/kg	3	10	8	8	3	4
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	18	15	11	7.1	7.5
Copper, Cu	mg/kg	0.5	11	15	11	8.6	9.0
Lead, Pb	mg/kg	1	29	43	30	24	23
Nickel, Ni	mg/kg	0.5	5.8	7.9	11	4.1	4.3
Zinc, Zn	mg/kg	0.5	54	190	110	32	30

PARAMETER	UOM	LOR	E6 SOIL - 26/4/2017 SE164553.006	E7 SOIL - 26/4/2017 SE164553.007	E8 SOIL - 26/4/2017 SE164553.008	E9 SOIL - 26/4/2017 SE164553.009	E10 SOIL - 26/4/2017 SE164553.010
Arsenic, As	mg/kg	3	10	7	10	6	10
Cadmium, Cd	mg/kg	0.3	0.4	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	26	9.4	11	10	12
Copper, Cu	mg/kg	0.5	42	9.7	9.4	21	9.6
Lead, Pb	mg/kg	1	57	22	27	14	14
Nickel, Ni	mg/kg	0.5	26	4.7	4.6	4.6	1.4
Zinc, Zn	mg/kg	0.5	160	38	38	77	15

PARAMETER	UOM	LOR	E11 SOIL - 26/4/2017 SE164553.011	E12 SOIL - 26/4/2017 SE164553.012	E13 SOIL - 26/4/2017 SE164553.013	E14 SOIL - 26/4/2017 SE164553.014	E15 SOIL - 26/4/2017 SE164553.015
Arsenic, As	mg/kg	3	9	10	17	10	7
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	10	6.6	4.8	6.4	2.9
Copper, Cu	mg/kg	0.5	9.1	12	13	11	11
Lead, Pb	mg/kg	1	13	14	7	13	7
Nickel, Ni	mg/kg	0.5	1.0	1.6	1.4	1.5	1.4
Zinc, Zn	mg/kg	0.5	11	20	19	17	14

PARAMETER	UOM	LOR	E16 SOIL - 26/4/2017 SE164553.016	E17 SOIL - 26/4/2017 SE164553.017	E18 SOIL - 26/4/2017 SE164553.018	E19 SOIL - 26/4/2017 SE164553.019	E20 SOIL - 26/4/2017 SE164553.020
Arsenic, As	mg/kg	3	9	9	<3	<3	8
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	21	5.5	5.5	5.0	4.7
Copper, Cu	mg/kg	0.5	12	16	1.7	1.8	15
Lead, Pb	mg/kg	1	14	11	8	7	9
Nickel, Ni	mg/kg	0.5	2.1	2.3	2.0	1.4	2.3
Zinc, Zn	mg/kg	0.5	15	26	13	11	25

Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 1/5/2017 (continued)

PARAMETER	UOM	LOR	E21 SOIL - 26/4/2017 SE164553.021
Arsenic, As	mg/kg	3	**9**
Cadmium, Cd	mg/kg	0.3	<0.3
Chromium, Cr	mg/kg	0.3	**20**
Copper, Cu	mg/kg	0.5	**12**
Lead, Pb	mg/kg	1	**13**
Nickel, Ni	mg/kg	0.5	**2.0**
Zinc, Zn	mg/kg	0.5	**15**

Mercury in Soil [AN312] Tested: 1/5/2017

PARAMETER	UOM	LOR	E1 SOIL - 26/4/2017 SE164553.001	E2 SOIL - 26/4/2017 SE164553.002	E3 SOIL - 26/4/2017 SE164553.003	E4 SOIL - 26/4/2017 SE164553.004	E5 SOIL - 26/4/2017 SE164553.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	E6 SOIL - 26/4/2017 SE164553.006	E7 SOIL - 26/4/2017 SE164553.007	E8 SOIL - 26/4/2017 SE164553.008	E9 SOIL - 26/4/2017 SE164553.009	E10 SOIL - 26/4/2017 SE164553.010
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	E11 SOIL - 26/4/2017 SE164553.011	E12 SOIL - 26/4/2017 SE164553.012	E13 SOIL - 26/4/2017 SE164553.013	E14 SOIL - 26/4/2017 SE164553.014	E15 SOIL - 26/4/2017 SE164553.015
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	E16 SOIL - 26/4/2017 SE164553.016	E17 SOIL - 26/4/2017 SE164553.017	E18 SOIL - 26/4/2017 SE164553.018	E19 SOIL - 26/4/2017 SE164553.019	E20 SOIL - 26/4/2017 SE164553.020
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	E21 SOIL - 26/4/2017 SE164553.021
Mercury	mg/kg	0.05	<0.05

