

**G**EOTECHNIQUE<sup>®</sup>  
PTY LTD

ABN 64 002 841 063



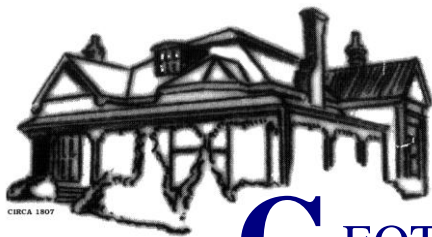
## **CONTAMINATION ASSESSMENT REPORT**

**NEWPARK PROPOSED SCHOOL SITE**

**LOT 30 IN DP1237735**

**CORNER ELARA BOULEVARD & KALUTA AVENUE, MARSDEN PARK**

**REPORT NO 14513/2-AA 30 OCTOBER 2019**



**G**EOTECHNIQUE<sup>®</sup>  
PTY LTD

ABN 64 002 841 063



Job No: 14513/2  
Our Ref: 14513/2-AA  
30 October 2019

Woorong Park Pty Ltd  
C/ - J Wyndham Prince Pty Ltd  
P O Box 4366  
PENRITH WESTFIELD NSW 2750  
Email: [cmudie@jwprince.com.au](mailto:cmudie@jwprince.com.au)

Attention: Mr C Mudie

Dear Sir,

re: **Newpark Proposed School Site**  
**Lot 30 in DP1237735**  
**Corner Elara Boulevard & Kaluta Avenue, Marsden Park**  
**Contamination Assessment Report**

Please find herewith our contamination assessment (CA) report for the above site.

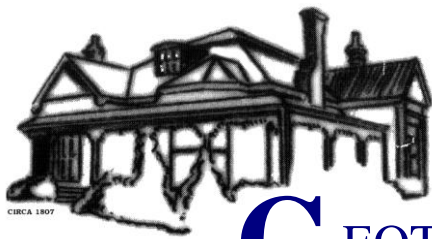
It is understood that the site will be dedicated to the Department of Planning as a future school site (Newpark school site).

A summary of the outcome of the assessment is summarised in the Executive Summary.

If you have any questions, please do not hesitate to contact the undersigned.

Yours faithfully  
GEOTECHNIQUE PTY LTD

ANWAR BARBHUYIA  
Senior Associate  
B.E (Civil), MEngSc (Enviro), MIEAust



**G**EOTECHNIQUE<sup>®</sup>  
PTY LTD

ABN 64 002 841 063



## **EXECUTIVE SUMMARY**

This executive summary presents a synopsis of a contamination assessment (CA) for a parcel of land currently registered Lot 30 in DP1237735, located at the corner of Elara Boulevard and Kaluta Avenue, Marsden Park (hereafter referred to as the site), in the local government area of Blacktown City Council.

It is understood that the site will be dedicated to the Department of Planning as a future school site (Newpark school site).

The objectives of the assessment were to identify any areas of potential contamination and to assess if the site potentially presents a risk of harm to human health and the environment under the conditions of the proposed use.

The scope of work included; site reconnaissance, review of site history information and geological maps, test pit excavation, soil sampling and testing, and preparation of this report.

Based on this assessment, the site is considered unlikely to present a risk of harm to human health and/or the environment, and is therefore, it is our opinion, considered to be suitable for the proposed school or other relevant uses, including a day care centre, park, recreational open space or playing field.

Reference should be made to Section 12.0 of the report for the conclusion and recommendations of this assessment.

Reference should be made to Section 13.0 of the report and Appendix H, which set out details of the limitations of the assessment

## TABLE OF CONTENTS

	Page
1.0 INTRODUCTION -----	1
2.0 SCOPE OF WORK -----	2
3.0 SITE IDENTIFICATION -----	2
4.0 SITE HISTORY -----	2
4.1 Aerial Photographs -----	3
4.2 NSW EPA Record of Notices -----	3
5.0 SITE CONDITION AND SURROUNDING ENVIRONMENT -----	3
5.1 Site Condition -----	3
5.2 Surrounding Environment -----	3
6.0 TOPOGRAPHY, GEOLOGY & HYDROGEOLOGY -----	4
7.0 SAMPLING & ANALYSIS PLAN AND SAMPLING METHODOLOGY -----	5
8.0 FIELD QUALITY ASSURANCE AND QUALITY CONTROL -----	7
8.1 Sampling Personnel -----	7
8.2 Decontamination Procedures -----	8
8.3 Rinsates -----	8
8.4 Trip Spikes -----	8
8.5 Duplicate Samples -----	9
8.6 Inter-laboratory Duplicate (Split) Sample -----	10
9.0 LABORATORY QUALITY ASSURANCE AND QUALITY CONTROL -----	10
10.0 ASSESSMENT CRITERIA -----	11
11.0 FIELD & LABORATORY TEST RESULTS, ASSESSMENT & DISCUSSION-----	12
11.1 Field Results-----	12
11.2 Analytical Results -----	13
11.2.1 Metals (As, Cd, Cr, Cu, Pb, Hg, Ni & Zn).....	13
11.2.2 TRH and BTEX .....	13
11.2.3 Polycyclic Aromatic Hydrocarbons (PAH).....	13
11.2.4 Organochlorine Pesticides (OCP).....	13
11.2.5 Polychlorinated Biphenyls (PCB).....	13
11.2.6 Phenols .....	13
11.2.7 Asbestos .....	13
12.0 CONCLUSION AND RECOMMENDATIONS -----	14
13.0 LIMITATIONS -----	14



---

14513/2-AA  
Table of Contents continued

---

**LIST OF REFERENCES**

---

**DRAWING**

Drawing No 14513/2-AA1                      Test Pit Locations

---

**TABLES FOR NORTH EASTERN CORNER OF THE SITE**

Table A	Rinsate
Table B	Trip Spike
Table C	Duplicate Sample
Table D	Split Sample
Table E	Metals, Cation Exchange Capacity (CEC) & pH Test Results - Discrete Samples
Table F	Total Recoverable Hydrocarbons (TRH) and BTEX Test Results - Discrete Samples
Table G	Polycyclic Aromatic Hydrocarbons (PAH) Test Results - Discrete Samples
Table H	Organochlorine Pesticides (OCP), Polychlorinated Biphenyls (PCB) & Phenols Test Results - Discrete Samples
Table I	Asbestos Test Results - Discrete Samples

**TABLES FOR REMAINDER OF THE SITE**

Table J	Rinsates
Table K	Trip Spikes
Tables L1 to L8	Duplicate Samples
Tables M1 to M8	Split Samples
Tables N1 to N3	Metals, Cation Exchange Capacity (CEC) & pH Test Results - Discrete Samples
Table O	Total Recoverable Hydrocarbons (TRH) and BTEX Test Results - Discrete Samples
Table P	Polycyclic Aromatic Hydrocarbons (PAH) Test Results - Discrete Samples
Table Q	Organochlorine Pesticides (OCP), Polychlorinated Biphenyls (PCB) & Phenols Test Results - Discrete Samples
Table R	Asbestos Test Results - Discrete Samples

---

---

**APPENDICES**

APPENDIX A	<i>Aerial Photographs</i>
APPENDIX B	<i>Cadastral and Deposited Plans</i>
APPENDIX C	<i>NSW EPA Record of Notices &amp; Environment Protection Licences</i>
APPENDIX D	<i>Table 1A - Test Pit Logs for North Eastern Corner of the Site &amp; Table 1B - Test Pit Logs for Remainder of the Site</i>
APPENDIX E	<i>Groundwater Map</i>
APPENDIX F	<i>Laboratory Test Results Reports/Certificates</i>
APPENDIX G	<i>Unexpected Finds Management Protocol</i>
APPENDIX H	<i>Environmental Notes</i>

14513/2-AA

Lot 30 in DP1237735 - Corner Elara Boulevard & Kaluta Avenue, Marsden Park

## 1.0 INTRODUCTION

This report presents the results of a contamination assessment (CA) of a parcel of land currently registered as Lot 30 in DP1237735, located at the corner of Elara Boulevard and Kaluta Avenue, Marsden Park (hereafter referred to as the site), in the local government area of Blacktown City Council, as indicated on Figure 1 below:

**FIGURE 1**



Map Data ©2019 Google

It is understood that the site will be dedicated to the Department of Planning as a future school site (Newpark school site).

The objectives of the assessment were to identify any areas of potential contamination and to assess if the site potentially presents a risk of harm to human health and the environment under the conditions of the proposed use.

This report was prepared generally in accordance with the NSW Environment Protection Authority (EPA), "Guidelines for Consultants Reporting on Contaminated Sites" – 2011, and to satisfy Managing Land Contamination: Planning Guidelines, State Environmental Planning Policy No. 55 – Remediation of Land.

14513/2-AA

Lot 30 in DP1237735 - Corner Elara Boulevard & Kaluta Avenue, Marsden Park

## **2.0 SCOPE OF WORK**

In order to achieve the objectives of this assessment, the following scope of work was conducted in accordance with our email fee proposals dated 2 August 2019 and 3 September 2019:

- A desktop study of:
  - Historical aerial photographs.
  - NSW EPA records of notices.
  - Groundwater bore records of Department of Primary Industries, Office of Water.
  - Soil and geological maps.
- Obtaining underground services plans from “Dial Before You Dig” and client / owner (if available).
- Scanning of sample locations by a services locator.
- An inspection of the site by an Environmental Scientist for current site conditions and identification of any environmental concerns based on visual and olfactory indicators of potential contamination.
- Soil sampling by the Environmental Scientist by using a backhoe or excavator in accordance with a pre-determined sampling plan developed with reference to the NSW EPA *Sampling Design Guidelines*, aimed at ascertaining the presence or otherwise of soil contaminants within the site.
- Chemical analysis by National Association of Testing Authorities (NATA) accredited testing laboratories, in accordance with chains of custody (COC) prepared by Geotechnique Pty Ltd (Geotechnique).
- Preparation and analysis of standard quality assurance (QA) and quality control (QC) samples.
- Assessment of the laboratory analytical results.
- Assessment of field and laboratory QA and QC.
- Assessment of the contamination status of the site.

## **3.0 SITE IDENTIFICATION**

The site is currently registered as Lot 30 in DP1237735, located at the corner of Elara Boulevard and Kaluta Avenue, Marsden Park, in the local government area of Blacktown City Council.

As shown on Drawing No 14513/2-AA1, the site is almost trapezoidal in shape, covering an area of approximately 6.0 hectares (ha).

Reference may be made to the cadastral and deposited plans in Appendix B for details of the location and dimensions of the site.

## **4.0 SITE HISTORY**

In order to formulate a picture of the site history and to assist in identification of any potential contamination, Geotechnique obtained and/or reviewed information including historical aerial photographs, NSW EPA record of Notices for Contaminated Land and records of the Protection of the Environment Operations (POEO) Public Register. The results of the information review are presented in the following sub-sections.

---

14513/2-AA

Lot 30 in DP1237735 - Corner Elara Boulevard & Kaluta Avenue, Marsden Park

#### **4.1 Aerial Photographs**

Aerial photographs taken in 1947, 1955, 1965, 1978, 1989, 1994, 2004 and July 2019 were examined. Copies of the aerial photographs are attached in Appendix A.

From 1947 to 2004 the site consisted of vacant / rural residential land, with development encroaching from the cardinal directions. By July 2019, residential subdivisions in the adjoining properties had been completed or were in the process of being completed.

#### **4.2 NSW EPA Record of Notices**

The NSW EPA publishes record of notices for contaminated lands under Section 58 of the Contaminated Land Management (CLM) Act 1997. The notices relate to investigation and/or remediation of site contamination considered to pose a significant risk of harm under the definition in the CLM Act.

A search of the EPA records on 17 October 2019 revealed no notices issued for the site.

It should be noted that the EPA record of notices for Contaminated Land does not provide a record of all contaminated lands in NSW. At the time of searching the records, 378 sites in NSW were registered in the database.

The EPA issues environment protection licences to owners or operators of various industrial premises under the POEO Act to control the air, noise, water and waste impacts of an activity.

A search of the POEO Public Register on 17 October 2019 found no records for the site.

NSW EPA and the POEO Public Register records are detailed in Appendix C of this report.

### **5.0 SITE CONDITION AND SURROUNDING ENVIRONMENT**

#### **5.1 Site Condition**

At the time of site inspection on 7 August 2019 and 23 to 25 September 2019, the site was vacant with no apparent activities. New wire mesh fencing was erected along the site boundaries.

It is understood that the north eastern portion of the site had previously been used for a site office and parking area. That part of the site was crushed sandstone covered, whilst the remainder of the site was grass covered.

There were no obvious ash materials, fibro-cement pieces on the ground surface, odour, or discolouration that would indicate the potential for contamination. There was no obvious features (bowser, breather pipe, inlet valve and piping) associated with underground storage tanks. There were no air emissions emanating from the site.

#### **5.2 Surrounding Environment**

At the time of field work, the neighbouring properties were as follows:

To the north:	Elara Boulevard, and then vacant land
To the east:	Kaluta Avenue, and then vacant land
To the south:	Swallowtail Street and then vacant land
To the west:	Galah Street and then vacant land and site office of Daracon Group

14513/2-AA

Lot 30 in DP1237735 - Corner Elara Boulevard & Kaluta Avenue, Marsden Park

## 6.0 TOPOGRAPHY, GEOLOGY & HYDROGEOLOGY

In general, ground surface was flat.

The Geological Map of Penrith (Geological Series Sheet 9030, Scale 1:100,000, Edition 1, 1991) published by the Department of Minerals and Energy indicates that the fluvial soils within the site to be underlain by Tertiary Age Londonderry Clay, comprising of clay, patches of ferruginized, consolidated sand.

The Soil Landscape Map of Penrith (soil Landscape Series Sheet 9030, Scale 1:100,000, 1989), prepared by the Soil Conservation Service of NSW, indicates that the site is located within the Berkshire Park landscape area and typically consists of impermeable fluvial soils.

Reference should be made to Tables 1A and 1B in Appendix D for descriptions of the soils encountered during sampling for this assessment. Based on information from the test pit excavation, the sub-surface profile across the site is generalised as follows:

<b>Topsoil</b>	Silty clay, low to medium plasticity, brown, with traces of root fibres and gravel, was encountered within most of the site to a depth of 200mm below the existing ground level (EGL), underlain by fill materials and/or natural clayey or silty soil.
<b>Fill</b>	<p>Type 1: 200mm to 2.7m thick silty clay, medium to high plasticity, brown mottled grey, yellow and red, with or without inclusions of gravel and sand was encountered at a number of underlain by possible fill materials and/or natural clayey or silty soil.</p> <p>Type 2: 200mm to 300mm thick silty clay, low plasticity, brown, with sandstone gravel, traces of root fibres and sand was encountered at the north eastern portion of the site, underlain by Type 1 fill and/or natural clayey soil.</p> <p>Type 3 Fill/possible natural soil: 200mm thick silty clay, medium to high plasticity, grey-brown mottled green was encountered at test pits TP47 and TP63, underlain by natural clayey soil.</p> <p>Type 4 Fill/possible natural soil: 200mm to 500mm thick silty clay, medium to high plasticity, grey-brown mottled red was encountered at test pits TP64 and TP73, underlain by natural clayey soil.</p> <p>Type 5 Fill/possible natural soil: 400mm thick silty clay, medium to high plasticity, grey-brown mottled yellow, was encountered at test pit TP72, underlain by natural clayey soil.</p> <p>Type 6 Possible fill: 100mm to 200mm thick gravelly sandy silt, low plasticity, brown, with pebbles and cobbles at test pit TP12 to TP14, underlain by natural clayey soil.</p> <p>Based on the contents of the fill materials, the natural soil profiles and regional geological information, it appears Types 1 and 2 fill materials and Type 6 possible fill materials appears to have been imported to the site, whilst Types 3 to 5 fill/possible natural may have originated from the region.</p>

---

*14513/2-AA**Lot 30 in DP1237735 - Corner Elara Boulevard & Kaluta Avenue, Marsden Park*

<b>Natural Soil</b>	<p>Type 1: Silty CLAY, low to medium plasticity, brown-orange with or without inclusions of gravel, was encountered beneath the topsoil and or fill materials.</p> <p>Type 2: Silty CLAY, medium to high plasticity, brown-orange, was encountered beneath the topsoil or fill materials or possible fill materials.</p> <p>Type 3: Gravelly Sandy SILT, low plasticity, brown, with pebbles and cobbles was encountered beneath the topsoil or fill materials.</p> <p>Type 4: Silty CLAY, high plasticity, red mottled grey, with or without inclusions cobbles was encountered beneath the topsoil or fill materials.</p> <p>Type 5: Silty CLAY, medium to high plasticity, grey mottled red, with or without inclusions of ironstone gravel and cobbles was encountered beneath the topsoil or fill materials.</p> <p>Type 6: Silty CLAY, medium to high plasticity, grey mottled yellow and orange, with or without inclusions of ironstone gravel and cobbles was encountered beneath the topsoil or fill materials.</p>
---------------------	---

No fibro-cement pieces were observed. There was no detectable odour and no obvious discolouration of the soil at the sampling locations.

Groundwater or perched water was not encountered during sampling to a maximum depth of about 2.9m below the EGL and during the short time the test pits remained open. It should be noted that the groundwater levels might vary due to rainfall and other factors not evident during field work.

Based on observation and site topography, surface run-off would predominantly flow to the north or west. The closest water body is a tributary of South Creek situated approximately 160m to the west of the site. The observed topography indicates that surface water runoff would flow either in the north or western directions. Anticipated stormwater run-off would be towards the north or west of the site.

A site-specific groundwater analysis was outside the scope of this assessment. However, a search was carried out on 17 October 2019 through the website of Department of Primary Industries Office of Water for any registered groundwater bore data within a radius of 500m of the site. The search revealed no bores within a radius of 500m of the site. The groundwater map is included in Appendix E of this report.

Based on previous experience in the region, groundwater in the site is anticipated to be in excess of 3.0m below existing ground surface.

## **7.0 SAMPLING & ANALYSIS PLAN AND SAMPLING METHODOLOGY**

Sampling and analyses were carried out within the site to obtain a reasonable assessment of the following:

1. Nature and location of any soil contaminant(s) within the site.
2. The risk(s) that the contaminant(s) (if present) poses to human health and/or the environment under the conditions of the proposed land uses.

14513/2-AA

Lot 30 in DP1237735 - Corner Elara Boulevard & Kaluta Avenue, Marsden Park

Soil sampling at the north eastern portion of the site was conducted on 7 August 2019 by an Environmental Scientist, who was responsible for visually assessing the site, locating the sample locations, recovering soil samples, preparing of QA / QC samples, and logging the sub-surface profile encountered at each sample location.

Based on the "Sampling Design Guidelines for Contaminated Sites" 1995 EPA, eight (8) systematic sampling locations (TP1 to TP8) were adopted in that portion of the, aimed at maximising the coverage of the site area. All locations were excavated using a backhoe.

The test pit locations are shown on Drawing No 14513/2-AA1.

Soil sampling at the remainder of the site was conducted on 23 to 25 September 2019 by two Environmental Scientists, who were responsible for visually assessing the site, locating the sample locations, recovering soil samples, preparing of QA / QC samples, and logging the sub-surface profile encountered at each sample location.

Based on the "Sampling Design Guidelines for Contaminated Sites" 1995 EPA, seventy three (73) systematic sampling locations (TP1 to TP73) were adopted in that portion of the, aimed at maximising the coverage of the site area. All locations were excavated using an excavator.

The test pit locations are shown on Drawing No 14513/2-AA1.

The sampling procedures adopted were as follows:

- The test pits were excavated using a backhoe or an excavator, over the depth interval nominated by the Environmental Scientist. The representative soil sample was recovered directly from the backhoe/excavator bucket using a stainless steel trowel.
- The trowel was decontaminated prior to use in order to prevent cross contamination (refer to Section 8.2 for details of the procedures for decontamination of the trowel).
- To minimise the potential loss of volatiles, the laboratory soil sample was immediately transferred to a labelled, laboratory supplied, 250ml glass jar and sealed with an airtight, Teflon screw top lid. The fully filled jar was then placed in a chilled container.
- The recovered soil sample for asbestos analysis was transferred into a separate small plastic bag, which was placed inside a large plastic bag.

In order to ensure the analytical performance of the primary laboratory, duplicate and split samples were prepared for analyses. Samples were kept in labelled laboratory supplied glass jars (acid-washed and solvent-rinsed) and sealed with airtight screw top Teflon lids. The fully filled jars were placed in a chilled container.

A rinsate water sample was collected and placed in a glass bottle and vial supplied by the laboratory at the completion of each day field works. The fully filled bottle and vial were labelled and placed in a chilled container.



---

14513/2-AA

Lot 30 in DP1237735 - Corner Elara Boulevard & Kaluta Avenue, Marsden Park

At the completion of field sampling, the chilled container and large plastic bag were transported to our Penrith office and the chilled container was transferred to a refrigerator where the temperature was maintained below 4°C.

The chilled containers with trip spike samples and large plastic bag were forwarded to the primary laboratory of SGS Environmental Services (SGS) and the secondary laboratory, Envirolab Services Pty Ltd (Envirolab), both NATA accredited. COC were then forwarded to the laboratories.

On receipt of the samples and COC, the laboratories returned the Sample Receipt Confirmation, verifying the integrity of all samples received.

Due to possible market garden activities in the region, all topsoil samples were analysed for Metals (arsenic, cadmium, copper, lead, mercury and zinc) and persistent Organochlorine Pesticides (OCP) for screening purposes. The samples were also analysed for chromium and nickel for screening purposes. Selected fill samples were analysed for common contaminants such as Metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), Total Recoverable Hydrocarbons (TRH), BTEX (Benzene, Toluene, Ethyl - benzene and Xylenes ), Polycyclic Aromatic Hydrocarbons (PAH), OCP, Polychlorinated Biphenyls (PCB) and asbestos for screening purposes as the source of the fill material is unknown. Due to past site activities, surface fill samples in the north eastern portion of the site and selected fill samples in the remainder of the site were also analysed for Phenols.

Generally the natural soil beneath the topsoil and/or fill materials is very unlikely to contain contaminants. However, the concentrations of natural metals within the minerals of the natural soil might exceed the Ecological Investigation Level (EIL) and the Health Investigation Levels (HIL). Reference may be made to *"Trace Element Concentrations in Soils from rural and Urban Areas of Australia"*, published by South Australian Health Commission in 1995. Selected deeper natural soil samples were analysed for Metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc) for screening purposes. One deeper natural soil sample was also analysed for TPH, BTEX, PAH, OCP and PCB for screening purposes.

## **8.0 FIELD QUALITY ASSURANCE AND QUALITY CONTROL**

### **8.1 Sampling Personnel**

Geotechnique undertook all the sampling associated with this assessment. Two Environmental Scientist from Geotechnique (Isaac Condie and Justin Hofmann), nominated sampling positions based on the project brief prepared by the Project Manager, supervised (full time) the excavation of test pits, logged the soil profile encountered, recovered soil samples at a frequency determined by the sampling plan (project brief), and packed the samples (refer to Section 7.0).

Mr Hofmann has a Bachelor of Science degree and has been employed by Geotechnique as an Environmental Scientist since 2015. Mr Condie has a Bachelor of Science in Earth Science degree and has been employed by Geotechnique as an Environmental Scientist since 2018. At commencement of employment, both Mr Hofmann and Mr Condie underwent supervised training in Geotechnique procedures for sampling and logging.

## 8.2 Decontamination Procedures

As stated in Section 7.0 of this report, soil sampling was carried out using a backhoe or an excavator. The stainless steel trowel was used to transfer the soil sample from the backhoe/excavator bulk sample to the laboratory supplied glass jar. The stainless steel trowel was decontaminated prior to use. As stated in Sections 8.5 and 8.6, a trowel was used to divide the soil sample into two portions to prepare duplicate/split samples.

Decontamination of the trowel involved the following:

- Removal of soils adhering to the trowel by scrubbing with a brush.
- Washing the trowel thoroughly in a solution of phosphate free detergent (Decon 90) using brushes and disposable trowel.
- Rinsing the trowel thoroughly with distilled water.
- Repeating the washing / rinsing steps and rinsing with water.
- Drying the trowel with a clean cloth.

A sample of the final rinsate water sample was recovered at completion of each day sampling.

## 8.3 Rinsates

A rinsate water sample was recovered on completion of field work (RS1) on 7 August 2019 and three rinsate water samples (RS1 to RS3) on completion of three days fields works on 23 to 25 September 2019 in order to identify possible cross contamination between the sampling locations.

The rinsate was analysed for Metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), OCP, TRH, BTEX and/or PAH. The test results for the rinsate water samples are summarised in Tables A and J. The laboratory test results certificates are included in Appendix F.

As indicated in Tables A and J, all concentrations in the rinsate blank samples were less than the laboratory limits of reporting (LOR), which indicates that adequate decontamination had been carried out in the field.

## 8.4 Trip Spikes

Trip spike samples are obtained from the laboratory on a regular basis, prior to conducting field sampling where volatile substances are suspected. The samples are held in the Penrith office of Geotechnique, at less than 4°C, for a period of not more than seven days. During the field work, the trip spike sample was kept in the chilled container with soil samples recovered from the site. The trip spike sample was then forwarded to the primary laboratory together with the soil samples recovered from the site.

The laboratory prepares the trip spike by adding a known amount of pure petrol standard to a clean sand sample. The sample is mixed thoroughly to ensure a relatively homogenous distribution of the spike throughout the sample. When the sample is submitted for analysis, the same procedure is adopted for testing as for the soil samples being analysed from the site.

---

14513/2-AA

Lot 30 in DP1237735 - Corner Elara Boulevard & Kaluta Avenue, Marsden Park

The purpose of the trip spike is to detect any loss or potential loss of volatiles from the soil samples during field work, transportation, sample extraction or testing.

One trip spike (TS1) was forwarded to the primary analytical laboratory with the samples collected from the site on 7 August 2019 and was tested for BTEX. Similarly, three trip spikes (TS1 to TS3) were forwarded to the primary analytical laboratory with the samples collected from the site on 23 to 25 September 2019 and were tested for BTEX.

The test results for the trip spikes, reported as a percentage recovery of the applied and known spike concentrations, are shown in Tables B and K. The laboratory test results certificates are included in Appendix F.

As indicated in Tables B and K, the results show generally good recovery of the spike concentrations. Furthermore, all BTEX results were less than laboratory LOR and there was no visible or olfactory indication of hydrocarbon contamination.

Based on the above, it is considered that any loss of volatiles from the recovered samples that might have occurred would not affect the outcome / conclusions of this report.

### **8.5 Duplicate Samples**

A field duplicate sample was prepared in the field through the following processes:

- A larger than normal quantity of soil was recovered from the sample location selected for duplication.
- The sample was placed in a decontaminated stainless bowl and divided into two portions using the decontaminated trowel.
- One portion of the sub-sample was immediately transferred using the decontaminated trowel into a labelled, laboratory supplied, 250ml glass jar and sealed with an airtight Teflon screw top lid. The fully filled jar was labelled as the duplicate sample and immediately placed in a chilled container.
- The remaining portion was stored in the same way and labelled as the original sample.

Nine duplicate samples were prepared.

The duplicate samples test results are presented with the analytical reports in Appendix F and summarised in Table C and Tables L1 to L8.

A comparison was made of the laboratory test results for the duplicate sample with the original sample and the Relative Percentage Differences (RPD) were computed to assess the accuracy of the laboratory test procedures. RPD within 30% are generally considered acceptable. However, this variation can be higher for organic analysis than for inorganics and for low concentrations of analytes.

As shown in Table C and Tables L1 to L8, the comparisons between the duplicates and corresponding original samples indicated generally acceptable RPD, with the exception of higher RPD of number of metals, mainly due to the heterogeneity of samples.

---

14513/2-AA

Lot 30 in DP1237735 - Corner Elara Boulevard & Kaluta Avenue, Marsden Park

All the concentrations with RPD in excess of 30% in the duplicate pairs were both less than the relevant assessment criteria.

Therefore, the variations are not considered critical and the laboratory test data provided by SGS are of adequate accuracy and reliability for this assessment.

### **8.6 Inter-laboratory Duplicate (Split) Sample**

The inter-laboratory duplicate (split) sample provides a check on the analytical performance of the primary laboratory. The split sample was prepared on the basis of sample numbers recovered during field work and the analyses undertaken by the primary laboratory.

The split sample was prepared in the same manner as the duplicate sample. Reference should be made to Section 8.5.

Nine split samples were prepared and forwarded to Envirolab for testing.

The laboratory certificates of analysis from Envirolab are included in Appendix F of this report. The results are also summarised in Table D and Tables M1 to M8.

Based on Schedule B3 of the NEPM 1999 (April 2013), the difference in the results between the split samples should generally be within 30% of the mean concentration determined by both laboratories, i.e., RPD should be within 30%. However, this variation can be higher for organic analysis than for inorganics and for low concentrations of analytes or non-homogeneous samples.

As shown in Table D and Tables M1 to M8, the comparisons between the splits and corresponding original samples indicated generally acceptable RPD, with the exception of higher RPD of number of metals, mainly due to the heterogeneity of samples.

All the concentrations with RPD in excess of 30% in the split pairs were both less than the relevant assessment criteria.

Therefore, the variations are not considered critical and the test results provided by the primary laboratory are deemed reliable for this assessment.

### **9.0 LABORATORY QUALITY ASSURANCE AND QUALITY CONTROL**

Geotechnique uses only laboratories accredited by the NATA for chemical analyses. The laboratories also incorporate quality laboratory management systems to ensure that trained analysts using validated methods and suitably calibrated equipment produce reliable results.

In addition to the QC samples, the laboratories also ensure that all analysts receive certification as to their competence in carrying out the analysis and participate in national and international proficiency studies.

SGS and Envirolab are accredited by NATA and operate a Quality System designed to comply with ISO / IEC 17025.

---

14513/2-AA

Lot 30 in DP1237735 - Corner Elara Boulevard & Kaluta Avenue, Marsden Park

The discrete soil samples were generally analysed within the allowable holding times detailed in Schedule B(3) of The *NEPM 1999 (April 2013)*. It should be noted that there is no specific holding time for asbestos analysis. The rinsate samples were analysed within the allowable holding times for water detailed in Standard Methods for the Examination of Water and Wastewater (APHA).

The test methods adopted by the laboratories are indicated with the laboratory test results certificates. As part of the analytical run for the project, the laboratories included laboratory blanks, duplicate samples, laboratory control samples, matrix spikes, matrix spike duplicates and/or surrogate spikes.

We have checked the QA/QC procedures and results adopted by the laboratories against the appropriate guidelines. The QC sample numbers adopted by SGS and Envirolab are considered adequate for the analyses undertaken.

The methods used by SGS and Envirolab have been validated and endorsed by NATA.

The samples analysed for TPH (C<sub>6</sub>–C<sub>9</sub>) and/or BTEX were extracted by the purge and trap method recommended by the NSW EPA.

All reported laboratory LOR / Practical Quantitation Limit (PQL) were less than the assessment criteria adopted for each analyte.

Overall, the QC elements adopted by SGS and Envirolab indicate that the analytical data falls within acceptable levels of accuracy and precision for the analysis of soils. The analytical data provided is therefore considered to be reliable and useable for this assessment.

## 10.0 ASSESSMENT CRITERIA

Investigation levels and screening levels developed in the NEPM 2013 were used in this assessment, as follows:

- Risk-based Health Investigation Levels (HIL) for a broad range of metals and organic substances. The HIL are applicable for assessing human health risk via all relevant pathways of exposure. The HIL as listed in Table 1A (1) of Schedule B1 “*Guideline on Investigation Levels for Soil and Groundwater*” are provided for different land uses.

The site is proposed for a school site. The site might be used for other relevant uses, including a day care centre, park, recreational open space or playing field.

As such, with regard to human health, analytical results will be assessed against more stringent risk based HIL for *residential with garden/accessible soil* (HIL A) which also includes childcare centres, preschools and primary schools.

- Health Screening Levels (HSL) for TPH fractions and Naphthalene are applicable for assessing human health risk via inhalation and direct contact pathways. The HSL depend on specific soil physicochemical properties, land use scenarios and the characteristics of building structures. The HSL listed in Table 1A(3) of Schedule B1 “*Guideline on Investigation Levels for Soil and Groundwater*” apply to different soil types and depths below surface to >4m.

For this assessment, the analytical results were assessed against the available HSL for *residential with garden/accessible soil* (HSL A) for clay to depth of 0m to <1m, 1m to <2m and 2m to <4m and for silt 1m to <2m.

- Ecological Screening Levels (ESL) for selected petroleum hydrocarbon compounds, TPH fractions and Benzo(a)Pyrene are applicable for assessing the risk to terrestrial ecosystems. ESL listed in Table 1B(6) of Schedule B1 “*Guideline on Investigation Levels for Soil and Groundwater*” broadly apply to coarse and fine-grained soils and various land uses and are generally applicable to the top 2m of soil.

The analytical result was assessed against the available ESL for *residential with garden/accessible soil* for fine-grained soil (clay and silt).

- Ecological Investigation Levels (EIL), a specific type of Soil Quality Guidelines (SQG) for selected metals, is applicable for assessing the risk to terrestrial ecosystems. EIL listed in Table 1B(1-5) of Schedule B1 “*Guideline on Investigation Levels for Soil and Groundwater*” depend on specific soil physicochemical properties and land use scenarios and generally apply to the top 2m of soil. For arsenic and lead, generic EIL are adopted, for *urban residential* land use for aged contamination. For other metals, where available, EIL are calculated using the EIL calculator developed by CSIRO for NEPC. Otherwise, where available, EIL are calculated using 30% effect concentration (EC30) or lowest observed effect concentrations (LOEC) toxicity data. EIL are the sum of the added contaminant limit (ACL) and the ambient background concentration (ABC).

For this assessment, the analytical results were assessed against the available SQG / EIL for *urban residential* land use for aged contamination in soil for low traffic volume.

For DDT and Naphthalene, generic EIL are adopted, for *urban residential* land use for fresh contaminants.

For discrete soil samples, the individual concentrations of analytes were assessed against the HIL A / HSL A / ESL / EIL.

For asbestos, the assessed soil must not contain ACM in excess of 0.01%w/w, surface soil within the site is free of visible ACM, and AF and FA in the soil is <0.001% w/w.

The site will be deemed contaminated or containing contamination “hot spots” if the above criteria are unfulfilled. Further investigation, remediation and/or management will be recommended if the area of concern is found to be contaminated or containing contamination “hot spots”.

The adopted assessment criteria for the soil samples are detailed in Tables E to I, N1 to N3 and Tables O to R.

## **11.0 FIELD & LABORATORY TEST RESULTS, ASSESSMENT & DISCUSSION**

### **11.1 Field Results**

Details of the sub-surface conditions encountered during field work for this assessment are presented in Tables 1A and 1B in Appendix D of this report. As discussed in Section 6.0, the general soil profile comprised topsoil and/or fill materials underlain by natural clayey soil. At a few locations, natural silty soil was encountered beneath fill materials.

The test pits did not reveal any visual evidence of asbestos or other indicators of significant contamination, such as staining, odours or significant foreign matter.

## **11.2 Analytical Results**

Reference may be made to Appendix F for the actual laboratory analytical reports from SGS. The test results are also presented in Tables E to I, N1 to N3 and Tables O to R together with the assessment criteria adopted. A discussion of the test data is presented in the following sub-sections.

### **11.2.1 Metals (As, Cd, Cr, Cu, Pb, Hg, Ni & Zn)**

Test results of CEC and pH were adopted to calculate EIL in Table E and Tables N1 to N3.

The Metals test result for discrete topsoil, selected fill samples and selected deeper natural soil samples are presented in Table E and Tables N1 to N3 and as indicated, all concentrations of Metals were below the relevant available Ecological Investigation Level (EIL) and Health Investigation Levels (HIL) for residential development with garden/accessible soil (HIL A) which also includes primary schools.

### **11.2.2 TRH and BTEX**

The TRH and BTEX test results for discrete selected fill samples and selected deeper natural soil sample are presented in Tables F and O.

As shown in Tables F and O, the concentrations of F1 (TRH C6-C10 less BTEX), F2 (TRH >C10-C16 less Naphthalene), F3 (TRH >C16-C34), F4 (TRH >C34-C40) and BTEX were below the relevant HSL A and ESL adopted. Moreover, all test results were below the laboratory limits of reporting (LOR).

### **11.2.3 Polycyclic Aromatic Hydrocarbons (PAH)**

The PAH test results for selected discrete fill samples and selected discrete deeper natural soil sample are presented in Tables G and P and as shown, concentrations of Benzo(a)pyrene, Benzo(a)pyrene TEQ, Naphthalene and Total PAH were well below the relevant HIL A or ESL or HSL A or EIL adopted. Moreover, all test results were below the laboratory LOR.

### **11.2.4 Organochlorine Pesticides (OCP)**

The OCP test results for discrete topsoil samples, selected discrete fill samples and selected discrete deeper natural soil sample are presented in Tables H and Q and as indicated, all concentrations of OCP were well below the relevant HIL A. Concentrations of DDT were also below the EIL. Moreover, all test results were below the laboratory LOR.

### **11.2.5 Polychlorinated Biphenyls (PCB)**

The PCB test results for selected discrete fill samples and selected discrete deeper natural soil sample are presented in Tables H and Q and as indicated, the concentrations of PCB were below the relevant HIL A adopted as well as below the laboratory LOR.

### **11.2.6 Phenols**

The Phenols test results for selected discrete fill samples and selected discrete deeper natural soil sample are presented in Tables H and Q and as indicated, the concentrations of Phenols were below the relevant HIL A adopted as well as below the laboratory LOR.

### **11.2.7 Asbestos**

The asbestos test results for the discrete fill samples are presented in Tables I and R and as indicated, AF and FA in excess of 0.001%w/w were not found in any fill samples. Moreover, ACM in excess of 0.01% was not detected in the analysed soil samples.



---

*14513/2-AA**Lot 30 in DP1237735 - Corner Elara Boulevard & Kaluta Avenue, Marsden Park*

## **12.0 CONCLUSION AND RECOMMENDATIONS**

Based on this assessment, the site is considered unlikely to present a risk of harm to human health and/or the environment, and is therefore it is our opinion, considered to be suitable for the proposed school or other relevant uses, including a day care centre, park, recreational open space or playing field.

If any suspect materials (identified by unusual staining, odour, discolouration or inclusions such as building rubble, asbestos sheets/pieces/pipes, ash material, etc.) are encountered between the sampling locations during any stage of future earthworks/site preparation, the Unexpected Finds Management Protocol (Appendix G) should be implemented. In the event of contamination, detailed assessment, remediation and validation will be necessary.

For any materials to be excavated and removed from the site, it is recommended that waste classification of the materials in accordance with the "Waste Classification Guidelines Part 1: Classifying Waste" NSW EPA 2014; NSW EPA resource recovery exemptions and orders; and/or NSW EPA Certification for virgin excavated natural material (VENM) is undertaken prior to disposal off-site (at a facility that can lawfully accept the materials).

For any materials to be imported to the site, the soil must be assessed by a qualified environmental consultant, prior to importation, to ensure suitability for the proposed use. In addition, the imported fill must not contain asbestos and ash, be free of unusual odour, not be discoloured and not acid sulphate soil or potential acid sulphate soil. The imported fill should either be VENM or excavated natural material (ENM).

## **13.0 LIMITATIONS**

Within the scope of work outlined in the email fee proposals dated 2 August 2019 and 3 September 2019, the services performed by Geotechnique were conducted in a manner consistent with the level of quality and skill generally exercised by members of the profession and consulting practice.

To the best of our knowledge, all information obtained and contained in this report is true and accurate. No further investigation has been carried out to authenticate the information provided. Supporting documentation was obtained where possible, some of which is contained in this report.

This report has been prepared for Woorong Park Pty Ltd through J Wyndham Prince Pty Ltd for the purposes stated within. Blacktown City Council may rely on the report for development and/or building application determinations. Any reliance on this report by other parties shall be at such parties' sole risk as the report might not contain sufficient information for other purposes.

This report shall only be presented in full and may not be used to support any objective other than those set out in the report, except where written approval is provided by Geotechnique Pty Ltd.

The information in this report is considered accurate at the completion of field sampling (25 September 2019). Any variations to the site form or use beyond that date will nullify the conclusion stated.

Whilst the assessment conducted at the site was carried out in accordance with current NSW guidelines, the potential always exists for contaminated soils to be present between sampled locations.

Presented in Appendix H is a document entitled "Environmental Notes", which should be read in conjunction with this report.

*Woorong Park Pty Ltd  
C/- J Wyndham Prince Pty Ltd  
AB.sf/30.10.2019*



**LIST OF REFERENCES**

*Contaminated Land Management Act 1997*

*Contaminated Land Management Regulation 1998*

*Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites – NSW Environment Protection Authority 2011*

*Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (3rd Edition) –NSW EPA 2017*

*Contaminated Sites: Sampling Design Guidelines - NSW Environment Protection Authority 1995*

*Geology of Penrith 1:100,000 Sheet (9030) – Geological Survey of New South Wales, Department of Minerals and Energy 1991*

*Guidelines for the Laboratory Analysis of Contaminated Soils - Australian and New Zealand Environment and Conservation Council (ANZECC) 1996*

*Managing Land Contamination: Planning Guidelines SEPP 55 – Remediation of Land – Department of Urban Affairs and Planning / NSW Environment Protection Authority 1998*

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

*Protection of the Environment Operations (Waste) Regulation 2005 – General Exemption Under Part 6, Clause 51 and 51A – The Excavated Natural Material Exemption & Order 2014*

*Soil Landscape of Penrith 1:100,000 Sheets (9030) – Soil Conservation Service Survey of NSW 1989*

*Standard Methods for the Examination of Water and Wastewater – American Public Health Association (APHA) 2005*

*Waste Classification Guidelines Part 1: Classifying Waste - NSW DECC (November 2014)*

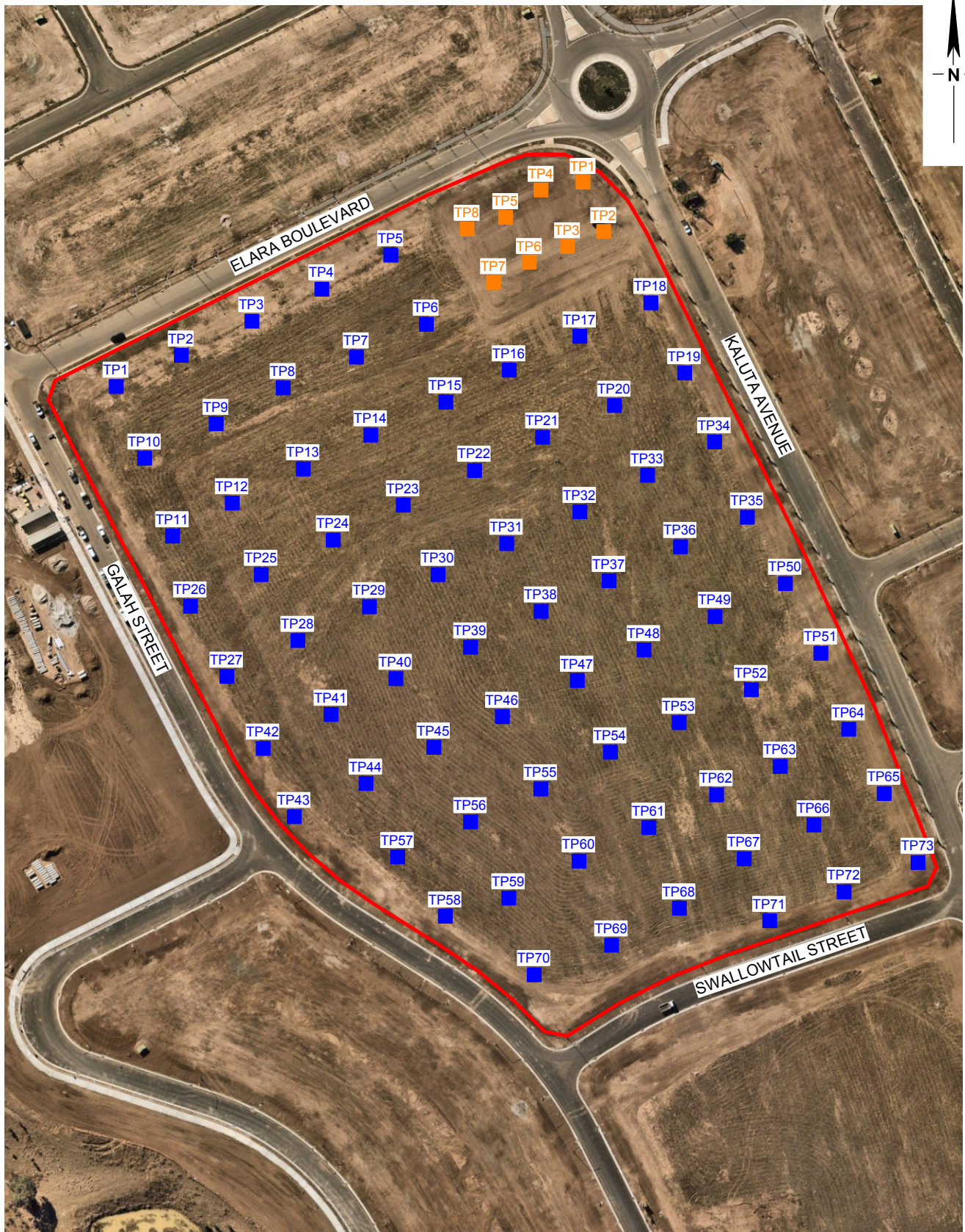
## DRAWING

---

*Drawing No 14513/2-AA1*

*Test Pit Locations*





#### LEGEND

- Test Pit (August 2019)
- Test Pit (September 2019)

Imagery ©2019 NearMap.com

0 20 40 60 80 100m



Scale 1:2000

PREPARED BY:



PO Box 880  
Penrith NSW 2750  
Tel: 02 4722 2700  
Fax: 02 4722 2777  
e-mail: info@geotech.com.au  
www.geotech.com.au

J Wyndham Prince Pty Ltd  
Lot 30 in DP1237735  
Cnr Elara Boulevard & Kaluta Avenue  
Marsden Park

Test Pit Locations

Drawing No: 14513/2-AA1  
Job No: 14513/2  
Drawn By: MH  
Date: 29 October 2019  
Checked By: JH/AB

File No: 14513-2  
Layers: 0, AA1



## TABLES

---

### **TABLES FOR NORTH EASTERN CORNER OF THE SITE**

Table A	<i>Rinsate</i>
Table B	<i>Trip Spike</i>
Table C	<i>Duplicate Sample</i>
Table D	<i>Split Sample</i>
Table E	<i>Metals, Cation Exchange Capacity (CEC) &amp; pH Test Results - Discrete Samples</i>
Table F	<i>Total Recoverable Hydrocarbons (TRH) and BTEX Test Results - Discrete Samples</i>
Table G	<i>Polycyclic Aromatic Hydrocarbons (PAH) Test Results - Discrete Samples</i>
Table H	<i>Organochlorine Pesticides (OCP), Polychlorinated Biphenyls (PCB) &amp; Phenols Test Results - Discrete Samples</i>
Table I	<i>Asbestos Test Results - Discrete Samples</i>

### **TABLES FOR REMAINDER OF THE SITE**

Table J	<i>Rinsates</i>
Table K	<i>Trip Spikes</i>
Tables L1 to L8	<i>Duplicate Samples</i>
Tables M1 to M8	<i>Split Samples</i>
Tables N1 to N3	<i>Metals, Cation Exchange Capacity (CEC) &amp; pH Test Results - Discrete Samples</i>
Table O	<i>Total Recoverable Hydrocarbons (TRH) and BTEX Test Results - Discrete Samples</i>
Table P	<i>Polycyclic Aromatic Hydrocarbons (PAH) Test Results - Discrete Samples</i>
Table Q	<i>Organochlorine Pesticides (OCP), Polychlorinated Biphenyls (PCB) &amp; Phenols Test Results - Discrete Samples</i>
Table R	<i>Asbestos Test Results - Discrete Samples</i>

**TABLE A**  
**RINSATE**  
**(Ref No: 14513/2-AA)**

SAMPLE DATE	RS1 7/08/2019
<b>METAL</b>	<b>(mg/L)</b>
Arsenic	<0.02
Cadmium	<0.001
Chromium	<0.005
Copper	<0.005
Lead	<0.02
Mercury	<0.0001
Nickel	<0.005
Zinc	<0.01
<b>ORGANOCHLORINE PESTICIDE (OCP)</b>	<b>(µg/L)</b>
Hexachlorobenzene (HCB)	<0.1
Heptachlor	<0.1
Aldrin+Dieldrin	<0.2
Endrin	<0.1
Methoxychlor	<0.1
Mirex	<0.1
Endosulfan (Alpha, Beta & Sulphate)	<0.3
DDD+DDE+DDT	<0.6
Chlordane (alpha & gamma)	<0.2

**TABLE B**  
**TRIP SPIKE**  
**(Ref No: 14513/2-AA)**

Sample	Sampling Date	BTEX			
		Benzene	Toluene	Ethylbenzene	Xylenes
TS1	7/08/2019	105%	97%	90%	89%

Note : results are reported as percentage recovery of known spike concentrations

**TABLE C**  
**DUPLICATE SAMPLE**  
**(Ref No: 14513/2-AA)**

<b>ANALYTE</b>	<b>TP2 0.0-0.15 (m) mg/kg</b>	<b>DDS1 mg/kg</b>	<b>RELATIVE PERCENTAGE DIFFERENCES (RPD) %</b>
Arsenic	4	3	29
Cadmium	1.3	1.3	0
Chromium	10	11	10
Copper	4.2	5.3	23
Lead	11	11	0
Mercury	<0.05	<0.05	-
Nickel	2	2.4	18
Zinc	23	20	14
<b>TOTAL RECOVERABLE HYDROCARBONS (TRH)</b>			
F1 (C6-C10 less BTEX)	<25	<25	-
F2 (>C10-C16)	<25	<25	-
F3 (>C16-C34)	<90	<90	-
F4 (>C34-C40)	<120	<120	-
<b>BTEX</b>			
Benzene	<0.1	<0.1	-
Toluene	<0.1	<0.1	-
Ethyl Benzene	<0.1	<0.1	-
Xylenes	<0.3	<0.3	-
<b>POLYCYCLIC AROMATIC HYDROCARBONS</b>			
Benzo(a)Pyrene TEQ	<0.3	<0.3	-
Total PAH	<0.8	<0.8	-
Naphthalene	<0.1	<0.1	-
Benzo(a)Pyrene	<0.1	<0.1	-
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.15	-
Endrin	<0.2	<0.2	-
Methoxychlor	<0.1	<0.1	-
Mirex	<0.1	<0.1	-
Endosulfan (alpha, beta & sulphate)	<0.5	<0.5	-
DDD+DDE+DDT	<0.6	<0.6	-
Chlordane (alpha & gamma)	<0.2	<0.2	-
<b>POLYCHLORINATED BIPHENYLS (PCB)</b>			
Total PCB	<1	<1	-
<b>Phenols</b>	<5	<5	-

**TABLE D**  
**SPLIT SAMPLE**  
**(Ref No: 14513/2-AA)**

<b>ANALYTE</b>	<b>TP3 0.0-0.15 (m) mg/kg (SGS)</b>	<b>DSS1 mg/kg (ENVIROLAB)</b>	<b>RELATIVE PERCENTAGE DIFFERENCES (RPD)  %</b>
Arsenic	2	5	86
Cadmium	1.3	<0.4	-
Chromium	8.7	14	47
Copper	4.4	4	10
Lead	9	11	20
Mercury	<0.05	<0.1	-
Nickel	2.1	3	35
Zinc	18	19	5
<b>TOTAL RECOVERABLE HYDROCARBONS (TRH)</b>			
F1 (C6-C10 less BTEX)	<25	<25	-
F2 (>C10-C16)	<25	<50	-
F3 (>C16-C34)	<90	<100	-
F4 (>C34-C40)	<120	<100	-
<b>BTEX</b>			
Benzene	<0.1	<0.2	-
Toluene	<0.1	<0.5	-
Ethyl Benzene	<0.1	<1	-
Xylenes	<0.3	<3	-
<b>POLYCYCLIC AROMATIC HYDROCARBONS (PAH)</b>			
Benzo(a)Pyrene TEQ	<0.3	<0.5	-
Total PAH	<0.8	<0.05	-
Naphthalene	<0.1	<1	-
Benzo(a)Pyrene	<0.1	<0.05	-
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.2	-
Endrin	<0.2	<0.1	-
Methoxychlor	<0.1	<0.1	-
Endosulfan (alpha (I), beta (II) & sulphate)	<0.5	<0.3	-
DDD+DDE+DDT	<0.6	<0.3	-
Chlordane (alpha & gamma)	<0.2	<0.2	-
<b>POLYCHLORINATED BIPHENYLS (PCB)</b>			
Total PCB	<1	<0.1	-
<b>Phenols</b>	<5	<5	-



**TABLE E**  
**METAL, CATION EXCHANGE CAPACITY (CEC) & pH TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

Sample Location	Depth (m)	METAL (mg/kg)								CEC (cmol <sub>c</sub> /kg)	pH
		ARSENIC	CADMIUM	CHROMIUM (Total)	COPPER	LEAD	MERCURY	NICKEL	ZINC		
TP1	0.0-0.15	4	1.3	8.5	3.9	9	<0.05	1.8	37	-	-
TP1	0.3-0.6	7	1.5	15	14	15	<0.05	5.6	28	19	5.2
TP1	0.65-0.75	4	1.4	7.7	12	10	<0.05	2.1	13	18	4.8
TP2	0.0-0.15	4	1.3	10	4.2	11	<0.05	2	23	6.2	6.2
TP2	0.3-0.6	5	1.3	9.8	10	13	<0.05	4.3	19	-	-
TP3	0.0-0.15	2	1.3	8.7	4.4	9	<0.05	2.1	18	-	-
TP3	0.5-0.6	<1	1.4	5.3	9.6	8	0.15	3.3	13	20	5.3
TP4	0.0-0.15	4	1.2	10	2.6	8	<0.05	1.6	10	5	5.8
TP4	0.3-0.6	5	1.4	11	12	17	<0.05	5.1	24	-	-
TP5	0.0-0.15	3	1.4	9.5	4.4	11	<0.05	1.9	30	-	-
TP5	0.3-0.6	6	1.5	15	16	15	<0.05	3.6	22	16	5.2
TP6	0.0-0.15	3	1.6	7.5	5.1	11	<0.05	2.6	41	7.2	6.2
TP6	0.3-0.5	3	1.5	5.1	5.4	6	<0.05	1.4	7	-	-
TP6	0.55-0.65	5	1.5	9.4	11	10	<0.05	2.3	13	19	5.3
TP7	0.0-0.15	5	1.3	11	4.6	9	<0.05	2	32	-	-
TP7	0.3-0.5	4	1.3	7	9.9	9	<0.05	2.3	12	12	5.2
TP8	0.0-0.15	4	1.4	13	5.4	11	<0.05	2.4	44	9.5	6.2
TP8	0.2-0.5	4	1.3	7.9	6.8	8	<0.05	3.5	17	-	-
TP8	0.55-0.65	5	1.4	10	14	13	<0.05	2.7	17	23	5
DDS1		3	1.3	11	5.3	11	<0.05	2.4	20	-	-
Limit of Reporting (LOR)		1	0.3	0.5	0.5	1	0.05	0.5	2	0.02	0.1
DSS1		5.0	<0.4	14	4	11	<0.1	3	19		
<b>NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)</b>											
Health-based Investigation Levels (HIL) A - <sup>a</sup> Residential A		100	20	100 <sup>c</sup>	6000	300	10 <sup>d</sup>	400	7400		
Ecological Investigation Levels (EIL) - <sup>b</sup> Urban residential		100 <sup>e</sup>	-	410 <sup>f</sup>	70	1100 <sup>g</sup>	-	35	190		

- Notes:
- a: Residential with garden / accessible soil (home grown produce <10% fruit and vegetable intake (no poultry)), also includes childcare centres, preschools and primary schools.
  - b: EIL of aged nickel & zinc were derived from calculation spreadsheet developed by CSIRO for NEPC; New Suburb with Low Traffic; the lowest CEC=5 cmol<sub>c</sub>/kg & pH=4.8; the assumed clay content=10 % were selected for derivation of EIL; a conservative approach.
  - EIL of aged copper = added contaminant limit (calculated based on the lowest of the pH and the lowest of the CEC) + ambient background concentration.
  - c: Chromium (VI)
  - d: Methyl Mercury
  - e: Generic EIL for aged arsenic
  - f: Chromium (III)
  - g: Generic added contaminant limit for aged lead + ambient background concentration; New Suburb with Low Traffic.

**TABLE F**  
**TOTAL RECOVERABLE HYDROCARBONS (TRH) AND BTEX TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)																																	
			TRH (mg/kg)					BTEX (mg/kg)				Health Screening Levels (HSL) A Low density residential						Ecological Screening Levels for fine-grained soil Urban residential								Ecological Screening Levels for coarse-grained soil Urban residential							
Sample Location	Depth (m)	Soil type	F1	F2*	F2**	F3	F4	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES	F1	F2*	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES	F1	F2*	F3	F4	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES	F1	F2**	F3	F4	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES
TP1	0.0-0.15	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP1	0.3-0.6	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP2	0.0-0.15	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP3	0.0-0.15	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP3	0.5-0.6	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP4	0.0-0.15	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP5	0.0-0.15	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP5	0.3-0.6	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP6	0.0-0.15	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP7	0.0-0.15	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP7	0.3-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP8	0.0-0.15	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
Limit of Reporting (LOR)			25	25	25	90	120	0.1	0.1	0.1	0.3																						

Notes:

- F1: C6-C10 less BTEX
- F2\*: >C10-C16 less Naphthalene
- F2\*\*: >C10-C16
- F3: >C16-C34
- F4: >C34-C40
- NL: Not Limiting

**TABLE G**  
**POLYCYCLIC AROMATIC HYDROCARBONS (PAH) TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

			NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)								
			PAH (mg/kg)				Health-based Investigation Levels (HIL) A - Residential A		Health Screening Level (HSL) A - Low density residential	Generic Ecological Investigation Level (EIL) - Urban residential	Ecological Screening Level (ESL) - Urban residential
			BaP TEQ	TOTAL PAHs	NAPHTHALENE	BENZO(a)PYRENE (BaP)	BaP TEQ	TOTAL PAHs	NAPHTHALENE	NAPHTHALENE	BENZO(a)PYRENE (BaP)
Sample Location	Depth (m)	Soil type	BaP TEQ	TOTAL PAHs	NAPHTHALENE	BENZO(a)PYRENE (BaP)	BaP TEQ	TOTAL PAHs	NAPHTHALENE	NAPHTHALENE	BENZO(a)PYRENE (BaP)
TP1	0.0-0.15	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP1	0.3-0.6	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP2	0.0-0.15	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP3	0.0-0.15	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP3	0.5-0.6	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP4	0.0-0.15	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP5	0.0-0.15	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP5	0.3-0.6	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP6	0.0-0.15	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP7	0.0-0.15	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP7	0.3-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP8	0.0-0.15	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
Limit of Reporting (LOR)			0.3	0.8	0.1	0.1					

Notes: a: Residential with garden / accessible soil (home grown produce <10% fruit and vegetable intake (no poultry)), also includes childcare centres, preschools and primary schools.

NL: Not Limiting

**TABLE H**  
**ORGANOCHLORINE PESTICIDES (OCP), POLYCHLORINATED BIPHENYLS (PCB) & PHENOLS TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

Sample Location	Depth (m)	OCP (mg/kg)										PCB (mg/kg)	Phenols (mg/kg)
		HEXACHLOROBENZENE (HCB)	HEPTACHLOR	ALDRIN+DIELDRIN	ENDRIN	METHOXYCHLOR	MIREX	ENDOSULFAN (alpha, beta & sulphate)	DDD+DDE+DDT	DDT	CHLORDANE (alpha & gamma)		
TP1	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP1	0.3-0.6	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	-
TP2	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP3	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP3	0.5-0.6	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	-
TP4	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP5	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP5	0.3-0.6	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	-
TP6	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP7	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP7	0.3-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	-
TP8	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
Limit of Reporting (LOR)		0.1	0.1	0.15	0.2	0.1	0.1	0.5	0.6	0.2	0.2	1	5
<b>NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)</b>													
Health-based Investigation Levels (HIL) A - Residential A <sup>a</sup>		10	6	6	10	300	10	270	240		50	1	3000
Ecological Investigation Levels (EIL) - Urban residential										180 <sup>b</sup>			

Notes: a: Residential with garden / accessible soil (home grown produce <10% fruit and vegetable intake (no poultry)), also includes childcare centres, preschools and primary schools.

b: Generic EIL for DDT

**TABLE I**  
**ASBESTOS TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

Sample Location	Depth (m)	ASBESTOS (% w/w)		
Soil Sample		ACM (>7mm)	AF/FA (<7mm)	
	TP1	0.0-0.15	<0.01	<0.001
	TP2	0.0-0.15	<0.01	<0.001
	TP2	0.3-0.6	<0.01	<0.001
	TP3	0.0-0.15	<0.01	<0.001
	TP4	0.0-0.15	<0.01	<0.001
	TP4	0.3-0.6	<0.01	<0.001
	TP5	0.0-0.15	<0.01	<0.001
	TP6	0.0-0.15	<0.01	<0.001
	TP6	0.3-0.5	<0.01	<0.001
	TP7	0.0-0.15	<0.01	<0.001
	TP8	0.0-0.15	<0.01	<0.001
TP8	0.2-0.5	<0.01	<0.001	
Limits of Reporting (LOR)		0.01	0.001	
NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)				
Health Screening Levels - Residential A <sup>a</sup>		0.01	0.001	
Fibro-cement Piece				

Notes:                   ACM: Asbestos Containing Material  
                               AF: Asbestos Fines  
                               FA: Fibrous Asbestos  
                               a: Residential with garden / accessible soil (home grown produce <10% fruit and vegetable intake (no poultry)), also includes childcare centres, preschools and primary schools.

**TABLE J**  
**RINSATES**  
**(Ref No: 14513/2-AA)**

SAMPLE DATE	RS1 23/09/2019	RS2 24/09/2019	RS3 25/09/2019
<b>METAL</b>	<b>(mg/L)</b>	<b>(mg/L)</b>	<b>(mg/L)</b>
Arsenic	<0.02	<0.02	<0.02
Cadmium	<0.001	<0.001	<0.001
Chromium	<0.005	<0.005	<0.005
Copper	<0.005	<0.005	<0.005
Lead	<0.02	<0.02	<0.02
Mercury	<0.0001	<0.0001	<0.0001
Nickel	<0.005	<0.005	<0.005
Zinc	<0.01	<0.01	<0.01
<b>TOTAL RECOVERABLE HYDROCARBON (TRH)</b>	<b>(µg/L)</b>	<b>(µg/L)</b>	<b>(µg/L)</b>
F1 (C6-C10 less BTEX)	<50	<50	<50
F2 (>C10-C16)	<60	<60	<60
F3 (>C16-C34)	<500	<500	<500
F4 (>C34-C40)	<500	<500	<500
<b>BTEX</b>	<b>(µg/L)</b>	<b>(µg/L)</b>	<b>(µg/L)</b>
Benzene	<0.5	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5
Ethyl Benzene	<0.5	<0.5	<0.5
Xylenes	<1.5	<1.5	<1.5
<b>POLYCYCLIC AROMATIC HYDROCARBON (PAH)</b>	<b>(µg/L)</b>	<b>(µg/L)</b>	<b>(µg/L)</b>
Total PAH	<1	<1	<1
Naphthalene	<0.1	<0.1	<0.1
Benzo(a)Pyrene	<0.1	<0.1	<0.1

**TABLE K**  
**TRIP SPIKES**  
**(Ref No: 14513/2-AA)**

Sample	Sampling Date	BTEX			
		Benzene	Toluene	Ethylbenzene	Xylenes
TS1	23/09/2019	92%	95%	99%	99%
TS2	24/09/2019	106%	139%	94%	93%
TS3	25/09/2019	107%	107%	101%	100%

Note : results are reported as percentage recovery of known spike concentrations

**TABLE L1**  
**DUPLICATE SAMPLE**  
**(Ref No: 14513/2-AA)**

<b>ANALYTE</b>	<b>TP1 0.0-0.15 (m) mg/kg</b>	<b>DDS1 mg/kg</b>	<b>RELATIVE PERCENTAGE DIFFERENCES (RPD) %</b>
Arsenic	4	6	40
Cadmium	<0.3	0.3	-
Chromium	13	14	7
Copper	7	6.1	14
Lead	15	16	6
Mercury	<0.05	<0.05	-
Nickel	3.1	3.3	6
Zinc	42	38	10
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.15	-
Endrin	<0.2	<0.2	-
Methoxychlor	<0.1	<0.1	-
Mirex	<0.1	<0.1	-
Endosulfan (alpha, beta & sulphate)	<0.5	<0.5	-
DDD+DDE+DDT	<0.6	<0.6	-
Chlordane (alpha & gamma)	<0.2	<0.2	-



**TABLE L2**  
**DUPLICATE SAMPLE**  
**(Ref No: 14513/2-AA)**

<b>ANALYTE</b>	<b>TP8 0.2-0.5 (m) mg/kg</b>	<b>DDS2 mg/kg</b>	<b>RELATIVE PERCENTAGE DIFFERENCES (RPD) %</b>
Arsenic	3	5	50
Cadmium	<0.3	<0.3	-
Chromium	10	12	18
Copper	11	10	10
Lead	12	8	40
Mercury	<0.05	<0.05	-
Nickel	2.7	2.4	12
Zinc	16	15	6
<b>TOTAL RECOVERABLE HYDROCARBONS (TRH)</b>			
F1 (C6-C10 less BTEX)	<25	<25	-
F2 (>C10-C16)	<25	<25	-
F3 (>C16-C34)	<90	<90	-
F4 (>C34-C40)	<120	<120	-
<b>BTEX</b>			
Benzene	<0.1	<0.1	-
Toluene	<0.1	<0.1	-
Ethyl Benzene	<0.1	<0.1	-
Xylenes	<0.3	<0.3	-
<b>POLYCYCLIC AROMATIC HYDROCARBONS</b>			
Benzo(a)Pyrene TEQ	<0.3	<0.3	-
Total PAH	<0.8	<0.8	-
Naphthalene	<0.1	<0.1	-
Benzo(a)Pyrene	<0.1	<0.1	-
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.15	-
Endrin	<0.2	<0.2	-
Methoxychlor	<0.1	<0.1	-
Mirex	<0.1	<0.1	-
Endosulfan (alpha, beta & sulphate)	<0.5	<0.5	-
DDD+DDE+DDT	<0.6	<0.6	-
Chlordane (alpha & gamma)	<0.2	<0.2	-
<b>POLYCHLORINATED BIPHENYLS (PCB)</b>			
Total PCB	<1	<1	-
<b>Phenols</b>	<5	<5	-

**TABLE L3**  
**DUPLICATE SAMPLE**  
**(Ref No: 14513/2-AA)**

ANALYTE	TP12 0.0-0.15 (m) mg/kg	DDS3 mg/kg	RELATIVE PERCENTAGE DIFFERENCES (RPD) %
Arsenic	2	4	67
Cadmium	<0.3	<0.3	-
Chromium	12	23	63
Copper	2.3	3.7	47
Lead	10	11	10
Mercury	<0.05	<0.05	-
Nickel	1.4	1.9	30
Zinc	7	8	13
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.15	-
Endrin	<0.2	<0.2	-
Methoxychlor	<0.1	<0.1	-
Mirex	<0.1	<0.1	-
Endosulfan (alpha, beta & sulphate)	<0.5	<0.5	-
DDD+DDE+DDT	<0.6	<0.6	-
Chlordane (alpha & gamma)	<0.2	<0.2	-

**TABLE L4**  
**DUPLICATE SAMPLE**  
**(Ref No: 14513/2-AA)**

<b>ANALYTE</b>	<b>TP23 0.0-0.15 (m) mg/kg</b>	<b>DDS4 mg/kg</b>	<b>RELATIVE PERCENTAGE DIFFERENCES (RPD) %</b>
Arsenic	5	5	0
Cadmium	<0.3	<0.3	-
Chromium	25	17	38
Copper	2.1	4.4	71
Lead	16	13	21
Mercury	<0.05	<0.05	-
Nickel	2.9	3.4	16
Zinc	12	14	15
<b>TOTAL RECOVERABLE HYDROCARBONS (TRH)</b>			
F1 (C6-C10 less BTEX)	<25	<25	-
F2 (>C10-C16)	<25	<25	-
F3 (>C16-C34)	<90	<90	-
F4 (>C34-C40)	<120	<120	-
<b>BTEX</b>			
Benzene	<0.1	<0.1	-
Toluene	<0.1	<0.1	-
Ethyl Benzene	<0.1	<0.1	-
Xylenes	<0.3	<0.3	-
<b>POLYCYCLIC AROMATIC HYDROCARBONS</b>			
Benzo(a)Pyrene TEQ	<0.3	<0.3	-
Total PAH	<0.8	<0.8	-
Naphthalene	<0.1	<0.1	-
Benzo(a)Pyrene	<0.1	<0.1	-
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.15	-
Endrin	<0.2	<0.2	-
Methoxychlor	<0.1	<0.1	-
Mirex	<0.1	<0.1	-
Endosulfan (alpha, beta & sulphate)	<0.5	<0.5	-
DDD+DDE+DDT	<0.6	<0.6	-
Chlordane (alpha & gamma)	<0.2	<0.2	-
<b>POLYCHLORINATED BIPHENYLS (PCB)</b>			
Total PCB	<1	<1	-
<b>Phenols</b>	<5	<5	-

**TABLE L5**  
**DUPLICATE SAMPLE**  
**(Ref No: 14513/2-AA)**

<b>ANALYTE</b>	<b>TP30 0.0-0.15 (m) mg/kg</b>	<b>DDS5 mg/kg</b>	<b>RELATIVE PERCENTAGE DIFFERENCES (RPD) %</b>
Arsenic	4	4	0
Cadmium	<0.3	<0.3	-
Chromium	12	29	83
Copper	4.9	4.3	13
Lead	13	10	26
Mercury	<0.05	<0.05	-
Nickel	1.6	1.0	46
Zinc	7	8	13
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.15	-
Endrin	<0.2	<0.2	-
Methoxychlor	<0.1	<0.1	-
Mirex	<0.1	<0.1	-
Endosulfan (alpha, beta & sulphate)	<0.5	<0.5	-
DDD+DDE+DDT	<0.6	<0.6	-
Chlordane (alpha & gamma)	<0.2	<0.2	-

**TABLE L6**  
**DUPLICATE SAMPLE**  
**(Ref No: 14513/2-AA)**

ANALYTE	TP51 0.0-0.15 (m) mg/kg	DDS6 mg/kg	RELATIVE PERCENTAGE DIFFERENCES (RPD) %
Arsenic	5	5	0
Cadmium	<0.3	<0.3	-
Chromium	14	10	33
Copper	3.3	4.6	33
Lead	10	7	35
Mercury	<0.05	<0.05	-
Nickel	1.6	<0.5	-
Zinc	9	5	57
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.15	-
Endrin	<0.2	<0.2	-
Methoxychlor	<0.1	<0.1	-
Mirex	<0.1	<0.1	-
Endosulfan (alpha, beta & sulphate)	<0.5	<0.5	-
DDD+DDE+DDT	<0.6	<0.6	-
Chlordane (alpha & gamma)	<0.2	<0.2	-

**TABLE L7**  
**DUPLICATE SAMPLE**  
**(Ref No: 14513/2-AA)**

<b>ANALYTE</b>	<b>TP59 0.0-0.15 (m) mg/kg</b>	<b>DDS7 mg/kg</b>	<b>RELATIVE PERCENTAGE DIFFERENCES (RPD) %</b>
Arsenic	3	3	0
Cadmium	<0.3	<0.3	-
Chromium	9.7	9.5	2
Copper	3.1	3	3
Lead	13	10	26
Mercury	<0.05	<0.05	-
Nickel	1.7	1.7	0
Zinc	7	8	13
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.15	-
Endrin	<0.2	<0.2	-
Methoxychlor	<0.1	<0.1	-
Mirex	<0.1	<0.1	-
Endosulfan (alpha, beta & sulphate)	<0.5	<0.5	-
DDD+DDE+DDT	<0.6	<0.6	-
Chlordane (alpha & gamma)	<0.2	<0.2	-

**TABLE L8**  
**DUPLICATE SAMPLE**  
**(Ref No: 14513/2-AA)**

<b>ANALYTE</b>	<b>TP72 0.2-0.5 (m) mg/kg</b>	<b>DDS8 mg/kg</b>	<b>RELATIVE PERCENTAGE DIFFERENCES (RPD) %</b>
Arsenic	3	4	29
Cadmium	<0.3	<0.3	-
Chromium	7.5	15	67
Copper	3.9	1.5	89
Lead	7	9	25
Mercury	<0.05	<0.05	-
Nickel	0.6	1.2	67
Zinc	3	6	67
<b>TOTAL RECOVERABLE HYDROCARBONS (TRH)</b>			
F1 (C6-C10 less BTEX)	<25	<25	-
F2 (>C10-C16)	<25	<25	-
F3 (>C16-C34)	<90	<90	-
F4 (>C34-C40)	<120	<120	-
<b>BTEX</b>			
Benzene	<0.1	<0.1	-
Toluene	<0.1	<0.1	-
Ethyl Benzene	<0.1	<0.1	-
Xylenes	<0.3	<0.3	-
<b>POLYCYCLIC AROMATIC HYDROCARBONS</b>			
Benzo(a)Pyrene TEQ	<0.3	<0.3	-
Total PAH	<0.8	<0.8	-
Naphthalene	<0.1	<0.1	-
Benzo(a)Pyrene	<0.1	<0.1	-
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.15	-
Endrin	<0.2	<0.2	-
Methoxychlor	<0.1	<0.1	-
Mirex	<0.1	<0.1	-
Endosulfan (alpha, beta & sulphate)	<0.5	<0.5	-
DDD+DDE+DDT	<0.6	<0.6	-
Chlordane (alpha & gamma)	<0.2	<0.2	-
<b>POLYCHLORINATED BIPHENYLS (PCB)</b>			
Total PCB	<1	<1	-
<b>Phenols</b>	<5	<5	-

**TABLE M1**  
**SPLIT SAMPLE**  
**(Ref No: 14513/2-AA)**

<b>ANALYTE</b>	<b>TP2 0.0-0.15 (m) mg/kg (SGS)</b>	<b>DSS1 mg/kg (ENVIROLAB)</b>	<b>RELATIVE PERCENTAGE DIFFERENCES (RPD)  %</b>
Arsenic	4	6	40
Cadmium	0.4	1	86
Chromium	10	16	46
Copper	5.4	9	50
Lead	13	19	38
Mercury	<0.05	<0.1	-
Nickel	3.1	5	47
Zinc	91	190	70
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.2	-
Endrin	<0.2	<0.1	-
Methoxychlor	<0.1	<0.1	-
Endosulfan (alpha (I), beta (II) & sulphate)	<0.5	<0.3	-
DDD+DDE+DDT	<0.6	<0.3	-
Chlordane (alpha & gamma)	<0.2	<0.2	-



**TABLE M2**  
**SPLIT SAMPLE**  
 (Ref No: 14513/2-AA)

<b>ANALYTE</b>	<b>TP9 0.2-0.5 (m) mg/kg (SGS)</b>	<b>DSS2 mg/kg (ENVIROLAB)</b>	<b>RELATIVE PERCENTAGE DIFFERENCES (RPD)  %</b>
Arsenic	7	8	13
Cadmium	<0.3	<0.4	-
Chromium	16	24	40
Copper	12	16	29
Lead	18	21	15
Mercury	<0.05	<0.1	-
Nickel	6.3	8	24
Zinc	33	34	3
<b>TOTAL RECOVERABLE HYDROCARBONS (TRH)</b>			
F1 (C6-C10 less BTEX)	<25	<25	-
F2 (>C10-C16)	<25	<50	-
F3 (>C16-C34)	<90	<100	-
F4 (>C34-C40)	<120	<100	-
<b>BTEX</b>			
Benzene	<0.1	<0.2	-
Toluene	<0.1	<0.5	-
Ethyl Benzene	<0.1	<1	-
Xylenes	<0.3	<3	-
<b>POLYCYCLIC AROMATIC HYDROCARBONS (PAH)</b>			
Benzo(a)Pyrene TEQ	<0.3	<0.5	-
Total PAH	<0.8	<0.05	-
Naphthalene	<0.1	<1	-
Benzo(a)Pyrene	<0.1	<0.05	-
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.2	-
Endrin	<0.2	<0.1	-
Methoxychlor	<0.1	<0.1	-
Endosulfan (alpha (I), beta (II) & sulphate)	<0.5	<0.3	-
DDD+DDE+DDT	<0.6	<0.3	-
Chlordane (alpha & gamma)	<0.2	<0.2	-
<b>POLYCHLORINATED BIPHENYLS (PCB)</b>			
Total PCB	<1	<0.1	-
<b>Phenols</b>	<5	<5	-

**TABLE M3**  
**SPLIT SAMPLE**  
**(Ref No: 14513/2-AA)**

ANALYTE	TP13 0.0-0.15 (m) mg/kg (SGS)	DSS3 mg/kg (ENVIROLAB)	RELATIVE PERCENTAGE DIFFERENCES (RPD) %
Arsenic	5	7	33
Cadmium	<0.3	<0.4	-
Chromium	16	22	32
Copper	2.1	4	62
Lead	11	13	17
Mercury	<0.05	<0.1	-
Nickel	2	2	0
Zinc	9	7	25
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.2	-
Endrin	<0.2	<0.1	-
Methoxychlor	<0.1	<0.1	-
Endosulfan (alpha (I), beta (II) & sulphate)	<0.5	<0.3	-
DDD+DDE+DDT	<0.6	<0.3	-
Chlordane (alpha & gamma)	<0.2	<0.2	-

**TABLE M4**  
**SPLIT SAMPLE**  
 (Ref No: 14513/2-AA)

<b>ANALYTE</b>	<b>TP25 0.2-0.5 (m) mg/kg (SGS)</b>	<b>DSS4 mg/kg (ENVIROLAB)</b>	<b>RELATIVE PERCENTAGE DIFFERENCES (RPD)  %</b>
Arsenic	6	4	40
Cadmium	<0.3	<0.4	-
Chromium	13	14	7
Copper	10	10	0
Lead	12	12	0
Mercury	<0.05	<0.1	-
Nickel	3.5	6	53
Zinc	17	19	11
<b>TOTAL RECOVERABLE HYDROCARBONS (TRH)</b>			
F1 (C6-C10 less BTEX)	<25	<25	-
F2 (>C10-C16)	<25	<50	-
F3 (>C16-C34)	<90	<100	-
F4 (>C34-C40)	<120	<100	-
<b>BTEX</b>			
Benzene	<0.1	<0.2	-
Toluene	<0.1	<0.5	-
Ethyl Benzene	<0.1	<1	-
Xylenes	<0.3	<3	-
<b>POLYCYCLIC AROMATIC HYDROCARBONS (PAH)</b>			
Benzo(a)Pyrene TEQ	<0.3	<0.5	-
Total PAH	<0.8	<0.05	-
Naphthalene	<0.1	<1	-
Benzo(a)Pyrene	<0.1	<0.05	-
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.2	-
Endrin	<0.2	<0.1	-
Methoxychlor	<0.1	<0.1	-
Endosulfan (alpha (I), beta (II) & sulphate)	<0.5	<0.3	-
DDD+DDE+DDT	<0.6	<0.3	-
Chlordane (alpha & gamma)	<0.2	<0.2	-
<b>POLYCHLORINATED BIPHENYLS (PCB)</b>			
Total PCB	<1	<0.1	-
<b>Phenols</b>	<5	<5	-

**TABLE M5**  
**SPLIT SAMPLE**  
**(Ref No: 14513/2-AA)**

<b>ANALYTE</b>	<b>TP31 0.0-0.15 (m) mg/kg (SGS)</b>	<b>DSS5 mg/kg (ENVIROLAB)</b>	<b>RELATIVE PERCENTAGE DIFFERENCES (RPD)  %</b>
Arsenic	4	<4	-
Cadmium	<0.3	<0.4	-
Chromium	11	11	0
Copper	4.5	5	11
Lead	10	7	35
Mercury	<0.05	<0.1	-
Nickel	2	1	67
Zinc	10	3	108
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.2	-
Endrin	<0.2	<0.1	-
Methoxychlor	<0.1	<0.1	-
Endosulfan (alpha (I), beta (II) & sulphate)	<0.5	<0.3	-
DDD+DDE+DDT	<0.6	<0.3	-
Chlordane (alpha & gamma)	<0.2	<0.2	-

**TABLE M6**  
**SPLIT SAMPLE**  
**(Ref No: 14513/2-AA)**

<b>ANALYTE</b>	<b>TP52 0.0-0.15 (m) mg/kg (SGS)</b>	<b>DSS6 mg/kg (ENVIROLAB)</b>	<b>RELATIVE PERCENTAGE DIFFERENCES (RPD)  %</b>
Arsenic	5	5	0
Cadmium	<0.3	<0.4	-
Chromium	17	6	96
Copper	4.7	13	94
Lead	12	9	29
Mercury	<0.05	0.6	-
Nickel	1.5	<1	-
Zinc	8	2	120
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.2	-
Endrin	<0.2	<0.1	-
Methoxychlor	<0.1	<0.1	-
Endosulfan (alpha (I), beta (II) & sulphate)	<0.5	<0.3	-
DDD+DDE+DDT	<0.6	<0.3	-
Chlordane (alpha & gamma)	<0.2	<0.2	-

**TABLE M7**  
**SPLIT SAMPLE**  
**(Ref No: 14513/2-AA)**

ANALYTE	TP60	DSS7	RELATIVE PERCENTAGE
	0.0-0.15 (m) mg/kg (SGS)	mg/kg (ENVIROLAB)	DIFFERENCES (RPD) %
Arsenic	4	6	40
Cadmium	<0.3	<0.4	-
Chromium	18	19	5
Copper	2	5	86
Lead	14	17	19
Mercury	<0.05	<0.1	-
Nickel	1.4	3	73
Zinc	7	8	13
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.2	-
Endrin	<0.2	<0.1	-
Methoxychlor	<0.1	<0.1	-
Endosulfan (alpha (I), beta (II) & sulphate)	<0.5	<0.3	-
DDD+DDE+DDT	<0.6	<0.3	-
Chlordane (alpha & gamma)	<0.2	<0.2	-

**TABLE M8**  
**SPLIT SAMPLE**  
 (Ref No: 14513/2-AA)

<b>ANALYTE</b>	<b>TP73 0.2-0.5 (m) mg/kg (SGS)</b>	<b>DSS8 mg/kg (ENVIROLAB)</b>	<b>RELATIVE PERCENTAGE DIFFERENCES (RPD)  %</b>
Arsenic	5	<4	-
Cadmium	<0.3	<0.4	-
Chromium	18	13	32
Copper	1.1	1	10
Lead	8	4	67
Mercury	<0.05	<0.1	-
Nickel	0.6	<1	-
Zinc	4	1	120
<b>TOTAL RECOVERABLE HYDROCARBONS (TRH)</b>			
F1 (C6-C10 less BTEX)	<25	<25	-
F2 (>C10-C16)	<25	<50	-
F3 (>C16-C34)	<90	<100	-
F4 (>C34-C40)	<120	<100	-
<b>BTEX</b>			
Benzene	<0.1	<0.2	-
Toluene	<0.1	<0.5	-
Ethyl Benzene	<0.1	<1	-
Xylenes	<0.3	<3	-
<b>POLYCYCLIC AROMATIC HYDROCARBONS (PAH)</b>			
Benzo(a)Pyrene TEQ	<0.3	<0.5	-
Total PAH	<0.8	<0.05	-
Naphthalene	<0.1	<1	-
Benzo(a)Pyrene	<0.1	<0.05	-
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.2	-
Endrin	<0.2	<0.1	-
Methoxychlor	<0.1	<0.1	-
Endosulfan (alpha (I), beta (II) & sulphate)	<0.5	<0.3	-
DDD+DDE+DDT	<0.6	<0.3	-
Chlordane (alpha & gamma)	<0.2	<0.2	-
<b>POLYCHLORINATED BIPHENYLS (PCB)</b>			
Total PCB	<1	<0.1	-
<b>Phenols</b>	<5	<5	-

**TABLE N1**  
**METAL, CATION EXCHANGE CAPACITY (CEC) & pH TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

Sample Location	Depth (m)	METAL (mg/kg)								CEC (cmol <sub>c</sub> /kg)	pH
		ARSENIC	CADMIUM	CHROMIUM (Total)	COPPER	LEAD	MERCURY	NICKEL	ZINC		
<b>Topsoil</b>											
TP1	0.0-0.15	4	<0.3	13	7	15	<0.05	3.1	42	8.5	5.4
TP2	0.0-0.15	4	0.4	10	5.4	13	<0.05	3.1	91	-	-
TP3	0.0-0.15	5	<0.3	14	5.4	18	<0.05	2.9	30	-	-
TP4	0.0-0.15	4	<0.3	11	6.1	13	<0.05	2.7	36	8.7	6
TP5	0.0-0.15	4	<0.3	14	3.7	15	<0.05	1.9	15	-	-
TP6	0.0-0.15	5	<0.3	7.1	4	8	<0.05	1.3	12	7.8	5.9
TP7	0.0-0.15	3	<0.3	14	4	16	<0.05	2.2	9	-	-
TP8	0.0-0.15	3	<0.3	14	2.8	14	<0.05	2.6	11	5.7	5.8
TP9	0.0-0.15	3	<0.3	11	5.7	13	<0.05	2.2	11	5.5	6.1
TP10	0.0-0.15	5	<0.3	10	12	12	<0.05	7.3	25	6.7	6
TP11	0.0-0.15	4	<0.3	14	4.3	18	<0.05	2.2	13	-	-
TP12	0.0-0.15	2	<0.3	12	2.3	10	<0.05	1.4	7	4.5	5.9
TP13	0.0-0.15	5	<0.3	16	2.1	11	<0.05	2	9	-	-
TP14	0.0-0.15	4	<0.3	19	3.3	12	<0.05	1.4	9	6.3	5.8
TP15	0.0-0.15	3	<0.3	20	2	14	<0.05	1.7	8	-	-
TP16	0.0-0.15	3	<0.3	8.2	2.9	12	<0.05	1.6	6	3.7	6.1
TP17	0.0-0.15	5	<0.3	14	5.2	20	<0.05	3.2	15	-	-
TP18	0.0-0.15	4	<0.3	11	4.6	18	<0.05	3	13	7	5.3
TP19	0.0-0.15	2	<0.3	9.8	2.9	11	<0.05	1.6	6	-	-
TP20	0.0-0.15	4	<0.3	19	4.1	19	<0.05	2.3	18	4.8	6.1
TP24	0.0-0.15	5	<0.3	24	3.4	15	<0.05	2.3	11	8	6
TP25	0.0-0.15	5	<0.3	19	5.1	15	<0.05	2.6	13	5.7	5.7
TP26	0.0-0.15	4	<0.3	16	2.9	13	<0.05	1.8	7	-	-
TP28	0.0-0.15	5	<0.3	13	3.6	17	<0.05	2.6	11	5	5.8
TP29	0.0-0.15	3	<0.3	14	2.7	11	<0.05	1.5	7	-	-
TP30	0.0-0.15	4	<0.3	12	4.9	13	<0.05	1.6	7	5.3	5.6
TP31	0.0-0.15	4	<0.3	11	4.5	10	<0.05	2	10	-	-
TP32	0.0-0.15	5	<0.3	16	3.6	13	<0.05	1.8	8	4	5.7
TP33	0.0-0.15	4	<0.3	12	3.4	13	<0.05	1.6	11	-	-
TP34	0.0-0.15	4	<0.3	11	4.4	14	<0.05	1.7	10	5.7	5
TP35	0.0-0.15	6	<0.3	12	4.8	23	<0.05	2.6	12	-	-
TP36	0.0-0.15	4	<0.3	9.3	4.5	12	<0.05	1.7	9	4.6	5.3
TP37	0.0-0.15	4	<0.3	12	3.1	11	<0.05	1.5	8	-	-
TP38	0.0-0.15	5	<0.3	12	5.1	15	<0.05	2.2	9	6.8	5.7
TP39	0.0-0.15	3	<0.3	13	3.7	12	<0.05	1.9	8	-	-
TP40	0.0-0.15	5	<0.3	17	4.2	14	<0.05	1.7	9	6.5	5.4
TP41	0.0-0.15	5	<0.3	12	4.1	16	<0.05	2.5	10	-	-
TP42	0.0-0.15	4	<0.3	9.5	4.6	11	<0.05	2.3	11	4.9	6.1
TP43	0.0-0.15	4	<0.3	13	3.1	12	<0.05	1.7	8	-	-
TP44	0.0-0.15	3	<0.3	8.6	4.1	10	<0.05	1.9	6	4	5.6
TP45	0.0-0.15	4	<0.3	14	4.2	12	<0.05	1.8	10	-	-
TP46	0.0-0.15	5	<0.3	16	3.5	12	<0.05	1.8	7	4.5	5.5
TP47	0.0-0.15	6	<0.3	20	2.1	6	<0.05	1.2	6	-	-
TP48	0.0-0.15	3	<0.3	7.8	3.3	9	<0.05	1.6	5	3.5	5.2
TP49	0.0-0.15	4	<0.3	12	5.2	14	<0.05	2.9	10	-	-
TP50	0.0-0.15	4	<0.3	12	3.3	10	<0.05	1.7	8	5.6	5.2
TP51	0.0-0.15	5	<0.3	14	3.3	10	<0.05	1.6	9	-	-
TP52	0.0-0.15	5	<0.3	17	4.7	12	<0.05	1.5	8	7.2	5.5
TP53	0.0-0.15	5	<0.3	10	3.2	13	<0.05	2.4	9	-	-



**TABLE N1**  
**METAL, CATION EXCHANGE CAPACITY (CEC) & pH TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

TP54	0.0-0.15	5	<0.3	17	6.5	13	<0.05	1.9	12	5.6	5.6
TP55	0.0-0.15	6	<0.3	18	4.6	15	<0.05	2.5	12	-	-
TP56	0.0-0.15	5	<0.3	14	4	13	<0.05	1.7	7	4.3	5.6
TP57	0.0-0.15	6	<0.3	16	4.9	19	<0.05	2.7	11	-	-
TP58	0.0-0.15	3	<0.3	12	2.5	14	<0.05	2.2	9	4.3	5.7
TP59	0.0-0.15	3	<0.3	9.7	3.1	13	<0.05	1.7	7	-	-
TP60	0.0-0.15	4	<0.3	18	2	14	<0.05	1.4	7	5.8	5.3
TP61	0.0-0.15	5	<0.3	16	5.1	19	<0.05	3.2	11	-	-
TP62	0.0-0.15	5	<0.3	22	1.7	15	<0.05	1.4	8	7.7	4.9
TP63	0.0-0.15	4	<0.3	13	2.6	12	<0.05	1.6	7	-	-
TP64	0.0-0.15	3	<0.3	14	2.2	10	<0.05	1.7	9	3.7	5.7
TP65	0.0-0.15	5	<0.3	15	2.3	15	<0.05	1.9	9	-	-
TP66	0.0-0.15	8	<0.3	23	1.4	14	<0.05	2.2	12	3.9	5.6
TP67	0.0-0.15	5	<0.3	16	4.1	26	<0.05	2.9	11	-	-
TP68	0.0-0.15	5	<0.3	13	3.6	15	<0.05	2.2	10	5.2	5.9
TP69	0.0-0.15	3	<0.3	7.8	5.9	6	<0.05	1.7	7	-	-
TP70	0.0-0.15	3	<0.3	11	2.9	11	<0.05	1.6	7	4	5.4
TP71	0.0-0.15	4	<0.3	13	1.7	18	<0.05	1.4	7	-	-
TP72	0.0-0.15	4	<0.3	20	0.8	13	<0.05	1.4	8	4.4	5.2
TP73	0.0-0.15	4	<0.3	13	2.6	12	<0.05	1.7	9	-	-
Limit of Reporting (LOR)		1	0.3	0.5	0.5	1	0.05	0.5	2	0.02	0.1
<b>NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)</b>											
Health-based Investigation Levels (HIL) A - <sup>a</sup> Residential A		100	20	100 <sup>c</sup>	6000	300	10 <sup>d</sup>	400	7400		
Ecological Investigation Levels (EIL) - <sup>b</sup> Urban residential		100 <sup>e</sup>	-	410 <sup>f</sup>	120	1100 <sup>g</sup>	-	45	280		

Notes: a: Residential with garden / accessible soil (home grown produce <10% fruit and vegetable intake (no poultry)), also includes childcare centres, preschools and primary schools.  
b: EIL of aged copper, nickel & zinc were derived from calculation spreadsheet developed by CSIRO for NEPC; Old Suburb with Low Traffic; the average CEC= 5.5 cmolc/kg & pH= 5.6 ; the assumed clay content=10 % were selected for derivation of EIL; a conservative approach.

c: Chromium (VI)

d: Methyl Mercury

e: Generic EIL for aged arsenic

f: Chromium (III)

g: Generic added contaminant limit for aged lead

**TABLE N2**  
**METAL, CATION EXCHANGE CAPACITY (CEC) & pH TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

Sample Location	Depth (m)	METAL (mg/kg)								CEC (cmol/kg)	pH
		ARSENIC	CADMIUM	CHROMIUM (Total)	COPPER	LEAD	MERCURY	NICKEL	ZINC		
<b>Fill/ Possible Fill</b>											
TP1	0.2-0.5	2	<0.3	4.9	7.5	8	<0.05	1.4	8	11	4.7
TP1	1.2-1.5	4	<0.3	11	9.2	11	<0.05	5.1	23	11	5.1
TP2	0.2-0.5	4	<0.3	10	15	13	<0.05	2.7	20	24	5.1
TP3	0.2-0.5	5	<0.3	9.8	14	11	<0.05	2	17	18	5
TP3	1.2-1.5	2	<0.3	4	6.1	5	<0.05	1.1	6	17	8.1
TP4	0.2-0.5	5	<0.3	7.7	9.5	11	<0.05	1.6	10	23	4.9
TP4	2.2-2.5	7	<0.3	11	9.8	12	<0.05	3.9	21	13	5.3
TP5	0.2-0.5	4	<0.3	14	8.4	9	<0.05	2.7	17	9.3	5.5
TP5	1.2-1.5	4	<0.3	9	11	11	<0.05	1.7	12	25	5.1
TP6	0.2-0.5	3	<0.3	13	7.5	16	<0.05	2.2	10	9.4	5.1
TP7	0.2-0.5	3	<0.3	10	12	11	<0.05	2	15	19	5
TP8	0.2-0.5	3	<0.3	10	11	12	<0.05	2.7	16	13	5.1
TP8	1.2-1.5	4	<0.3	10	9.5	15	<0.05	4	18	13	6.7
TP9	0.2-0.5	7	<0.3	16	12	18	<0.05	6.3	33	13	5.2
TP10	0.2-0.5	4	<0.3	12	15	13	<0.05	3.5	24	23	4.8
TP11	0.2-0.5	2	<0.3	7.4	8.8	11	<0.05	3.9	17	10	5.5
TP11	1.2-1.5	4	<0.3	14	17	14	<0.05	3.2	22	19	5.1
TP12	0.2-0.5	5	<0.3	14	17	16	<0.05	3.1	22	19	5.1
TP12	1.8-1.9	3	<0.3	16	1.7	13	<0.05	1.4	6	1.8	6.1
TP13	0.2-0.5	6	<0.3	14	12	17	<0.05	3.7	20	14	5.2
TP13	1.9-2.0	4	<0.3	20	<0.5	15	<0.05	2.4	9	1.8	6.6
TP14	0.2-0.5	4	<0.3	8.5	9.3	12	<0.05	3.2	16	11	5.4
TP14	1.8-2.0	3	<0.3	27	2.5	14	<0.05	2.6	10	2.9	6.2
TP15	0.2-0.5	4	<0.3	11	10	11	<0.05	3.4	16	13	5.5
TP16	0.2-0.5	3	<0.3	9	11	12	<0.05	1.9	15	22	5.4
TP16	1.2-1.5	4	<0.3	10	8.6	10	<0.05	2.1	10	13	5.4
TP17	0.2-0.5	1	<0.3	3.9	8.4	7	<0.05	1.6	6	25	5.6
TP18	0.2-0.5	7	<0.3	17	16	17	<0.05	3.2	27	22	5.4
TP20	0.25-0.35	3	<0.3	21	0.8	14	<0.05	1.5	7	-	-
TP21	0.0-0.15	5	<0.3	13	13	16	<0.05	7.7	25	20	6.3
TP22	0.0-0.15	6	<0.3	14	10	16	<0.05	9.9	27	12	5.2
TP23	0.0-0.15	5	<0.3	25	2.1	16	<0.05	2.9	12	3.6	6
TP25	0.2-0.5	6	<0.3	13	10	12	<0.05	3.5	17	14	5.1
TP26	0.2-0.5	<1	<0.3	4.1	7.3	7	<0.05	1.9	10	20	4.7
TP27	0.0-0.15	4	<0.3	8.5	11	10	<0.05	2.3	13	16	4.4
TP27	0.5-0.8	6	<0.3	12	11	12	<0.05	3.6	19	16	4.7
TP47	0.2-0.4	2	<0.3	1.4	4.7	3	<0.05	<0.5	<2	38	5.8
TP63	0.2-0.4	2	<0.3	2.2	6.2	3	<0.05	<0.5	<2	33	5.4
TP64	0.2-0.4	9	<0.3	11	12	10	<0.05	<0.5	7	28	4.7

**TABLE N2**  
**METAL, CATION EXCHANGE CAPACITY (CEC) & pH TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

TP72	0.2-0.5	3	<0.3	7.5	3.9	7	<0.05	0.6	3	20	4.8
TP73	0.2-0.5	5	<0.3	18	1.1	8	<0.05	0.6	4	17	4.5
Limit of Reporting (LOR)		1	0.3	0.5	0.5	1	0.05	0.5	2	0.02	0.1
<b>NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)</b>											
Health-based Investigation Levels (HIL) A - <sup>a</sup> Residential A		100	20	100 <sup>c</sup>	6000	300	10 <sup>d</sup>	400	7400		
Ecological Investigation Levels (EIL) - <sup>b</sup> Urban residential		100 <sup>e</sup>	-	200 <sup>f</sup>	140	1100 <sup>g</sup>	-	240	330		

Notes: a: Residential with garden / accessible soil (home grown produce <10% fruit and vegetable intake (no poultry)), also includes childcare centres, preschools and primary schools.  
b: EIL of aged copper, nickel & zinc were derived from calculation spreadsheet developed by CSIRO for NEPC; Old Suburb with Low Traffic; the average CEC=16.3 cmolc/kg & pH=5.4; the assumed clay content=1 % were selected for derivation of EIL; a conservative approach.

EIL of aged copper = added contaminant limit (calculated based on the average of the pH and the average of the CEC) + ambient background concentration.

c: Chromium (VI)

d: Methyl Mercury

e: Generic EIL for aged arsenic

f: Chromium (III)

g: Generic added contaminant limit for aged lead

**TABLE N3**  
**METAL, CATION EXCHANGE CAPACITY (CEC) & pH TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

		METAL (mg/kg)								CEC (cmol <sub>c</sub> /kg)	pH
		ARSENIC	CADMIUM	CHROMIUM (Total)	COPPER	LEAD	MERCURY	NICKEL	ZINC		
Sample Location	Depth (m)										
Natural Soil											
TP1	2.45-2.55	5	<0.3	11	13	14	<0.05	2.1	14	19	4.9
TP3	2.85-2.95	4	<0.3	8.3	9.6	9	<0.05	5.5	18	6.3	6.9
TP5	2.65-2.75	4	<0.3	14	9.6	12	<0.05	3.7	20	12	5.7
TP6	1.55-1.65	3	<0.3	8.2	10	13	<0.05	5.4	21	-	-
TP7	2.05-2.15	4	<0.3	11	9.2	13	<0.05	2.8	18	13	5.3
TP8	2.65-2.75	4	<0.3	13	13	14	<0.05	4.4	22	-	-
TP9	2.25-2.35	4	<0.3	10	12	11	<0.05	6.8	24	-	-
TP10	2.25-2.35	4	<0.3	13	11	10	<0.05	4.3	19	16	5.9
TP11	1.85-1.95	2	<0.3	17	5.9	6	<0.05	2.4	8	8.1	5.1
TP12	1.95-2.05	1	<0.3	24	4.7	10	<0.05	4	6	9.2	5.7
TP13	2.05-2.15	3	<0.3	31	<0.5	18	<0.05	1.7	6	-	-
TP14	2.05-2.15	<1	<0.3	19	2.6	10	<0.05	1.6	4	3.8	5.8
TP15	2.05-2.15	5	<0.3	1.7	5.7	3	<0.05	<0.5	2	-	-
TP16	2.05-2.15	3	<0.3	6.5	6.4	6	<0.05	0.8	4	26	4.6
TP17	1.55-1.65	1	<0.3	19	1.8	12	<0.05	1.7	5	-	-
TP18	1.05-1.15	4	<0.3	7.9	4.8	8	<0.05	<0.5	4	26	4.8
TP20	0.25-0.35	3	<0.3	21	0.8	14	<0.05	1.5	7	-	-
TP21	0.55-0.65	4	<0.3	12	11	11	<0.05	6.7	20	19	7.3
TP22	0.55-0.65	2	<0.3	37	2.2	18	0.05	4	9	-	-
TP23	0.55-0.65	<1	<0.3	26	1	13	<0.05	2.1	5	6.6	5.9
TP24	0.25-0.35	2	<0.3	21	1.2	12	<0.05	1.5	5	-	-
TP25	0.85-0.95	2	<0.3	19	1.7	9	<0.05	1.2	7	3.4	5.5
TP26	1.85-1.95	3	<0.3	23	2	11	<0.05	1.7	6	-	-
TP28	0.25-0.35	3	<0.3	24	2.9	8	<0.05	1.8	6	7.5	5.1
TP30	0.25-0.35	2	<0.3	20	3.5	10	<0.05	0.6	6	-	-
TP32	0.25-0.35	2	<0.3	22	2.1	8	<0.05	1.6	6	7.3	5.2
TP34	0.25-0.35	3	<0.3	2.3	4.2	2	<0.05	<0.5	<2	27	5
TP36	0.25-0.35	3	<0.3	3.8	5.3	4	<0.05	<0.5	2	25	4.5
TP38	0.25-0.35	4	<0.3	23	3.9	7	<0.05	1.4	4	15	4.3
TP39	0.25-0.35	5	<0.3	16	2.2	18	<0.05	0.9	5	6.4	5
TP41	0.25-0.35	2	<0.3	2.2	5.3	5	0.08	<0.5	2	-	-
TP43	0.25-0.35	2	<0.3	14	2.6	8	<0.05	1.2	7	6.7	5.6
TP45	0.25-0.35	5	<0.3	8.3	6.2	6	<0.05	<0.5	5	17	4.9
TP47	0.45-0.55	5	<0.3	3.1	7.8	6	0.08	<0.5	4	-	-
TP49	0.25-0.35	2	<0.3	3.4	4.4	4	<0.05	<0.5	2	18	4.6
TP51	0.25-0.35	6	<0.3	11	5.6	8	<0.05	<0.5	6	-	-
TP53	0.25-0.35	3	<0.3	12	5.3	5	0.06	<0.5	3	7	4.5
TP54	0.25-0.35	4	<0.3	8.6	6.8	4	0.06	<0.5	4	16	4.8
TP56	0.25-0.35	3	<0.3	7.7	3.8	4	<0.05	<0.5	4	14	5

**TABLE N3**  
**METAL, CATION EXCHANGE CAPACITY (CEC) & pH TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

TP58	0.25-0.35	2	<0.3	2.8	3.8	4	<0.05	0.8	4	15	5
TP60	0.25-0.35	5	<0.3	15	3.1	15	<0.05	<0.5	6	15	4.2
TP62	0.35-0.45	7	<0.3	4.7	15	10	<0.05	0.5	6	26	4.8
TP63	0.45-0.55	3	<0.3	2.7	8.2	6	<0.05	<0.5	3	-	-
TP64	0.45-0.55	5	<0.3	4	11	6	<0.05	<0.5	5	-	-
TP65	0.25-0.35	3	<0.3	9.2	1.9	5	<0.05	<0.5	2	14	4.6
TP67	0.25-0.35	2	<0.3	2.8	4.3	4	<0.05	<0.5	<2	21	5.4
TP69	0.25-0.35	<1	<0.3	3	4.8	3	<0.05	<0.5	<2	-	-
TP71	0.25-0.35	6	<0.3	10	6.6	5	<0.05	<0.5	4	-	-
TP72	0.65-0.75	3	<0.3	7.7	3.2	5	<0.05	0.6	2	-	-
TP73	0.75-0.85	1	<0.3	3.7	3.3	2	<0.05	0.6	<2	13	5.1
Limit of Reporting (LOR)		1	0.3	0.5	0.5	1	0.05	0.5	2	0.02	0.1
NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)											
Health-based Investigation Levels (HIL) A - <sup>a</sup> Residential A		100	20	100 <sup>c</sup>	6000	300	10 <sup>d</sup>	400	7400		
Ecological Investigation Levels (EIL) - <sup>b</sup> Urban residential		100 <sup>e</sup>	-	200 <sup>f</sup>	120	1100 <sup>g</sup>	-	220	290		

Notes: a: Residential with garden / accessible soil (home grown produce <10% fruit and vegetable intake (no poultry)), also includes childcare centres, preschools and primary schools.

b: EIL of aged nickel & zinc were derived from calculation spreadsheet developed by CSIRO for NEPC; Old Suburb with Low Traffic; the average CEC=14.2cmolc/kg & pH=5.2; the assumed clay content=1 % were selected for derivation of EIL; a conservative approach.

c: Chromium (VI)

d: Methyl Mercury

e: Generic EIL for aged arsenic

f: Chromium (III)

g: Generic added contaminant limit for aged lead

**TABLE O**  
**TOTAL RECOVERABLE HYDROCARBONS (TRH) AND BTEX TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

											NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)																							
Sample Location Depth (m)Soil type			TRH (mg/kg)					BTEX (mg/kg)				Health Screening Levels (HSL) A Low density residential						Ecological Screening Levels for fine-grained soil Urban residential								Ecological Screening Levels for coarse-grained soil Urban residential								
												F1F2*BENZENETOLUENEETHYLBENZENEXYLENES						F1F2*F3F4BENZENETOLUENEETHYLBENZENEXYLENES								F1F2*F3F4BENZENETOLUENEETHYLBENZENEXYLENES								
TP1	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP1	1.2-1.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	90	NL	1	NL	NL	310	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP2	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP2	2.2-2.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	150	NL	2	NL	NL	NL	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP3	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP3	1.2-1.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	90	NL	1	NL	NL	310	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP4	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP4	2.2-2.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	150	NL	2	NL	NL	NL	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP5	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP5	1.2-1.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	90	NL	1	NL	NL	310	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP6	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP7	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP8	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP8	1.2-1.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	90	NL	1	NL	NL	310	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP9	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP10	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP11	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP11	1.2-1.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	90	NL	1	NL	NL	310	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP12	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP12	1.8-1.9	Silt	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	65	NL	0.7	NL	NL	210	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP13	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP13	1.9-2.0	Silt	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	65	NL	0.7	NL	NL	210	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP14	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP14	1.8-2.0	Silt	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	65	NL	0.7	NL	NL	210	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP15	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP16	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP16	1.2-1.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	90	NL	1	NL	NL	310	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP17	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-
TP18	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-	-

**TABLE O**  
**TOTAL RECOVERABLE HYDROCARBONS (TRH) AND BTEX TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

												NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)																					
			TRH (mg/kg)					BTEX (mg/kg)				Health Screening Levels (HSL) A Low density residential						Ecological Screening Levels for fine-grained soil Urban residential								Ecological Screening Levels for coarse- grained soil Urban residential							
Sample Location	Depth (m)	Soil type	F1	F2*	F2**	F3	F4	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES	F1	F2*	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES	F1	F2**	F3	F4	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES	F1	F2**	F3	F4	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES
TP21	0.0-0.15	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP22	0.0-0.15	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP23	0.0-0.15	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP25	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP26	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP27	0.0-0.15	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP27	0.5-0.8	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP47	0.2-0.4	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP63	0.2-0.4	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP64	0.2-0.4	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP72	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
TP73	0.2-0.5	Clay	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
Limit of Reporting (LOR)			25	25	25	90	120	0.1	0.1	0.1	0.3																						

Notes:

- F1: C6-C10 less BTEX
- F2\*: >C10-C16 less Naphthalene
- F2\*\*: >C10-C16
- F3: >C16-C34
- F4: >C34-C40
- NL: Not Limiting

**TABLE P**  
**POLYCYCLIC AROMATIC HYDROCARBONS (PAH) TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

			NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)								
			PAH (mg/kg)				Health-based Investigation Levels (HIL) A - Residential A		Health Screening Level (HSL) A - Low density residential	Generic Ecological Investigation Level (EIL) - Urban residential	Ecological Screening Level (ESL) - Urban residential
			BaP TEQ	TOTAL PAHs	NAPHTHALENE	BENZO(a)PYRENE (BaP)	BaP TEQ	TOTAL PAHs	NAPHTHALENE	NAPHTHALENE	BENZO(a)PYRENE (BaP)
Sample Location	Depth (m)	Soil type	BaP TEQ	TOTAL PAHs	NAPHTHALENE	BENZO(a)PYRENE (BaP)	BaP TEQ	TOTAL PAHs	NAPHTHALENE	NAPHTHALENE	BENZO(a)PYRENE (BaP)
TP1	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP1	1.2-1.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	NL	170	0.7
TP2	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP2	2.2-2.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	NL	170	0.7
TP3	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP3	1.2-1.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	NL	170	0.7
TP4	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP4	2.2-2.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	NL	170	0.7
TP5	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP5	1.2-1.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	NL	170	0.7
TP6	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP7	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP8	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP8	1.2-1.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	NL	170	0.7
TP9	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP10	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP11	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP11	1.2-1.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	NL	170	0.7
TP12	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP12	1.8-1.9	Silt	<0.3	<0.8	<0.1	<0.1	3	300	NL	170	0.7
TP13	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP13	1.9-2.0	Silt	<0.3	<0.8	<0.1	<0.1	3	300	NL	170	0.7
TP14	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP14	1.8-2.0	Silt	<0.3	<0.8	<0.1	<0.1	3	300	NL	170	0.7



**TABLE P**  
**POLYCYCLIC AROMATIC HYDROCARBONS (PAH) TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

			NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)								
			PAH (mg/kg)				Health-based Investigation Levels (HIL) A - Residential A		Health Screening Level (HSL) A - Low density residential	Generic Ecological Investigation Level (EIL) - Urban residential	Ecological Screening Level (ESL) - Urban residential
			BaP TEQ	TOTAL PAHs	NAPHTHALENE	BENZO(a)PYRENE (BaP)	BaP TEQ	TOTAL PAHs	NAPHTHALENE	NAPHTHALENE	BENZO(a)PYRENE (BaP)
Sample Location	Depth (m)	Soil type	BaP TEQ	TOTAL PAHs	NAPHTHALENE	BENZO(a)PYRENE (BaP)	BaP TEQ	TOTAL PAHs	NAPHTHALENE	NAPHTHALENE	BENZO(a)PYRENE (BaP)
TP15	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP16	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP16	1.2-1.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	NL	170	0.7
TP17	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP18	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP21	0.0-0.15	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP22	0.0-0.15	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP23	0.0-0.15	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP25	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP26	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP27	0.0-0.15	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP27	0.5-0.8	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP47	0.2-0.4	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP63	0.2-0.4	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP64	0.2-0.4	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP72	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
TP73	0.2-0.5	Clay	<0.3	<0.8	<0.1	<0.1	3	300	5	170	0.7
Limit of Reporting (LOR)			0.3	0.8	0.1	0.1					

Notes: a: Residential with garden / accessible soil (home grown produce <10% fruit and vegetable intake (no poultry)), also includes childcare centres, preschools and primary schools.

NL: Not Limiting

**TABLE Q**  
**ORGANOCHLORINE PESTICIDES (OCP), POLYCHLORINATED BIPHENYLS (PCB) & PHENOLS TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

Sample Location	Depth (m)	OCP (mg/kg)										(mg/kg)	(mg/kg)
		HEXACHLOROBENZENE (HCB)	HEPTACHLOR	ALDRIN+DIELDRIN	ENDRIN	METHOXYCHLOR	MIREX	ENDOSULFAN (alpha, beta & sulphate)	DDD+DDE+DDT	DDT	CHLORDANE (alpha & gamma)		
TP1	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP1	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP1	1.2-1.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP2	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP2	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP2	2.2-2.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP3	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP3	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP3	1.2-1.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP4	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP4	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP4	2.2-2.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP5	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP5	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP5	1.2-1.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP6	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP6	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP7	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP7	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP8	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP8	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP8	1.2-1.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP9	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP9	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP10	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP10	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP11	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP11	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP11	1.2-1.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP12	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP12	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5

**TABLE Q**  
**ORGANOCHLORINE PESTICIDES (OCP), POLYCHLORINATED BIPHENYLS (PCB) & PHENOLS TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

Sample Location	Depth (m)	OCP (mg/kg)										(mg/kg)	(mg/kg)
		HEXACHLOROBENZENE (HCB)	HEPTACHLOR	ALDRIN+DIELDRIN	ENDRIN	METHOXYCHLOR	MIREX	ENDOSULFAN (alpha, beta & sulphate)	DDD+DDE+DDT	DDT	CHLORDANE (alpha & gamma)		
TP12	1.8-1.9	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP13	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP13	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP13	1.9-2.0	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP14	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP14	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP14	1.8-2.0	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP15	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP15	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP16	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP16	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP16	1.2-1.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP17	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	-
TP17	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP18	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	-
TP18	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP19	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	-
TP20	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	-
TP21	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP22	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP23	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP24	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	-
TP25	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP25	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP26	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP26	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP27	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	-
TP27	0.5-0.8	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP28	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP29	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP30	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-

**TABLE Q**  
**ORGANOCHLORINE PESTICIDES (OCP), POLYCHLORINATED BIPHENYLS (PCB) & PHENOLS TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

Sample Location		OCP (mg/kg)										(mg/kg)	(mg/kg)
		HEXACHLOROBENZENE (HCB)	HEPTACHLOR	ALDRIN+DIELDRIN	ENDRIN	METHOXYCHLOR	MIREX	ENDOSULFAN (alpha, beta & sulphate)	DDD+DDE+DDT	DDT	CHLORDANE (alpha & gamma)		
TP31	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP32	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP33	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP34	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP35	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP36	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP37	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP38	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP39	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP40	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP41	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP42	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP43	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP44	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP45	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP46	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP47	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP47	0.2-0.4	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP48	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP49	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP50	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP51	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP52	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP53	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP54	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP55	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP56	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP57	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP58	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP59	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP60	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-

**TABLE Q**  
**ORGANOCHLORINE PESTICIDES (OCP), POLYCHLORINATED BIPHENYLS (PCB) & PHENOLS TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

Sample Location  Depth (m)		OCP (mg/kg)										(mg/kg)	(mg/kg)
		HEXACHLOROBENZENE (HCB)	HEPTACHLOR	ALDRIN+DIELDRIN	ENDRIN	METHOXYCHLOR	MIREX	ENDOSULFAN (alpha, beta & sulphate)	DDD+DDE+DDT	DDT	CHLORDANE (alpha & gamma)		
TP61	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP62	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP63	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP63	0.2-0.4	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP64	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP64	0.2-0.4	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP65	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP66	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP67	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP68	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP69	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP70	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP71	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP72	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP72	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
TP73	0.0-0.15	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-
TP73	0.2-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<5
Limit of Reporting (LOR)		0.1	0.1	0.15	0.2	0.1	0.1	0.5	0.6	0.2	0.2	1	5
NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)													
Health-based Investigation Levels (HIL) A - Residential A <sup>a</sup>		10	6	6	10	300	10	270	240		50	1	3000
Ecological Investigation Levels (EIL) - Urban residential													

**TABLE R**  
**ASBESTOS TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

Sample Location	Depth (m)	ASBESTOS (% w/w)	
Soil Sample		ACM (>7mm)	AF/FA (<7mm)
TP1	0.2-0.5	<0.01	<0.001
TP1	1.2-1.5	<0.01	<0.001
TP2	0.2-0.5	<0.01	<0.001
TP2	2.2-2.5	<0.01	<0.001
TP3	0.2-0.5	<0.01	<0.001
TP3	1.2-1.5	<0.01	<0.001
TP4	0.2-0.5	<0.01	<0.001
TP4	2.2-2.5	<0.01	<0.001
TP5	0.2-0.5	<0.01	<0.001
TP5	1.2-1.5	<0.01	<0.001
TP6	0.2-0.5	<0.01	<0.001
TP7	0.2-0.5	<0.01	<0.001
TP8	0.2-0.5	<0.01	<0.001
TP8	1.2-1.5	<0.01	<0.001
TP9	0.2-0.5	<0.01	<0.001
TP10	0.2-0.5	<0.01	<0.001
TP11	0.2-0.5	<0.01	<0.001
TP11	1.2-1.5	<0.01	<0.001
TP12	0.2-0.5	<0.01	<0.001
TP12	1.8-1.9	<0.01	<0.001
TP13	0.2-0.5	<0.01	<0.001
TP13	1.9-2.0	<0.01	<0.001
TP14	0.2-0.5	<0.01	<0.001
TP14	1.8-2.0	<0.01	<0.001
TP15	0.2-0.5	<0.01	<0.001
TP16	0.2-0.5	<0.01	<0.001
TP16	1.2-1.5	<0.01	<0.001
TP17	0.2-0.5	<0.01	<0.001
TP18	0.2-0.5	<0.01	<0.001
TP21	0.0-0.15	<0.01	<0.001
TP22	0.0-0.15	<0.01	<0.001

**TABLE R**  
**ASBESTOS TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 14513/2-AA)**

Sample Location	Depth (m)	ASBESTOS (% w/w)	
TP23	0.0-0.15	<0.01	<0.001
TP25	0.2-0.5	<0.01	<0.001
TP26	0.2-0.5	<0.01	<0.001
TP27	0.0-0.15	<0.01	<0.001
TP27	0.5-0.8	<0.01	<0.001
TP63	0.2-0.4	<0.01	<0.001
TP64	0.2-0.4	<0.01	<0.001
TP72	0.2-0.5	<0.01	<0.001
TP73	0.2-0.5	<0.01	<0.001
Limits of Reporting (LOR)		0.01	0.001
<b>NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)</b>			
Health Screening Levels - Residential A <sup>a</sup>		0.01	0.001
<b>Fibro-cement Piece</b>			

Notes:

ACM: Asbestos Containing

AF: Asbestos Fines

FA: Fibrous Asbestos

a: Residential with garden / accessible soil (home grown produce <10% fruit and vegetable intake (no poultry)), also includes childcare centres, preschools and primary schools.

## **APPENDIX A**

---

### **AERIAL PHOTOGRAPHS**



14513/2



**July 2019**



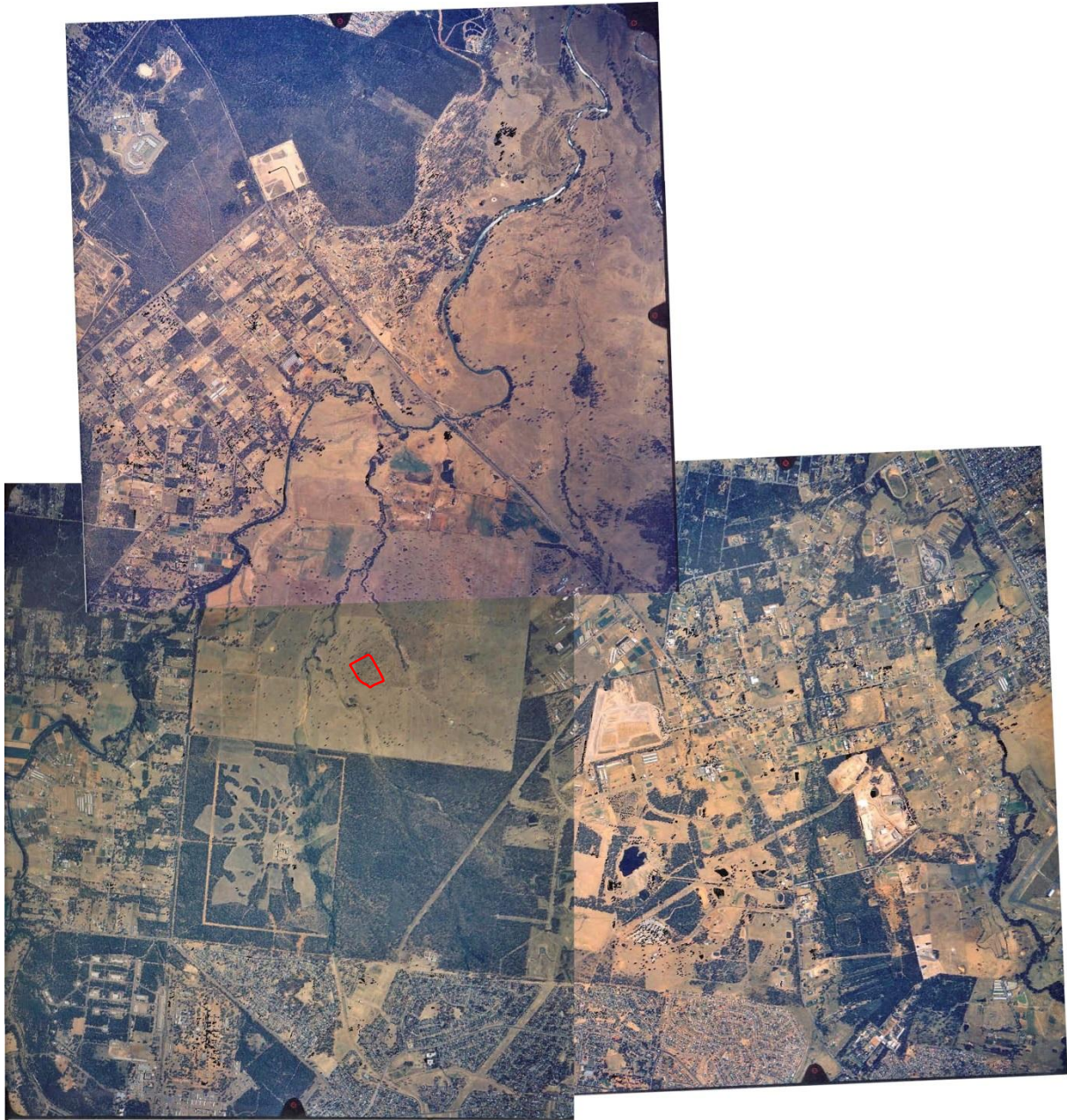
14513/2



**2004**



14513/2



**1994**



14513/2



**1989**



14513/2



**1978**



14513/2



**1965**

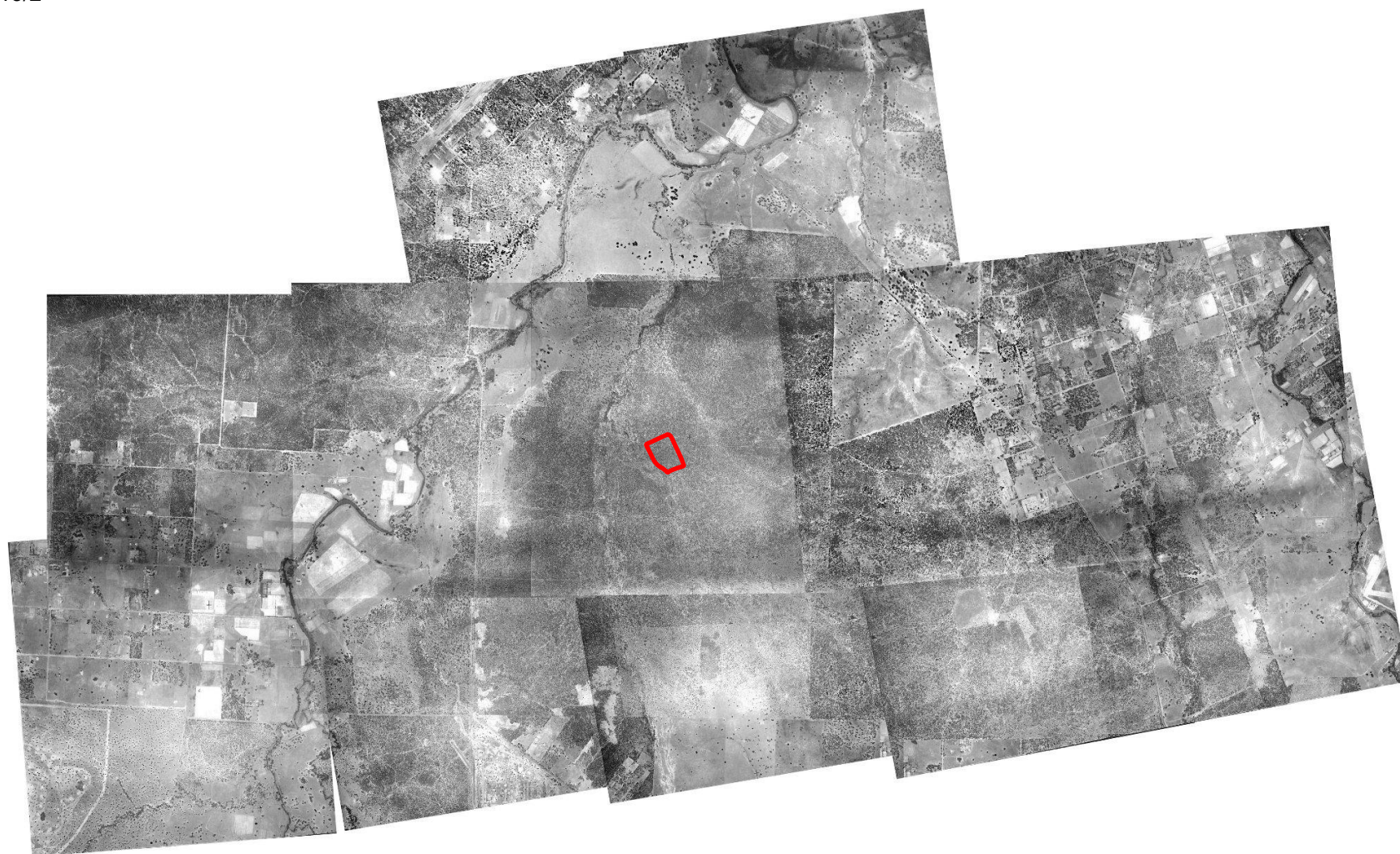


14513/2



**1955**

14513/2



**1947**



## **APPENDIX B**

---

### **CADASTRAL AND DEPOSITED PLANS**

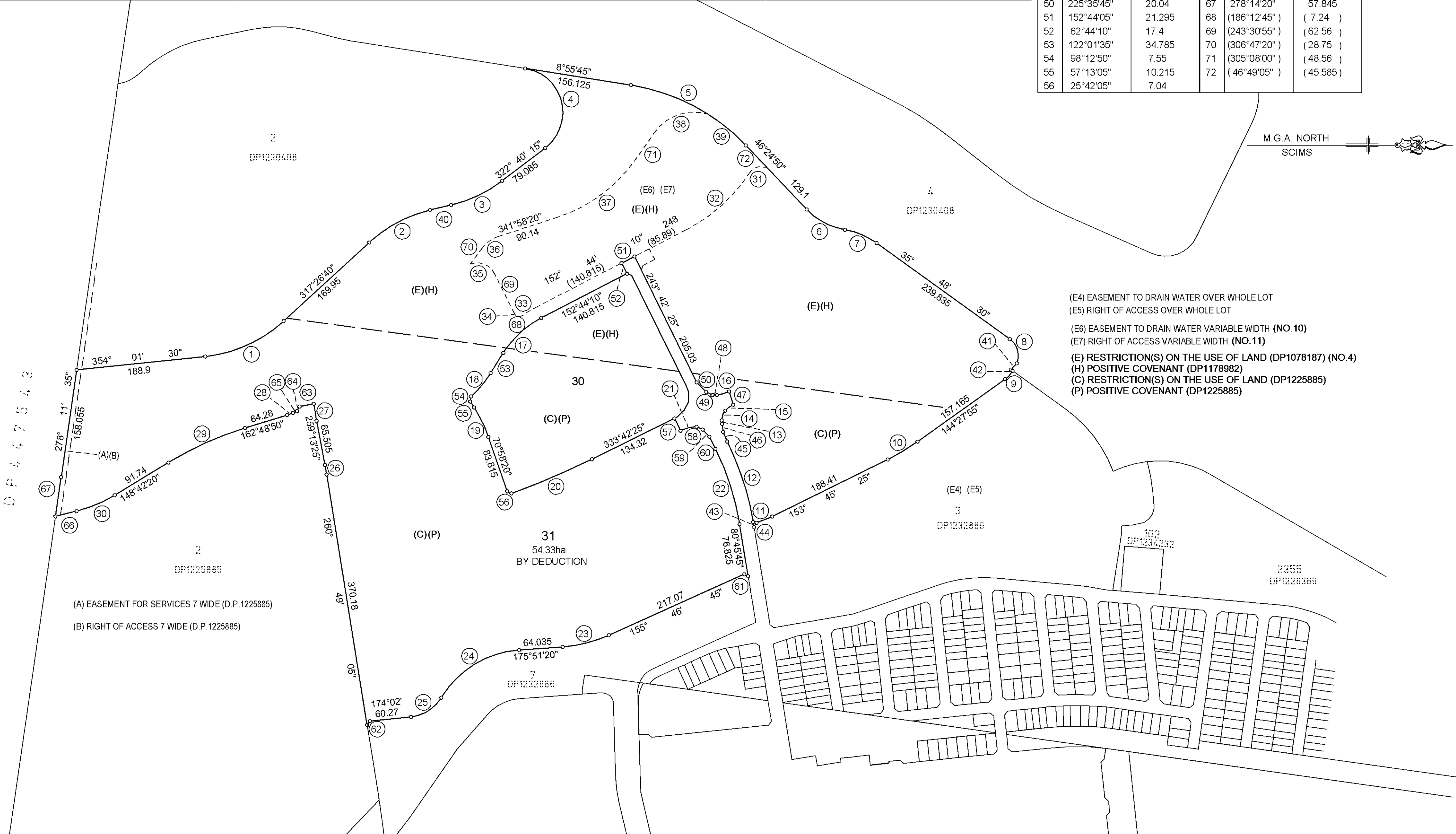


SCHEDULE of CURVED BOUNDARIES


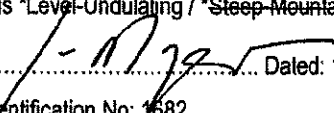
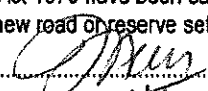
No	Bearing	Chord	Arc	Radius	No	Bearing	Chord	Arc	Radius	No	Bearing	Chord	Arc	Radius	No	Bearing	Chord	Arc	Radius
1	335°44'05"	125.53	127.69	200	11	158°06'40"	24.205	24.225	159.4	21	346°22'30"	24.12	24.32	55	31	(165°09'55")	( 26.655 )	29.21	19.9
2	331°58'35"	100.37	101.45	200	12	252°04'50"	123.62	124.095	409.5	22	72°13'40"	115.605	116.03	389.5	32	(137°55'35")	(123.325)	124.71	241.25
3	334°35'25"	82.61	83.205	200	13	264°46'10"	5.06	5.06	64.55	23	165°49'00"	69.34	69.695	198.9	33	(148°07'20")	( 25.645 )	25.67	159.4
4	255°48'00"	119.55	151.725	65	14	289°49'30"	15.155	15.565	19.55	24	148°31'10"	133.035	138.215	144.85	34	(238°25'50")	( 7.195 )	7.205	40.6
5	27°40'15"	189.53	192.955	294.925	15	323°10'05"	14.465	14.545	39.55	25	147°36'30"	52.425	54.33	58.9	35	(200°43'05")	( 37.91 )	41.68	27.9
6	27°58'55"	63.235	64.34	100	16	163°08'15"	18.355	18.435	56	26	260°01'10"	14.205	14.205	510.22	36	(324°22'50")	( 30.225 )	30.705	50
7	22°40'45"	49.97	50.41	110	17	137°22'50"	75.2	76.11	142	27	260°42'15"	25.27	25.275	489.1	37	(323°33'10")	(141.745)	144.215	224.3
8	73°45'10"	36.895	39.735	30	18	130°10'15"	44.765	44.915	158	28	159°59'20"	9.105	9.11	92.35	38	(341°07'40")	( 82.275 )	87.95	70
9	132°32'15"	16.285	16.405	39.4	19	64°05'40"	48.02	48.135	200.5	29	155°45'35"	122.755	123.065	499.75	39	( 39°26'10" )	( 71.66 )	71.835	294.925
10	149°06'40"	50.69	50.745	312.9	20	337°00'15"	127.685	127.755	1110.1	30	157°22'55"	60.425	60.655	200.25					

SCHEDULE of LINES

No	Bearing	Distance	No	Bearing	Distance
40	346°30'30"	31.69	57	63°42'30"	20
41	133°42'30"	12.47	58	24°13'50"	10
42	35°51'30"	3.18	59	46°46'15"	14.155
43	121°31'55"	7.595	60	63°40'45"	19.75
44	260°45'55"	7.54	61	208°16'15"	6.09
45	247°59'00"	14.93	62	127°25'30"	6.87
46	262°26'10"	12.065	63	169°21'50"	20.825
47	252°27'25"	20.235	64	119°28'30"	7.915
48	180°25'40"	6.62	65	157°09'45"	6.52
49	204°50'25"	10	66	166°03'35"	31.67
50	225°35'45"	20.04	67	278°14'20"	57.845
51	152°44'05"	21.295	68	(186°12'45" )	( 7.24 )
52	62°44'10"	17.4	69	(243°30'55" )	( 62.56 )
53	122°01'35"	34.785	70	(306°47'20" )	( 28.75 )
54	98°12'50"	7.55	71	(305°08'00" )	( 48.56 )
55	57°13'05"	10.215	72	( 46°49'05" )	( 45.585 )
56	25°42'05"	7.04			




SURVEYOR Name: Ian Vincent Myers Date:13 <sup>th</sup> September, 2018. Reference: 20260-3C	PLAN OF SUBDIVISION OF LOTS 1 & 4 D.P.1232886 AND EASEMENTS OVER LOT 3 D.P.1232886	L.G.A: BLACKTOWN Locality: MARSDEN PARK Reduction Ratio: 1:4000 Lengths are in metres	REGISTERED 25.01.2019	DP1237735
--	--	--	--------------------------	-----------

PLAN FORM 6 (2017)		DEPOSITED PLAN ADMINISTRATION SHEET		Sheet 1 of 3 sheet(s)	
<p>Office Use Only</p> <p>Registered:  25.01.2019</p> <p>Title System: TORRENS</p>		<p>Office Use Only</p> <p><b>DP1237735</b></p>			
<p><b>PLAN OF SUBDIVISION OF LOTS 1 &amp; 4 D.P.1232886 AND EASEMENTS OVER LOT 3 D.P.1232886.</b></p>		<p>LGA: BLACKTOWN</p> <p>Locality: MARSDEN PARK</p> <p>Parish: ROOTY HILL</p> <p>County: CUMBERLAND</p>			
<p><b>Survey Certificate</b></p> <p>I, Ian Vincent Myers</p> <p>of Vince Morgan Surveyors Pty. Ltd.</p> <p>a surveyor registered under the <i>Surveying and Spatial Information Act 2002</i>, certify that:</p> <p><del>*(a) The land shown in the plan was surveyed in accordance with the Surveying and Spatial Information Regulation 2017, is accurate and the survey was completed on .....</del>, or</p> <p>*(b) The part of the land shown in the plan (*being/*excluding **Lot 31) was surveyed in accordance with the <i>Surveying and Spatial Information Regulation 2017</i>, the part surveyed is accurate and the survey was completed on 13 th September, 2018 the part not surveyed was compiled in accordance with that Regulation, or</p> <p><del>*(c) The land shown in this plan was compiled in accordance with the Surveying and Spatial Information Regulation 2017.</del></p> <p>Datum Line: 'A' - 'B' SSM196342 TO SSM196314</p> <p>Type: *Urban/*Rural</p> <p>The terrain is *Level-Undulating / *Steep-Mountainous.</p> <p>Signature:  Dated: 13 th September, 2018</p> <p>Surveyor Identification No: 1682</p> <p>Surveyor registered under the <i>Surveying and Spatial Information Act 2002</i></p> <p>*Strike out inappropriate words.</p> <p>**Specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey.</p>		<p><b>Crown Lands NSW/Western Lands Office Approval</b></p> <p>I, ..... (Authorised Officer) in approving this plan certify that all necessary approvals in regard to the allocation of the land shown herein have been given.</p> <p>Signature: .....</p> <p>Date: .....</p> <p>File Number: .....</p> <p>Office: .....</p>			
<p><b>Subdivision Certificate</b></p> <p>I, <u>Judith Portelli</u></p> <p>*Authorised Person/*General Manager/*Accredited Certifier, certify that the provisions of s.109J of the <i>Environmental Planning and Assessment Act 1979</i> have been satisfied in relation to the proposed subdivision, new road or reserve set out herein.</p> <p>Signature: </p> <p>Accreditation number: <u>N/A</u></p> <p>Consent Authority: <u>BLACKTOWN CITY COUNCIL</u></p> <p>Date of endorsement: <u>14 JANUARY 2019</u></p> <p>Subdivision Certificate number: <u>18-00216</u></p> <p>File number: <u>DA-16-04214</u></p> <p>*Strike through if inapplicable.</p>					
<p>Plans used in the preparation of survey/compilation:</p> <p>DP1232886 DP1228369 DP1230408</p>		<p>Statements of intention to dedicate public roads, create public reserves and drainage reserves, acquire/resume land.</p> <p>IT IS INTENDED TO DEDICATE THE EXTENSION OF ELARA BOULEVARD AND ROSE PARK DRIVE, KALUTA AVENUE AND THE SPLAY CORNERS TO THE PUBLIC AS PUBLIC ROAD.</p>			
<p>Surveyor's Reference: 20260-3C</p>		<p>Signatures, Seals and Section 88B Statements should appear on PLAN FORM 6A</p>			

PLAN FORM 6A (2017)

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 2 of 3 sheet(s)

<p>Registered:  25.01.2019</p>	<p>Office Use Only</p>
<p>PLAN OF SUBDIVISION OF LOTS 1 &amp; 4 D.P.1232886 AND EASEMENTS OVER LOT 3 D.P.1232886.</p>	<p>Office Use Only</p>
<p>Subdivision Certificate number: .....18-00216.....          Date of Endorsement: .....14/01/19.....</p>	<p>This sheet is for the provision of the following information as required:</p> <ul style="list-style-type: none"> <li>• A schedule of lots and addresses - See 60(c) <i>SSI Regulation 2017</i></li> <li>• Statements of intention to create and release affecting interests in accordance with section 88B <i>Conveyancing Act 1919</i></li> <li>• Signatures and seals- see 195D <i>Conveyancing Act 1919</i></li> <li>• Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.</li> </ul>

PURSUANT TO SECTION 88b OF THE  
CONVEYANCING ACT, 1919 IT  
IS INTENDED TO CREATE:-

1. EASEMENT TO DRAIN WATER VARIABLE WIDTH (E1)
2. RIGHT OF ACCESS VARIABLE WIDTH (E2)
3. EASEMENT FOR PADMOUNT SUBSTATION 2.75 WIDE (E3)
4. RESTRICTION ON THE USE OF LAND (R1)
5. RESTRICTION ON THE USE OF LAND (R2)
6. RESTRICTION ON THE USE OF LAND
7. RESTRICTION ON THE USE OF LAND
8. EASEMENT TO DRAIN WATER OVER WHOLE LOT (E4)
9. RIGHT OF ACCESS OVER WHOLE LOT (E5)
10. EASEMENT TO DRAIN WATER VARIABLE WIDTH (E6)
11. RIGHT OF ACCESS VARIABLE WIDTH (E7)

RELEASE:-

1. RIGHT OF ACCESS VARIABLE WIDTH (E1) (D.P.1232886)

STREET ADDRESSES NOT AVAILABLE

If space is insufficient use additional annexure sheet

Surveyor's Reference: 20260-3C

ePlan

PLAN FORM 6A (2017) DEPOSITED PLAN ADMINISTRATION SHEET Sheet 3 of 3 sheet(s)

Registered:



25.01.2019

Office Use Only

Office Use Only

PLAN OF SUBDIVISION OF  
LOTS 1 & 4 D.P.1232886 AND  
EASEMENTS OVER LOT 3 D.P.1232886.

DP1237735

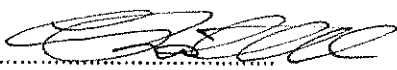
Subdivision Certificate number: 18-00216  
Date of Endorsement: 14/01/19

This sheet is for the provision of the following information as required:

- A schedule of lots and addresses - See 60(c) SSI Regulation 2017
- Statements of intention to create and release affecting interests in accordance with section 88B Conveyancing Act 1919
- Signatures and seals- see 195D Conveyancing Act 1919
- Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.

Executed on behalf of the Corporation named below  
by the authorised persons whose signatures appear  
below pursuant to the authority specified.

Corporation: Woorong Park Pty Ltd ACN 094 493 428  
Authority: Section 127 Corporations Act 2001

  
Signature of authorised person:

GARRY ROTHWELL

Name of authorised person:  
Office held: Sole Director / Secretary

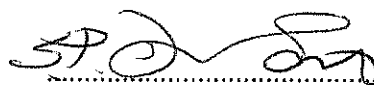
Address of authorised person:

Executed by STUART DUNCAN as attorney for  
Global Demand Holding 11 Limited  
under Power of Attorney registered Book 4736 No. 171  
in the presence of:-

  
Signature of Witness

MICHELLE WONG  
Name of Witness

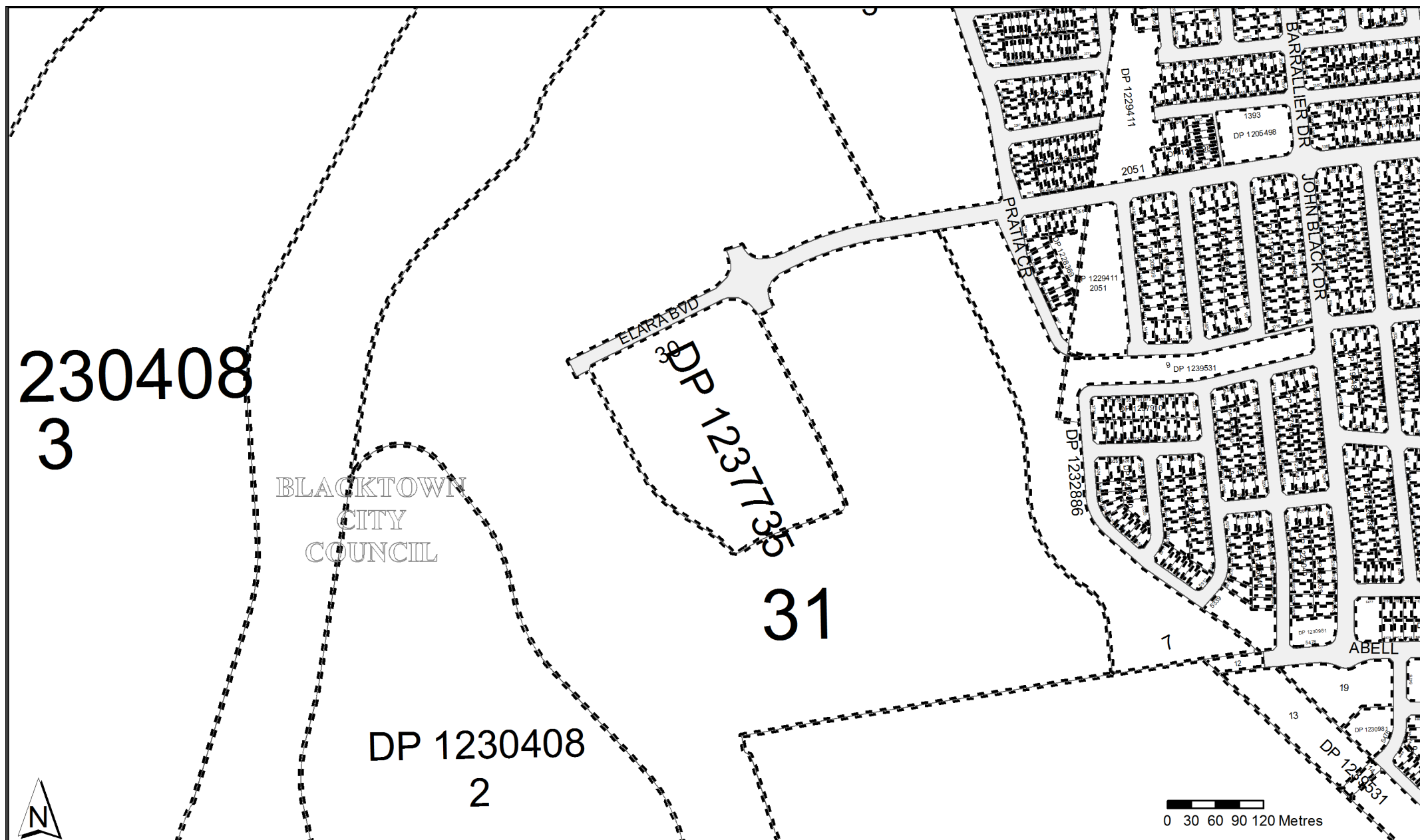
1 FARRER PLACE, SYDNEY  
Address of Witness



Signature of Attorney  
by executing this document the Attorney states that  
he has not received notice of revocation of the  
Power of Attorney

If space is insufficient use additional annexure sheet

Surveyor's Reference: 20260-3C



## **APPENDIX C**

---

### **NSW EPA RECORD OF NOTICES & ENVIRONMENT PROTECTION LICENCES**



## Contaminated land - record of notices

### Record under section 58 of the Contaminated Land Management Act 1997

This record is maintained by OEH in accordance with Part 5 of the [Contaminated Land Management Act 1997](#) (CLM Act).

The record **does** provide

- ✓ a record of written notices issued by OEH under the CLM Act, including preliminary investigation orders.
- ✓ the names of the sites, owners or occupiers **at the time of OEH action** in relation to the site
- ✓ copies of site audit statements (SAS) provided to OEH under section 52 of the CLM Act and relating to significantly contaminated land.

The record **does not** provide

- ✗ a record of all contaminated land in NSW. [See frequently asked questions](#)
- ✗ a list of [notifications of contamination](#) that OEH receives.
- ✗ the names of the sites, owners or occupiers if it changes **after OEH action** in relation to the site.
- ✗ some [personal information](#).

... [more about the CLM record of notices](#)

**From 1 July 2009 there were changes to the terminology of certain OEH actions under the CLM Act.** See the [list of these changes](#).

The record includes notices issued under sections 35 and 36 of the Environmentally Hazardous Chemicals Act 1985. These sections have been repealed. These notices are treated by the CLM Act as management orders.

Before using the record of notices see the [Disclaimer and terms of use](#).

As at Thursday, 17 October 2019 there are 1638 notices in the record relating to 382 sites.

[Show me the entire record](#) or [Search the record](#)

17 October 2019

- 131 555 (tel:131555)
- [info@epa.nsw.gov.au](mailto:info@epa.nsw.gov.au) (mailto:info@epa.nsw.gov.au)
- EPA Office Locations (<https://www.epa.nsw.gov.au/about-us/contact-us/locations>)

[Accessibility \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index)

[Disclaimer \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer)

[Privacy \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy)

[Copyright \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright)

For business  
and industry □

For local  
government □

Contact us

Find us on

□ <https://au.linkedin.com/company/environment-protection-authority-nsw>  
□ <https://www.facebook.com/epa.nsw>  
□ [https://twitter.com/epa\\_nsw](https://twitter.com/epa_nsw)  
□ <https://www.youtube.com/user/epanew>

Matched 11 notices  
relating to 2 sites.

Refine Search

Find us on

## Search results

Your search for: Suburb: MARSDEN PARK

did not find any records in our database.

If a site does not appear on the record it may still be affected by contamination. For example:

- Contamination may be present but the site has not been regulated by the EPA under the Contaminated Land Management Act 1997 or the Environmentally Hazardous Chemicals Act 1985.
- The EPA may be regulating contamination at the site through a licence or notice under the Protection of the Environment Operations Act 1997 (POEO Act).
- Contamination at the site may be being managed under the [planning process](#).

More information about particular sites may be available from:

- The [POEO public register](#)
- The appropriate planning authority: for example, on a planning certificate issued by the local council under [section 149 of the Environmental Planning and Assessment Act](#).

See [What's in the record and What's not in the record](#).

If you want to know whether a specific site has been the subject of notices issued by the EPA under the CLM Act, we suggest that you search by Local Government Area only and carefully review the sites that are listed.

This public record provides information about sites regulated by the EPA under the Contaminated Land Management Act 1997, including sites currently and previously regulated under the Environmentally Hazardous Chemicals Act 1985. Your inquiry using the above search criteria has not matched any record of current or former regulation. You should consider searching again using different criteria. The fact that a site does not appear on the record does not necessarily mean that it is not affected by contamination. The site may have been notified to the EPA but not yet assessed, or contamination may be present but the site is not yet being regulated by the EPA. Further information about particular sites may be available from the appropriate planning authority, for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act. In addition the EPA may be regulating contamination at the site through a licence under the Protection of the Environment Operations Act 1997. You may wish to search the POEO public register. [POEO public register](#)

17 October 2019

**For business and industry** ☐

**For local government** ☐

**Contact us**

- ☐ 131 555 (tel:131555)
- ☐ [info@epa.nsw.gov.au](mailto:info@epa.nsw.gov.au) (mailto:info@epa.nsw.gov.au)
- ☐ EPA Office Locations (<https://www.epa.nsw.gov.au/about-us/contact-us/locations>)

[Accessibility \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index)

[Disclaimer \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer)

[Privacy \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy)

[Copyright \(https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright)

Find us on

☐ <https://au.linkedin.com/company/environment-protection-authority-nsw>  
☐ <https://www.facebook.com/epanew>

## Search results

Your search for: FULL REGISTER

Matched 1638 notices  
relating to 382 sites.

[Search Again](#)

[Refine Search](#)

Suburb	Address	Site Name	Notices related to this site
LISMORE	Cnr John Street & Keen STREET	<a href="#">Lismore Gasworks</a>	6 former
LISMORE HEIGHTS	22 New Ballina ROAD	<a href="#">Beardow Street Road Reserve</a>	1 current
LISMORE HEIGHTS	426 Ballina ROAD	<a href="#">Coles Express Lismore Heights</a>	2 current
LITHGOW	4 Martini PARADE	<a href="#">Lithgow Thales</a>	1 former
LOFTUS	127 Loftus AVENUE	<a href="#">BP Freedom Fuel Service Station Loftus</a>	2 former
LONG JETTY	290-294 The Entrance ROAD	<a href="#">Westside Petroleum Service Station</a>	2 current
LUCAS HEIGHTS	access from Little Forest ROAD	<a href="#">Harringtons Quarry</a>	3 current and 2 former
LUCAS HEIGHTS	Little Forest ROAD	<a href="#">IWC landfill</a>	2 current and 1 former
LUDDENHAM	Lot 4 The Northern ROAD	<a href="#">Elura Liquid Waste Disposal Site</a>	1 former
MAIN ARM	Upper Main Arm ROAD	<a href="#">Dip 5393 Tooland</a>	1 current
MAITLAND	Charles STREET	<a href="#">Maitland Gasworks</a>	2 current
MALDON	Lot 2 Wilton Park ROAD	<a href="#">Maldon Works</a>	1 current
MANLY	Stuart STREET	<a href="#">Little Manly Point</a>	1 current and 7 former
MANLY VALE	Addiscombe ROAD	<a href="#">Former Landfill Addiscombe Road</a>	2 current and 1 former
MARKS POINT	770-772 Pacific HIGHWAY	<a href="#">Former Mobil Service Station (now 7-Eleven)</a>	6 former
MARRICKVILLE	Thornley STREET	<a href="#">Cooks River Aqueduct</a>	1 former
MARRICKVILLE	Smidmore STREET	<a href="#">Former Dry Cleaners and Loading Dock (adjacent Lot 1 DP612551)</a>	2 current
MARRICKVILLE	22-28 Carrington ROAD	<a href="#">TRW Steering and Suspension</a>	1 current and 1 former
MARYVILLE	184-188 Hannell STREET	<a href="#">7-Eleven Service Station</a>	2 current
MASCOT	336-348 King STREET	<a href="#">Former Mascot Galvanising</a>	5 current and 2 former

[1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) ...

Page 10 of 20

17 October 2019

**For business and industry** ☐

**For local government** ☐

**Contact us**

- ☐ 131 555 (tel:131555)
- ☐ [info@epa.nsw.gov.au](mailto:info@epa.nsw.gov.au) (mailto:info@epa.nsw.gov.au)
- ☐ EPA Office Locations (<https://www.epa.nsw.gov.au/about-us/contact-us/locations>)

Accessibility (<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index>)

Disclaimer (<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer>)

Privacy (<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy>)

Copyright (<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright>)

☐ <https://au.linkedin.com/company/epa-nsw>

☐ <https://www.facebook.com/epa.nsw>

Find us on

## Search results

Your search for: **General Search** with the following criteria

**Suburb - Marsden Park**

returned 52 results

[Export to excel](#)

1 of 3 Pages

[Search Again](#)

Number	Name	Location	Type	Status	Issued date
<a href="#">1583887</a>		10 Langford Drive, MARSDEN PARK, NSW 2765	s.80 Surrender of a Licence	Issued	27 Sep 2019
<a href="#">7680</a>	ASSOCIATED DAIRIES PTY LTD	1270 RICHMOND ROAD, MARSDEN PARK, NSW 2765	POEO licence	Surrendered	12 Jul 2000
<a href="#">1009789</a>	ASSOCIATED DAIRIES PTY LTD	1270 RICHMOND ROAD, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	16 Jul 2001
<a href="#">1010198</a>	ASSOCIATED DAIRIES PTY LTD	1270 RICHMOND ROAD, MARSDEN PARK, NSW 2765	s.80 Surrender of a Licence	Issued	14 Aug 2001
<a href="#">6653</a>	BARTTER ENTERPRISES PTY. LIMITED	SOUTH STREET , MARSDEN PARK, NSW 2765	POEO licence	Surrendered	19 Apr 2000
<a href="#">1008250</a>	BARTTER ENTERPRISES PTY. LIMITED	SOUTH STREET , MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	17 Aug 2001
<a href="#">1014668</a>	BARTTER ENTERPRISES PTY. LIMITED	SOUTH STREET , MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	12 Apr 2002
<a href="#">1025286</a>	BARTTER ENTERPRISES PTY. LIMITED	SOUTH STREET , MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	24 Mar 2003
<a href="#">1079567</a>	BARTTER ENTERPRISES PTY. LIMITED	SOUTH STREET , MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	01 Nov 2007
<a href="#">1115186</a>	BARTTER ENTERPRISES PTY. LIMITED	SOUTH STREET , MARSDEN PARK, NSW 2765	s.80 Surrender of a Licence	Issued	13 Jul 2010
<a href="#">21193</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	POEO licence	Pending	
<a href="#">11497</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	POEO licence	Issued	20 Dec 2001
<a href="#">1034185</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	24 Feb 2004
<a href="#">1035619</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	07 Apr 2004
<a href="#">1036931</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	24 May 2004
<a href="#">1040181</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	25 Aug 2004
<a href="#">1042674</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	15 Dec 2004
<a href="#">1043785</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	07 Feb 2005
<a href="#">1050775</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	14 Jul 2006
<a href="#">1089097</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	18 Jul 2008

**For business and industry** ☐

**For local government** ☐

**Contact us**

[123](#)

17 October 2019

☐

*A*

二

—

C

10

(<https://au.linkedin.com/company/environment-protection>)

□ authority-  
(<http://sepa.wa.gov.au>) (<http://www.nsw.gov.au>)

Find us on

## Search results

Your search for: **General Search** with the following criteria

**Suburb - Marsden Park**

returned 52 results

[Export to excel](#)

2 of 3 Pages

[Search Again](#)

Number	Name	Location	Type	Status	Issued date
<a href="#">1093057</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	17 Oct 2008
<a href="#">1096556</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	10 Mar 2009
<a href="#">1101188</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	14 May 2009
<a href="#">1106136</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	04 Sep 2009
<a href="#">1114182</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	18 May 2010
<a href="#">1119607</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	24 Sep 2010
<a href="#">1121964</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	24 Nov 2010
<a href="#">1510549</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	10 Jan 2014
<a href="#">1533201</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	15 Sep 2015
<a href="#">1534882</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	09 Dec 2015
<a href="#">3085778163</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	Penalty Notice	Issued	20 Jan 2016
<a href="#">1579702</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	05 Jun 2019
<a href="#">1580943</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	09 Aug 2019
<a href="#">1586949</a>	BLACKTOWN WASTE SERVICES PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Pending	09 Oct 2019
<a href="#">20968</a>	COSTCO WHOLESALE AUSTRALIA, PTY. LTD.	10 Langford Drive, MARSDEN PARK, NSW 2765	POEO licence	Surrendered	13 Jul 2017
<a href="#">13337</a>	EDL LFG (NSW) PTY LTD	GRANGE AVENUE (WEST), MARSDEN PARK, NSW 2765	POEO licence	Issued	02 Dec 2010
<a href="#">1519393</a>	EDL LFG (NSW) PTY LTD	GRANGE AVENUE (WEST), MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	29 May 2014
<a href="#">1534518</a>	EDL LFG (NSW) PTY LTD	GRANGE AVENUE (WEST), MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	23 Nov 2015
<a href="#">1015376</a>	GANIAN PTY LIMITED	25 Harris Avenue, MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	03 Apr 2002
<a href="#">20626</a>	HYDRASYST HOLDINGS PTY LTD	ELARA BOULEVARD, MARSDEN PARK, NSW 2765	POEO licence	Pending	

**For business and industry** ☐

**For local government** ☐

**Contact us**

[123](#)

17 October 2019

□ EPA Office Locations (<https://www.epa.nsw.gov.au/about-us/contact-us/locations>)

[Accessibility \(<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index>\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index)

[Disclaimer \(<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer>\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer)

[Privacy \(<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy>\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy)

[Copyright \(<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright>\)](https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright)

□  
(<https://au.linkedin.com/company/environment-protection-authority-nsw>)

Find us on

□ (<https://www.facebook.com/epanew>)



## Search results

Your search for: **General Search** with the following criteria

**Suburb - Marsden Park**

returned 52 results

[Export to excel](#)

3 of 3 Pages

[Search Again](#)

Number	Name	Location	Type	Status	Issued date
<a href="#">1502774</a>	JILLIAN VIDLER	851 Richmond Road, MARSDEN PARK, NSW 2765	s.91 Clean Up Notice	Issued	03 Jan 2012
<a href="#">21014</a>	LINFOX AUSTRALIA PTY LTD	3 Harris Avenue, MARSDEN PARK, NSW 2765	POEO licence	Issued	10 Oct 2017
<a href="#">1123965</a>	WASTE ASSETS MANAGEMENT CORPORATION	GRANGE AVENUE (WEST), MARSDEN PARK, NSW 2765	s.81 Variation of a Surrender Condition	Issued	31 Jan 2011
<a href="#">5273</a>	WSN ENVIRONMENTAL SOLUTIONS PTY LIMITED	GRANGE AVENUE (WEST), MARSDEN PARK, NSW 2765	POEO licence	Surrendered	03 Jul 2001
<a href="#">1020342</a>	WSN ENVIRONMENTAL SOLUTIONS PTY LIMITED	GRANGE AVENUE (WEST), MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	18 Sep 2002
<a href="#">1040253</a>	WSN ENVIRONMENTAL SOLUTIONS PTY LIMITED	GRANGE AVENUE (WEST), MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	15 Sep 2004
<a href="#">1045159</a>	WSN ENVIRONMENTAL SOLUTIONS PTY LIMITED	GRANGE AVENUE (WEST), MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	20 Apr 2005
<a href="#">1056693</a>	WSN ENVIRONMENTAL SOLUTIONS PTY LIMITED	GRANGE AVENUE (WEST), MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	05 Apr 2006
<a href="#">1063668</a>	WSN ENVIRONMENTAL SOLUTIONS PTY LIMITED	GRANGE AVENUE (WEST), MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	16 Aug 2006
<a href="#">1071327</a>	WSN ENVIRONMENTAL SOLUTIONS PTY LIMITED	GRANGE AVENUE (WEST), MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	10 Apr 2007
<a href="#">1106001</a>	WSN ENVIRONMENTAL SOLUTIONS PTY LIMITED	GRANGE AVENUE (WEST), MARSDEN PARK, NSW 2765	s.58 Licence Variation	Issued	18 Nov 2009
<a href="#">1120903</a>	WSN ENVIRONMENTAL SOLUTIONS PTY LIMITED	GRANGE AVENUE (WEST), MARSDEN PARK, NSW 2765	s.80 Surrender of a Licence	Issued	02 Dec 2010

**For business and industry** ☐

**For local government** ☐

[123](#)

17 October 2019

**Contact us**

- ☐ 131 555 (tel:131555)
- ☐ [info@epa.nsw.gov.au](mailto:info@epa.nsw.gov.au) (mailto:info@epa.nsw.gov.au)
- ☐ EPA Office Locations (<https://www.epa.nsw.gov.au/about-us/contact-us/locations>)

Accessibility (<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index>)  
 Disclaimer (<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer>)  
 Privacy (<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy>)  
 Copyright (<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright>)

☐ <https://au.linkedin.com/company/environment-protection-authority-nsw>  
☐ <https://www.facebook.com/epanew>

Find us on

## Background

A strategy to systematically prioritise, assess and respond to notifications under Section 60 of the **Contaminated Land Management Act 1997** (CLM Act) has been developed by the EPA. This strategy acknowledges the EPA's obligations to make information available to the public under **Government Information (Public Access) Act 2009**.

When a site is notified to the EPA, it may be accompanied by detailed site reports where the owner has been proactive in addressing the contamination and its source. However, often there is minimal information on the nature or extent of the contamination.

After receiving a report, the first step is to confirm that the report does not relate to a pollution incident. The *Protection of the Environment Operations Act 1997* (POEO Act) deals with pollution incidents, waste stockpiling or dumping. The EPA also has an **incident management** process to manage significant incidents.

In many cases, the information indicates the contamination is securely immobilised within the site, such as under a building or carpark, and is not currently causing any significant risks for the community or environment. Such sites may still need to be cleaned up, but this can be done in conjunction with any subsequent building or redevelopment of the land. These sites do not require intervention under the CLM Act, and are dealt with through the **planning and development consent process**. In these cases, the EPA informs the local council or other planning authority, so that the information can be recorded and considered at the appropriate time.

Where indications are that the contamination could cause actual harm to the environment or an unacceptable offsite impact (i.e. the land is 'significantly contaminated'), the EPA would apply the regulatory provisions of the CLM Act to have the responsible polluter and/or landowner investigate and remediate the site. If the reported contamination could present an immediate or long-term threat to human health NSW Health will be consulted. SafeWork NSW and Water NSW can also be consulted if there appear to be occupational health and safety risks or an impact on groundwater quality.

As such, the sites notified to the EPA and presented in the list of contaminated sites notified to the EPA are at various stages of the assessment and remediation process. Understanding the nature of the underlying contamination, its implications and implementing a remediation program where required, can take a considerable period of time. The list provides an indication, in relation to each nominated site, as to the management status of that particular site. Further detailed information may be available from the EPA or the person who notified the site.

The following questions and answers may assist those interested in this issue:

## Frequently asked questions

**What is the difference between the 'List of NSW contaminated sites notified to EPA' and the 'Contaminated Land: Record of Notices'?**

A site will be on the **Contaminated Land: Record of Notices** only if the EPA has issued a regulatory notice in relation to the site under the *Contaminated Land Management Act 1997*.

The sites appearing in the list of NSW contaminated sites notified to the EPA indicate that the notifiers consider that the sites are contaminated and warrant reporting to EPA. However, the contamination may or may not be significant enough to warrant regulation by the EPA. The EPA needs to review and, if necessary, obtain more information before it can make a determination as to whether the site warrants regulation.

## **Why does my site appear on the list?**

Your site appears on the list for one or more of the following reasons

- The site owner and/or the person partly or fully responsible for causing the contamination notified the EPA about the contamination under Section 60 of the *Contaminated Land Management Act 1997*. In other words, the site owner or the 'polluter' believes the site is contaminated.
- The EPA has been notified via other means and is satisfied that the site is or was contaminated.

## **Does the list contain all contaminated sites in NSW?**

No. The list only contains contaminated sites that EPA is aware of, with regard to its regulatory role under the CLM Act. An absence of a site from the list does not necessarily mean the site is not contaminated.

The EPA relies upon responsible parties to notify contaminated sites.

## **How are notified contaminated sites managed by the EPA?**

There are different ways that the EPA manages these notified contaminated sites. First, an initial assessment is carried out by the EPA. At the completion of the initial assessment, the EPA may take one or more than one of the following management approaches:

- The contamination warrants the EPA's direct regulatory intervention either under the *Contaminated Land Management Act 1997* or the *Protection of the Environment Operations Act 1997* (POEO Act), or both. Information about current or past regulatory action on this site can be found on the EPA website.
- The contamination with respect to the current use or approved use of the site, as defined under the *Contaminated Land Management Act 1997*, is not significant enough that it warrants EPA regulation.
- The contamination does not require EPA regulation and can be managed by a planning approval process.
- The contamination is related to an operational **underground petroleum storage system**, such as a service station or fuel depot. The contamination may be managed under the POEO Act and the **Protection of the Environment Operation (Underground Petroleum Storage Systems) Regulation 2014**.

Note: There are specific instances where contamination is managed under a specifically tailored program operated by another agency. For example the [Division of Resources & Geoscience's Derelict Mines Program](#) and the [NSW DPI Cattle tick dip site locator](#).

The Legacy contamination management procedures for these sites will be detailed in a Memorandum of Understanding between the NSW EPA, NSW Resources and Energy and Dept. Primary Industries (Crown Lands and Biosecurity) (Note: the MoU is currently in draft).

### **I am the owner of a site that appears on the list. What should I do?**

First of all, you should ensure the current use of the site is compatible with the site contamination. Secondly, if the site is the subject of EPA regulation, make sure you comply with the regulatory requirements, and you have considered your obligations to notify other parties who may be affected.

If you have any concerns, contact us and we may be able to offer you general advice, or direct you to accredited professionals who can assist with specific issues.

### **I am a prospective buyer of a site that appears on the list. What should I do?**

You should seek advice from the vendor to put the contamination issue into perspective. You may need to seek independent expert advice.

The information provided in the list, particularly the EPA site management class, is meant to be indicative only, and a starting point for your own assessment. Site contamination as a legacy of past site uses is not uncommon, particularly in an urban environment. If the contamination on a site is properly remediated or managed, it may not materially impact upon the intended future use of the site. However, each site needs to be considered in context.

### **Who can I contact if I need more information about a site?**

If you have questions about a site on the list of sites notified to the EPA you can contact the [Environment Line](#) at any time. By phone: 131 555 or by email: [info@environment.nsw.gov.au](mailto:info@environment.nsw.gov.au)

# List of NSW Contaminated Sites Notified to the EPA

## Disclaimer

The EPA has taken all reasonable care to ensure that the information in the list of contaminated sites notified to the EPA (the list) is complete and correct. The EPA does not, however, warrant or represent that the list is free from errors or omissions or that it is exhaustive.

The EPA may, without notice, change any or all of the information in the list at any time.

You should obtain independent advice before you make any decision based on the information in the list.

The list is made available on the understanding that the EPA, its servants and agents, to the extent permitted by law, accept no responsibility for any damage, cost, loss or expense incurred by you as a result of:

1. any information in the list; or
2. any error, omission or misrepresentation in the list; or
3. any malfunction or failure to function of the list;
4. without limiting (2) or (3) above, any delay, failure or error in recording, displaying or updating information.

Site Status	Explanation
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or <i>Protection of the Environment Operations Act 1997</i> .
Under Preliminary Investigation Order	The EPA has issued a Preliminary Investigation Order under s10 of the <i>Contaminated Land Management Act 1997</i> , to obtain additional information needed to complete the assessment.
Regulation under CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the <i>Contaminated Land Management Act 1997</i> is not required.
Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the

	<i>Contaminated Land Management Act 1997</i> . A regulatory approach is being finalised.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the <i>Contaminated Land Management Act 1997</i> (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's <a href="#">Contaminated Land Public Record</a> .
Contamination currently regulated under POEO Act	Contamination is currently regulated under the <i>Protection of the Environment Operations Act 1997</i> (POEO Act). The EPA as <i>the appropriate regulatory authority</i> reasonably suspects that a pollution incident is occurring/ has occurred and that it requires regulation under the POEO Act. The EPA may use environment protection notices, such as clean up notices, to require clean up action to be taken. Such regulatory notices are available on the <a href="#">POEO public register</a> .
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the <i>Contaminated Land Management Act 1997</i> (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the <i>Protection of the Environment Operations Act 1997</i> (POEO Act).
Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act).

Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the <i>Contaminated Land Management Act 1997</i> (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's <a href="#">Contaminated Land Public Record</a> .
---	--

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
ABBOTSFORD	Former Gasworks	83 Wymston PARADE	Gasworks	Contamination formerly regulated under the CLM Act	-33.85288351	151.1265979
ABBOTSFORD	Former Gasworks	82, 83, 84 Wymston Pde, & 37, 39, 43, 45 St Albans STREET	Gasworks	Contamination formerly regulated under the CLM Act	-33.85288316	151.1267729
ABBOTSFORD	Former Gasworks	85 Wymston PARADE	Gasworks	Regulation under CLM Act not required	-33.85265214	151.1266277
ABBOTSFORD	Former Gasworks	80-81 Wymston Pde and 35 and 41 St Albans STREET	Gasworks	Regulation under CLM Act not required	-33.85306653	151.1268142
ABBOTSFORD	Former Gasworks	43 St Albans STREET	Gasworks	Contamination formerly regulated under the CLM Act	-33.85270604	151.126976
ABERDEEN	Former Transport Depot	87-89 St Andrew STREET	Other Industry	Regulation under CLM Act not required	-32.17160931	150.8972859
ALBION PARK	Caltex Albion Park Service Station	1 Calderwood ROAD	Service Station	Regulation under CLM Act not required	-34.57131362	150.7647971
ALBION PARK RAIL	Caltex Service Station	174 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.56134097	150.7953663
ALBION PARK RAIL	Caltex Service Station	31 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.55162786	150.7880626
ALBION PARK RAIL	Former Timber Storage Area	36 Rivulet CRESCENT	Other Industry	Regulation under CLM Act not required	-34.54872597	150.7899351
ALBURY	Mobil Depot, Railway Place Albury	1 Railway PLACE	Other Petroleum	Regulation under CLM Act not required	-36.08526805	146.9236999
ALBURY	Woolworths Petrol	515 Young STREET	Service Station	Regulation under CLM Act not required	-36.08073723	146.92351
ALBURY	Former Caltex Service Station	842 David STREET	Service Station	Regulation under CLM Act not required	-36.06398743	146.9252143
ALBURY	SRA Land, 514 to 526 Young Street	514 to 526 Young STREET	Other Petroleum	Regulation under CLM Act not required	-36.08084123	146.9241682
ALBURY	Former Gasworks and surrounding commercial land.	441 Kiewa STREET	Gasworks	Contamination currently regulated under CLM Act	-36.08357983	146.9137004
ALBURY	Coles Express Albury	465 Guinea STREET	Service Station	Regulation under CLM Act not required	-36.07513665	146.9213077
ALBURY	Former Thales Australia site, Albury	161 Fallon STREET	Other Industry	Contamination currently regulated under CLM Act	-36.064966	146.9434831



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
ALBURY	Xpress Service Station	616-624 Young STREET	Service Station	Contamination formerly regulated under the CLM Act	-36.07555262	146.9256466
ALBURY	Albury Plaza	Cnr Smollett Street and Townsend STREET	Other Industry	Regulation under CLM Act not required	-36.08112933	146.9135719
ALBURY	Mobil Albury Aviation Fuel Depot	Hangar 8 (Albury Airport), Ogden PLACE	Other Petroleum	Regulation under CLM Act not required	-36.07178139	146.9530165
ALBURY	SRA Land	448 and 452 Young STREET	Unclassified	Regulation under CLM Act not required	-36.08438605	146.9235454
ALBURY	Caltex Service Station	Dean Street, Corner Creek STREET	Service Station	Regulation under CLM Act not required	-36.07978937	146.9110825
ALEXANDRIA	Former Mobil Service Station	20 O'Riordan STREET	Service Station	Regulation under CLM Act not required	-33.9075539	151.2014811
ALEXANDRIA	Caltex Alexandria Service Station	133 Wyndham St, cnr McEvoy STREET	Service Station	Regulation under CLM Act not required	-33.90220927	151.2000425
ALEXANDRIA	Former Cadbury Schweppes	49-59 O'Riordan STREET	Other Industry	Contamination formerly regulated under the CLM Act	-33.91406619	151.195067
ALEXANDRIA	Formerly Gas N Go Alexandria (fully redeveloped into residential apartment as of September 2016)	10-20 Botany ROAD	Service Station	Regulation under CLM Act not required	-33.89536227	151.1987818
ALEXANDRIA	Mascot Developments	494-504 Gardeners ROAD	Other Industry	Regulation under CLM Act not required	-33.9198218	151.191282
ALEXANDRIA	Alexandria GoGas	562 Botany ROAD	Service Station	Regulation under CLM Act not required	-33.91577222	151.2000753
ALEXANDRIA	Australian Refined Alloys	202-212 Euston ROAD	Metal Industry	Regulation under CLM Act not required	-33.91505136	151.185872
ALEXANDRIA	Alexandra Canal Sediments	Off Huntley STREET	Unclassified	Contamination currently regulated under CLM Act	-33.92204213	151.1770009
ALEXANDRIA	Australia Post	10-24 Ralph STREET	Other Industry	Contamination was addressed via the planning process (EP&A Act)	-33.91583041	151.197997
ALEXANDRIA	Perry Park	1B Maddox STREET	Landfill	Regulation under CLM Act not required	-33.90809949	151.1962945
ALEXANDRIA	Alexandria Gardens	146-156 Wyndham Street & 146-156 Botany ROAD	Unclassified	Regulation under CLM Act not required	-33.89956961	151.1997377
ALEXANDRIA	Sydney Park	Sydney Park, Alexandria ROAD	Landfill	Contamination currently regulated under CLM Act	-33.91163421	151.1840827

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
ALEXANDRIA	Former Industrial Site (now Value Suites)	16 O'Riordan STREET	Other Industry	Regulation under CLM Act not required	-33.9069796	151.201902
ALEXANDRIA	The Gentry Alexandria - 31 to 41 William St.	31-41 William STREET	Unclassified	Regulation under CLM Act not required	-33.91288033	151.1980106
ALSTONVILLE	Caltex Service Station Alstonville	73 Main STREET	Service Station	Regulation under CLM Act not required	-28.84115994	153.4388699
AMBARVALE	Caltex Service Station	37 Woodhouse DRIVE	Service Station	Regulation under CLM Act not required	-34.08438034	150.8019168
ANNANDALE	7-Eleven (former Mobil) Annandale Service Station	198 Parramatta ROAD	Service Station	Regulation under CLM Act not required	-33.88706434	151.1741135
ANNANDALE	Shell Coles Express Service Station	124-126 Johnston STREET	Service Station	Regulation under CLM Act not required	-33.88085651	151.1704805
APPIN	Elladale Creek Aqueduct Upper Canal	Macquariedale ROAD	Unclassified	Regulation under CLM Act not required	-34.18867067	150.7539597
APPIN	West Cliff Colliery	Wedderburn ROAD	Other Petroleum	Regulation under CLM Act not required	-34.21970612	150.8217522
ARDLETHAN	Landmark Fertiliser Storage Facility	18 & 24-26 Arianh STREET	Chemical Industry	Regulation under CLM Act not required	-34.35696645	146.9007084
ARGENTON	NSW Mines Rescue Services - Argenton	533 Lake ROAD	Other Industry	Regulation under CLM Act not required	-32.93807208	151.6269664
ARMIDALE	Former Mobil Depot	132 Niagara STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-30.51115918	151.6490343
ARMIDALE	Caltex Service Station	146 Miller STREET	Service Station	Regulation under CLM Act not required	-30.51362759	151.6481123
ARMIDALE	RTA land adjoining Martin Street estate	adjoining Martin STREET	Other Industry	Contamination formerly regulated under the CLM Act	-30.5045	151.6433
ARMIDALE	Shell Service Station	93 Marsh STREET	Service Station	Regulation under CLM Act not required	-30.51299824	151.6697557
ARMIDALE	Parklands near the former gasworks	Beardy Street and Allingham STREET	Gasworks	Regulation under CLM Act not required	-30.51013465	151.6652722
ARMIDALE	Gasworks and portion of Harris Park	Corner of Beardy Street and Allingham STREET	Gasworks	Contamination currently regulated under CLM Act	-30.51157406	151.6623073
ARMIDALE	Martin Street Estate, Lot 3	Lot 3 Martin STREET	Other Industry	Regulation under CLM Act not required	-30.5066659	151.6453692

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
ARMIDALE	Martin Street Estate	Martin STREET	Other Industry	Regulation under CLM Act not required	-30.50559024	151.6431854
ARMIDALE	Caltex Armidale Girraween Service Station	6-8 Queen Elizabeth DRIVE	Service Station	Regulation under CLM Act not required	-30.50348872	151.6510748
ARMIDALE	Martin Street, Crown Land	Martin STREET	Other Industry	Contamination formerly regulated under the CLM Act	-30.50414076	151.6429516
ARMIDALE	Former Shell Depot	134 Niagara STREET	Other Petroleum	Regulation under CLM Act not required	-30.51180178	151.6488634
ARMIDALE	Caltex Service Station	144 Marsh STREET	Service Station	Regulation under CLM Act not required	-30.51709925	151.6675802
ARMIDALE	Caltex North Hill Service Station	2-4 Marsh STREET	Service Station	Regulation under CLM Act not required	-30.50320439	151.6727051
ARMIDALE	Mobil Armidale Service Station and Former Depot	10-12 McLennan STREET	Service Station	Regulation under CLM Act not required	-30.51107573	151.648242
ARMIDALE	Caltex Service Station	19/10541 New England HIGHWAY	Service Station	Regulation under CLM Act not required	-30.53210764	151.6160492
ARMIDALE	Armidale Dumaresq Council Grafton Road Depot	15-25 Grafton ROAD	Other Petroleum	Regulation under CLM Act not required	-30.52058076	151.6815261
ARNCLIFFE	7-Eleven Arncliffe	28 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-33.93428397	151.1525438
ARTARMON	7-Eleven (former Mobil) Artarmon Service Station	477 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.81053826	151.1774248
ASHBY	Ashby Dry Dock	via Clarence STREET	Other Industry	Contamination formerly regulated under the CLM Act	-29.44158377	153.1972304
ASHFIELD	Vehicle Workshop	445-449 Liverpool ROAD	Service Station	Regulation under CLM Act not required	-33.88826829	151.1167477
ASQUITH	BP Service Station	462 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.68982678	151.106156
ATTUNGA	Attunga Limestone Mine (Waste Oil Site)	Garthowen ROAD	Other Industry	Regulation under CLM Act not required	-30.92920627	150.8579435
AUBURN	DIC Australia	323 Chisholm ROAD	Other Industry	Regulation under CLM Act not required	-33.87228962	151.0157032
AUBURN	Former Ajax chemical factory	9 Short STREET	Other Industry	Contamination currently regulated under CLM Act	-33.83671601	151.0292071

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
AUBURN	Janyon	Manchester ROAD	Other Industry	Regulation under CLM Act not required	-33.84467826	151.020745
AUBURN	Maintrain Facility - Sydney Trains Auburn	Manchester ROAD	Other Industry	Regulation under CLM Act not required	-33.84410947	151.0242502
AUBURN	Department of Corrective Services land adjacent to the former Auburn Landfill	Jamieson STREET	Landfill	Contamination formerly regulated under the CLM Act	-33.82928257	151.0590653
AWABA	Awaba Colliery	Wilton ROAD	Other Industry	Regulation under CLM Act not required	-33.02098186	151.5383612
BALGOWLAH	BP Service Station	Cnr Sydney Road and Maretimo STREET	Service Station	Regulation under CLM Act not required	-33.79546175	151.2559309
BALGOWLAH	Part of Manly Council Maintenance Depot	8-10 Roseberry STREET	Other Petroleum	Regulation under CLM Act not required	-33.78928907	151.2679557
BALGOWNIE	Fuel Power Plus	99 Balgownie ROAD	Service Station	Contamination currently regulated under POEO Act	-34.38925632	150.8808544
BALLINA	Former Mobil Service Station	37-41 Cherry STREET	Service Station	Regulation under CLM Act not required	-28.86952673	153.5624436
BALLINA	Ballina Shell	273 River STREET	Service Station	Regulation under CLM Act not required	-28.86809272	153.5552789
BALLINA	Woolworths Petrol	Kerr STREET	Service Station	Regulation under CLM Act not required	-28.85824461	153.5605439
BALLINA	Ballina Mays Motors	River STREET	Other Petroleum	Regulation under CLM Act not required	-28.86935402	153.5585931
BALRANALD	Caltex Service Station	Sturt HIGHWAY	Service Station	Regulation under CLM Act not required	-34.66747746	143.5662034
BANKSIA	Woolworths Petrol Service Station Banksia	314 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-33.94567308	151.1416884
BANKSIA	Cooks Cove Development	Cooks Cove PARK	Landfill	Under assessment	-33.948464	151.153128
BANKSMEADOW	Orica Botany Groundwater Project	16-20 Beauchamp ROAD	Chemical Industry	Contamination currently regulated under CLM Act	-33.9552673	151.2151954
BANKSMEADOW	Discovery Cove, Former Ampol Rail Terminal	1801 Botany ROAD	Other Petroleum	Regulation being finalised	-33.96162178	151.2184122
BANKSMEADOW	Caltex Terminal	1-3 Penrhyn ROAD	Other Petroleum	Contamination currently regulated under POEO Act	-33.96335328	151.2171062

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
BANKSMEADOW	Orica Botany (Pre-2003 Regulation)	Port Feeder ROAD	Chemical Industry	Contamination currently regulated under CLM Act	-33.9516159	151.2195804
BANKSMEADOW	Veolia Waste Transfer Terminal (former Keith Engineering site)	34-36 McPherson STREET	Other Industry	Regulation under CLM Act not required	-33.95811039	151.2195225
BANKSMEADOW	Orica Former Chlor Alkali Plant	Botany Industrial Park, off Denison STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.95664283	151.221685
BANKSMEADOW	Former Pipeline	Corish CIRCLE	Other Petroleum	Regulation being finalised	-33.94705787	151.2209919
BANKSMEADOW	Pacific National Rail Siding	1 Beauchamp ROAD	Chemical Industry	Contamination currently regulated under CLM Act	-33.95757712	151.2204974
BANKSMEADOW	Former Mobil Banksmeadow Terminal	Coal Pier ROAD	Other Petroleum	Regulation under CLM Act not required	-33.95405624	151.2142048
BANKSMEADOW	Orica Car Park Waste Encapsulation	Corish CIRCLE	Landfill	Contamination formerly regulated under the POEO Act	-33.94703665	151.22083
BANKSTOWN	7-Eleven Service Station	689 Henry Lawson DRIVE	Service Station	Regulation under CLM Act not required	-33.92749953	150.9804784
BANORA POINT	Caltex Service Station	Corner Leisure Drive and Darlington DRIVE	Service Station	Regulation under CLM Act not required	-28.21390712	153.5417434
BARGO	Tahmoor Colliery	Remembrance DRIVE	Other Industry	Regulation under CLM Act not required	-34.25090795	150.5793631
BARMEDMAN	Caltex - Barmedman	Corner Watson Street and Star STREET	Other Petroleum	Regulation under CLM Act not required	-34.14351302	147.3824934
BARRACK HEIGHTS	Caltex Service Station	332-336 Shellharbour ROAD	Service Station	Regulation under CLM Act not required	-34.56489171	150.8597814
BATEAU BAY	Former landfill	The Entrance ROAD	Landfill	Contamination currently regulated under CLM Act	-33.3938305	151.4699046
BATEAU BAY	Woolworths Service Station Bateau Bay	9 Bay Village ROAD	Service Station	Regulation under CLM Act not required	-33.37316432	151.4737125
BATEHAVEN	Caltex Service Station	264 Beach ROAD	Service Station	Regulation under CLM Act not required	-35.73255166	150.1997536
BATEHAVEN	Coles Express Service Station Batehaven	198 Beach ROAD	Service Station	Regulation under CLM Act not required	-35.72671807	150.1944931
BATEMANS BAY	Caltex Service Station	87-89 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-35.71940701	150.1762788

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
BATHURST	Shell Coles Express Service Station	(Cnr Stewart and Rocket Street) 298 Stewart STREET	Service Station	Regulation under CLM Act not required	-33.41910999	149.5677773
BATHURST	Former Shell Depot Bathurst	56 Bant STREET	Other Petroleum	Regulation under CLM Act not required	-33.43471575	149.5774595
BATHURST	Bathurst Rail Fabrication Centre	34 Alpha STREET	Other Industry	Regulation under CLM Act not required	-33.42805153	149.5829156
BATHURST	Bathurst - Former Caltex Depot	114 Howick STREET	Other Petroleum	Regulation under CLM Act not required	-33.42296963	149.5862574
BATHURST	Caltex Bathurst Service Station	53 Durham STREET	Service Station	Regulation under CLM Act not required	-33.41689545	149.5848527
BATHURST	Former Police Station	Corner of William Street and Durham STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-33.41592424	149.5842233
BATHURST	Former Mobil Depot	1 Lambert STREET	Other Petroleum	Regulation under CLM Act not required	-33.42875534	149.5806344
BATHURST	Crago Mill site	Piper STREET	Other Industry	Regulation under CLM Act not required	-33.42777602	149.5809428
BATHURST	Former Mobil Depot	Lower Russell STREET	Other Petroleum	Regulation under CLM Act not required	-33.42497876	149.585128
BATHURST	Shell Coles Express Bathurst Service Station	59 Durham STREET	Service Station	Regulation under CLM Act not required	-33.41639415	149.5843243
BATHURST	Former Gasworks	71 Russell STREET	Gasworks	Contamination formerly regulated under the CLM Act	-33.42420302	149.5864517
BATHURST	Devro Cattle Hide Processing Plant	46 Vale ROAD	Other Industry	Regulation under CLM Act not required	-33.43926137	149.5803563
BAULKHAM HILLS	Caltex Baulkham Hills Service Station	117 Seven Hills ROAD	Service Station	Regulation under CLM Act not required	-33.76139872	150.9750767
BAULKHAM HILLS	Caltex Service Station	130 Seven Hills ROAD	Service Station	Regulation under CLM Act not required	-33.76180431	150.9746297
BAULKHAM HILLS	Shell Coles Express Service Station	363 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.7601819	150.9916224
BEACON HILL	Caltex Service Station	176 Warringah ROAD	Service Station	Contamination currently regulated under CLM Act	-33.75381485	151.2602617
BEACON HILL	Former 7 - Eleven Service Station, Beacon Hill	312 Warringah ROAD	Service Station	Regulation under CLM Act not required	-33.7515497	151.2469442



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
BEACONSFIELD	63-85 Victoria St, Beaconsfield	63-85 Victoria STREET	Other Industry	Regulation under CLM Act not required	-33.9102929	151.2016275
BEGA	Coles Express (former Caltex) Service Station	2-6 Swan (Corner Carp) STREET	Service Station	Regulation under CLM Act not required	-36.67388263	149.838163
BEGA	Former BP Service Station	100 - 102 Gipps STREET	Service Station	Regulation under CLM Act not required	-36.67563094	149.8433291
BEGA	Former Bega Gasworks	19-29 Upper STREET	Gasworks	Under preliminary investigation order	-36.67710613	149.8480253
BEGA	Caltex Service Station	36-40 Lagoon STREET	Service Station	Regulation under CLM Act not required	-36.66832965	149.8289048
BEGA	Lands Adjoining the Former Bega Gasworks	Part of Upper, East, Gordon & Gloucester STREET	Gasworks	Under preliminary investigation order	-36.67710613	149.8480253
BEGA	Spenco Site - owned by Bega Spotlight Property 2 Pty Ltd	53-65 Bega Street STREET	Other Industry	Regulation under CLM Act not required	-36.67135539	149.8450828
BELMONT	Coles Express Belmont Service Station	502 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.03317155	151.6605194
BELMONT	Former Ampol Service Station	467-469 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.0299728	151.6613301
BELMONT NORTH	Woolworths Service Station Belmont North	399 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.02454211	151.6634893
BELMONT NORTH	Caltex Belmont North Service Station	406 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.02476876	151.6623655
BELMONT NORTH	Belmont Bus Depot	2 Floraville ROAD	Other Petroleum	Regulation under CLM Act not required	-33.02476269	151.6606657
BELMORE	SRA Land	348 Burwood ROAD	Unclassified	Regulation under CLM Act not required	-33.91753611	151.0859487
BELMORE	7-Eleven Service Station	792-794 Canterbury ROAD	Service Station	Regulation under CLM Act not required	-33.92567992	151.0873469
BELROSE	Glenrose Shopping Centre	56-58 Glen STREET	Unclassified	Contamination currently regulated under CLM Act	-33.73917996	151.2101029
BELROSE	Woolworths Petrol	60 Glen STREET	Service Station	Regulation under CLM Act not required	-33.74009002	151.2091045
BELROSE	Caltex Service Station	157 Forest WAY	Service Station	Regulation under CLM Act not required	-33.7347675	151.2212004

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
BENNETTS GREEN	Former Windale Wastewater Treatment Works	8 Templar PLACE	Other Industry	Regulation under CLM Act not required	-33.00317523	151.6936636
BERESFIELD	BP Beresfield Truckstop	2 Kinta Drive, corner John Renshaw DRIVE	Service Station	Regulation under CLM Act not required	-32.81122768	151.6393427
BERESFIELD	Former Koppers Timber Treatment Site	53 Weakleys DRIVE	Other Industry	Regulation under CLM Act not required	-32.79902937	151.6358846
BERKELEY VALE	Former Berkeley Vale Service Station	121-123 Lakedge AVENUE	Service Station	Regulation under CLM Act not required	-33.34899186	151.4423109
BERKSHIRE PARK	Shell Coles Express Berkshire Park	746 - 752 Richmond ROAD	Service Station	Regulation under CLM Act not required	-33.66508654	150.7990243
BEROWRA	Caltex Berowra Service Station	12-14 Berowra Waters ROAD	Service Station	Regulation under CLM Act not required	-33.6233827	151.1505554
BEROWRA	7-Eleven Berowra Service Station	965-969 Pacific (Cnr Waratah Rd) HIGHWAY	Service Station	Regulation under CLM Act not required	-33.62673163	151.1479171
BEROWRA	Shell Coles Express Berowra	955 Pacific (Cnr Yallambee Rd) HIGHWAY	Service Station	Regulation under CLM Act not required	-33.62818015	151.1475736
BEROWRA	42 Berowra Waters Road	42 Berowra Waters ROAD	Unclassified	Regulation under CLM Act not required	-33.6203211	151.1482454
BERRIGAN	Caltex Service Station Berrigan	155-165 Chanter STREET	Service Station	Regulation under CLM Act not required	-35.6557616	145.8015557
BERRY	Berry Service Centre - Shell Branded	88 Queen STREET	Service Station	Regulation under CLM Act not required	-34.77571634	150.6961713
BERRY	BP branded service station Berry (Formerly Shell)	75 Queen STREET	Service Station	Contamination currently regulated under POEO Act	-34.77500516	150.695167
BEXLEY	7-Eleven Bexley	474 Forest ROAD	Service Station	Regulation under CLM Act not required	-33.95160096	151.1252355
BEXLEY	7-Eleven (former Mobil) Service Station Bexley	613 Forest ROAD	Service Station	Regulation under CLM Act not required	-33.95539246	151.118447
BILLINUDGEL	CSR Readymix	Mogo PLACE	Other Industry	Regulation under CLM Act not required	-28.50210255	153.5278161
BILLINUDGEL	Billinudgel General Store	2A Wilfred STREET	Service Station	Under preliminary investigation order	-28.50435	153.52701
BLACKMANS FLAT	Mount Piper Extension Development Site	2847 Boulder ROAD	Other Industry	Regulation under CLM Act not required	-33.35619968	150.0279881



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
BLACKMANS FLAT	Western Coal Services (former Lamberts Gully Mine)	Castlereagh HIGHWAY	Other Industry	Regulation under CLM Act not required	-33.36713827	150.0483236
BLACKTOWN	Former Caltex Service Station	131 Richmond ROAD	Service Station	Regulation under CLM Act not required	-33.75866104	150.8962614
BLACKTOWN	Valspar Blacktown	4 Steel STREET	Chemical Industry	Regulation under CLM Act not required	-33.75425018	150.9127714
BLACKTOWN	Land at Reservoir Road	Reservoir ROAD	Unclassified	Regulation under CLM Act not required	-33.79119448	150.8967838
BLACKTOWN	7-Eleven Service Station	60 Walters ROAD	Service Station	Regulation under CLM Act not required	-33.77599783	150.8948926
BLAKEHURST	Woolworths Service Station Blakehurst	390 Princes HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.990197	151.11361
BLAKEHURST	The Bay Nursing Home	392 & 394 Princes HIGHWAY	Service Station	Under assessment	-33.99030465	151.1140293
BLAXLAND	7-Eleven (former Mobil) Service Station	137 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.74627	150.6137669
BOAMBEE	Lindsay Bros transport depot site	542 Pacific HIGHWAY	Other Petroleum	Regulation under CLM Act not required	-30.33106848	153.0802985
BOAMBEE	BP-branded (former Mobil) Boambee Service Station	601 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-30.33544287	153.0817266
BOBS FARM	Bob's Farm	15 Fenningham Island ROAD	Other Industry	Regulation under CLM Act not required	-32.74867207	152.0316217
BOGGABILLA	Former Caltex Service Station	90 Simpson Street, corner Newell HIGHWAY	Service Station	Regulation under CLM Act not required	-28.60654029	150.3571056
BOGGABILLA	Lowes (Former Mobil) Depot	Newell HIGHWAY	Other Petroleum	Regulation under CLM Act not required	-28.61023985	150.3529156
BOMADERRY	Caltex Service Station	341 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.84561952	150.5946978
BOMADERRY	Caltex Service Station Bomaderry	246 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.83833824	150.5958799
BOMADERRY	Former Mobil Emoleum Depot	7 Victa WAY	Other Petroleum	Regulation under CLM Act not required	-34.84454618	150.6139462
BOMADERRY	Former Shell Depot	44 Railway STREET	Other Petroleum	Regulation under CLM Act not required	-34.85193621	150.6117038

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
BOMADERRY	SRA Land	Lot 2 Meroo STREET	Unclassified	Regulation under CLM Act not required	-34.85314813	150.6099573
BOMADERRY	Bomaderry Works Depot	10 McIntyre WAY	Other Petroleum	Regulation under CLM Act not required	-34.84576748	150.6131411
BOMADERRY	Commercial Land	320 Princes HIGHWAY	Other Industry	Contamination currently regulated under CLM Act	-34.84424073	150.5958149
BOMBALA	Caltex Service Station Bombala	159-161 Maybe STREET	Service Station	Regulation under CLM Act not required	-36.91234945	149.2374622
BOMBALA	Former Bright Street Timber Mill	Bright STREET	Other Industry	Regulation under CLM Act not required	-36.91547645	149.2302454
BOMBALA	Caltex Bombala Service Station	High Street corner Stephen STREET	Service Station	Regulation under CLM Act not required	-36.90447935	149.241292
BOMBALA	Prime Pine site	Sandy LANE	Other Industry	Regulation under CLM Act not required	-36.9315425	149.2110959
BOMEN	Caltex Terminal	34 Lewington STREET	Other Petroleum	Regulation under CLM Act not required	-35.0700202	147.4121955
BONDI	BP-branded Service Station	185 Bondi ROAD	Service Station	Regulation under CLM Act not required	-33.89432208	151.2647671
BONDI	Caltex Service Station Bondi	51 Bondi ROAD	Service Station	Regulation under CLM Act not required	-33.8936307	151.260001
BONDI JUNCTION	Waverley Bus Depot	1-15 Oxford STREET	Other Industry	Regulation under CLM Act not required	-33.89165341	151.2421246
BONNY HILLS	Bonny View Store	923 Ocean DRIVE	Service Station	Regulation under CLM Act not required	-31.59075636	152.8392935
BONNYRIGG	Metro (Formerly United & AP SAVER) Service Station Bonnyrigg	709 Cabramatta Road West ROAD	Service Station	Regulation under CLM Act not required	-33.893058	150.892476
BONNYRIGG HEIGHTS	