Moisture Content [AN002] Tested: 2/5/2017

PARAMETER	UOM	LOR	E1 SOIL - 26/4/2017 SE164553.001	E2 SOIL - 26/4/2017 SE164553.002	E3 SOIL - 26/4/2017 SE164553.003	E4 SOIL - 26/4/2017 SE164553.004	E5 SOIL - 26/4/2017 SE164553.005
% Moisture	%w/w	0.5	14	15	11	5.0	5.2

PARAMETER	UOM	LOR	E6 SOIL - 26/4/2017 SE164553.006	E7 SOIL - 26/4/2017 SE164553.007	E8 SOIL - 26/4/2017 SE164553.008	E9 SOIL - 26/4/2017 SE164553.009	E10 SOIL - 26/4/2017 SE164553.010
% Moisture	%w/w	0.5	9.5	11	11	7.4	19

PARAMETER	UOM	LOR	E11 SOIL - 26/4/2017 SE164553.011	E12 SOIL - 26/4/2017 SE164553.012	E13 SOIL - 26/4/2017 SE164553.013	E14 SOIL - 26/4/2017 SE164553.014	E15 SOIL - 26/4/2017 SE164553.015
% Moisture	%w/w	0.5	18	16	13	14	13

PARAMETER	UOM	LOR	E16 SOIL - 26/4/2017 SE164553.016	E17 SOIL - 26/4/2017 SE164553.017	E18 SOIL - 26/4/2017 SE164553.018	E19 SOIL - 26/4/2017 SE164553.019	E20 SOIL - 26/4/2017 SE164553.020
% Moisture	%w/w	0.5	21	10	8.2	4.7	10

PARAMETER	UOM	LOR	E21 SOIL - 26/4/2017 SE164553.021
% Moisture	%w/w	0.5	20

Fibre Identification in soil [AN602] Tested: 2/5/2017

PARAMETER	UOM	LOR	E1 SOIL - 26/4/2017 SE164553.001	E2 SOIL - 26/4/2017 SE164553.002	E3 SOIL - 26/4/2017 SE164553.003	E4 SOIL - 26/4/2017 SE164553.004	E5 SOIL - 26/4/2017 SE164553.005
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	E6 SOIL - 26/4/2017 SE164553.006	E7 SOIL - 26/4/2017 SE164553.007	E8 SOIL - 26/4/2017 SE164553.008	E9 SOIL - 26/4/2017 SE164553.009	E11 SOIL - 26/4/2017 SE164553.011
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	E13 SOIL - 26/4/2017 SE164553.013	E15 SOIL - 26/4/2017 SE164553.015	E16 SOIL - 26/4/2017 SE164553.016	E18 SOIL - 26/4/2017 SE164553.018	E20 SOIL - 26/4/2017 SE164553.020
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN077	Hydrogen cyanide is liberated from an acidified alkali soil extract by distillation and purging with air. The hydrogen cyanide gas is then collected by passing it through a sodium hydroxide scrubbing solution. The scrubbing solution will then be analysed for cyanide by the appropriate method.
AN101	pH in Soil Sludge Sediment and Water: pH is measured electrometrically using a combination electrode and is calibrated against 3 buffers purchased commercially. For soils, sediments and sludges, an extract with water (or 0.01M CaCl2) is made at a ratio of 1:5 and the pH determined and reported on the extract. Reference APHA 4500-H+.
AN106	Conductivity and TDS by Calculation: Conductivity is measured by meter with temperature compensation and is calibrated against a standard solution of potassium chloride. Conductivity is generally reported as µmhos/cm or µS/cm @ 25°C. For soils, an extract with water is made at a ratio of 1:5 and the EC determined and reported on the extract, or calculated back to the as-received sample. Salinity can be estimated from conductivity using a conversion factor, which for natural waters, is in the range 0.55 to 0.75. Reference APHA 2510 B.
AN287	A buffered distillate or water sample is treated with chloramine/barbituric acid reagents and the intensity of the colour developed is proportional to the cyanide concentration by Aquakem DA .
AN289	Analysis of Total Phenols in Soil Sediment and Water: Steam distillable phenols react with 4-aminoantipyrine at pH 7.9±0.1 in the presence of potassium ferricyanide to form a coloured antipyrine dye analysed by Discrete Analyser. Reference APHA 5530 B/D.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid , mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser . Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Petroleum Hydrocarbons (TPH) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN420	SVOC Compounds: 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 technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.

AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf).
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602	The sample can be reported “no asbestos found at the reporting limit of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

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

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

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.sgs.com.au/~/media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Nathan Smith
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Address	2 SHIRLEY STREET ROSEHILL NSW 2144
Telephone	(Not specified)
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Project	**AG170**
Order Number	**AG170**
Samples	15

LABORATORY DETAILS

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SGS Reference	**SE164553 R0**
Date Received	26 Apr 2017
Date Reported	03 May 2017

COMMENTS

Accredited for compliance with ISO/IEC 17025-Testing. NATA accredited laboratory 2562(4354).

No respirable fibres detected in all soil samples using trace analysis technique.

Sample #1-9, 11, 13, 15-16, 18, 20: A portion of the sample supplied has been sub-sampled for asbestos according to SGS In-house procedures.
We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied.
SGS Environment, Health and Safety recommends supplying approximately 50-100g of sample in a separate container.

Asbestos analysed by Approved Identifier Ravee Sivasubramaniam.

SIGNATORIES

Dong Liang
Metals/Inorganics Team Leader

Kamrul Ahsan
Senior Chemist

Ly Kim Ha
Organic Section Head

Ravee Sivasubramaniam
Hygiene Team Leader

Shane McDermott
Senior Laboratory Technician

RESULTS

Fibre Identification in soil — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	
SE164553.001	E1	Soil	41g Clay, Soil	26 Apr 2017	No Asbestos Found	<0.01
SE164553.002	E2	Soil	38g Clay	26 Apr 2017	No Asbestos Found	<0.01
SE164553.003	E3	Soil	52g Clay, Sand	26 Apr 2017	No Asbestos Found	<0.01
SE164553.004	E4	Soil	73g Clay, Sand, Soil, Rocks	26 Apr 2017	No Asbestos Found	<0.01
SE164553.005	E5	Soil	35g Sand, Soil, Rocks	26 Apr 2017	No Asbestos Found Organic Fibres Detected	<0.01
SE164553.006	E6	Soil	55g Sand, Soil, Rocks	26 Apr 2017	No Asbestos Found Organic Fibres Detected	<0.01
SE164553.007	E7	Soil	35g Clay, Sand, Soil	26 Apr 2017	No Asbestos Found	<0.01
SE164553.008	E8	Soil	29g Clay, Sand, Soil	26 Apr 2017	No Asbestos Found Organic Fibres Detected	<0.01
SE164553.009	E9	Soil	45g Clay, Sand, Soil, Rocks	26 Apr 2017	No Asbestos Found Organic Fibres Detected	<0.01
SE164553.011	E11	Soil	56g Clay	26 Apr 2017	No Asbestos Found	<0.01
SE164553.013	E13	Soil	64g Clay	26 Apr 2017	No Asbestos Found	<0.01
SE164553.015	E15	Soil	59g Clay	26 Apr 2017	No Asbestos Found	<0.01
SE164553.016	E16	Soil	53g Clay	26 Apr 2017	No Asbestos Found	<0.01
SE164553.018	E18	Soil	71g Clay, Sand	26 Apr 2017	No Asbestos Found	<0.01
SE164553.020	E20	Soil	68g Clay, Sand	26 Apr 2017	No Asbestos Found	<0.01

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf).
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples , Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602	The sample can be reported “no asbestos found at the reporting limit of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

Amosite	-	Brown Asbestos	NA	-	Not Analysed
Chrysotile	-	White Asbestos	LNR	-	Listed, Not Required
Crocidolite	-	Blue Asbestos	*	-	NATA accreditation does not cover the performance of this service .
Amphiboles	-	Amosite and/or Crocidolite	**	-	Indicative data, theoretical holding time exceeded.

(In reference to soil samples only) This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

Sampled by the client.

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining.
Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy, including dispersion staining.
Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

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.

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.sgs.com.au/~/media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf

CHAIN OF CUSTODY & ANALYSIS REQUEST

Page ____ of ____

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SGS EHS Alexandria Laboratory

SE164553 COC
Received: 26 – Apr – 2017

Company Name:	AUSTRALIAN GEOTECHNICAL	Project Name/No:	AG-170
Address:	ROSEHILL	Purchase Order No:	11
		Results Required Date:	STD TAT
		Telephone:	Fax:
Contact Name:	NATHAN	Email Results to:	nathan @ austgeo.com.au
Quotation No:			@

SGS ID	Client Sample ID	Sampling Date/ Time	Matrix (Tick as appropriate) Soil Sample	Water Sample	Other	NO. OF CONTAINERS	ENM (EXCLUDING TZ76)	PCB	PHENOLS	CYANIDES	ASBESTOS ID	OCP
1	E1						X	X			X	X
2	E2						X		X		X	
3	E3						X			X	X	X
4	E4						X	X			X	
5	E5						X		X		X	X
6	E6						X			X	X	
7	E7						X				X	X
8	E8						X	X			X	
9	E9						X		X		X	
10	E10						X					
11	E11						X	X	X	X	X	X
12	E12						X					
13	E13						X	X	X		X	

ANALYSIS REQUESTED

Additional Report Formats

- ☐ NEPM
- ☐ CSV
- ☐ ESDAT
- ☐ DQO
- ☐ GO, Guidelines --------
- ☐ Others _____

Notes/Guidelines/LOR/ Special instructions

Relinquished By:	Date/Time:	Received By: A. Ochiseo	Date/Time: 26/4/17 @ 9:25am
Relinquished By:	Date/Time:	Received By:	Date/Time:
Samples Intact: (Yes) / No	Temperature: 15.3 °C	Sample Security Sealed: (Yes) / No	Hazards: *e.g. may contain Asbestos*

Comments / Subcontracting details:

CHAIN OF CUSTODY & ANALYSIS REQUEST

Page ____ of ____

SGS Environmental Services Sydney
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Lab ID Number: *(please quote on correspondence)*

Company Name:	AUSTRALIAN GEOTECHNICAL	Project Name/No:	AG-170
Address:	ROSEHILL	Purchase Order No:	11
		Results Required Date:	STD TAT
		Telephone:	Fax:
Contact Name:	NATHAN	Email Results to:	nathan @ gustgeo.com.au
Quotation No:			@

SGS ID	Client Sample ID	Sampling Date/ Time	Matrix (Tick as appropriate) Soil Sample	Water Sample	Other____	NO. OF CONTAINERS	ANALYSIS REQUESTED ENM (EXCLUDING LT276)	PCB	PHENOLS	CYANIDES	ASBESTOS ID	OCP
14	E14						X					X
15	E15						X	X			X	
16	E16						X				X	X
17	E17						X		X	X		
18	E18						X				X	
19	E19						X		X	X		
20	E20						X	X			X	
21	E21						X					X

Additional Report Formats

- ☐ NEPM
- ☐ CSV
- ☐ ESDAT
- ☐ DQO
- ☐ GO, Guidelines ---------
- ☐ Others _____

Notes/Guidelines/LOR/ Special instructions

Relinquished By:	Date/Time:	Received By: A. Calisno	Date/Time: 26/4/17 @ 9:25pm
Relinquished By:	Date/Time:	Received By:	Date/Time:
Samples Intact: (Yes) / No	Temperature: 15.3 °C	Sample Security Sealed: (Yes) / No	Hazards: *e.g. may contain Asbestos*

Comments / Subcontracting details: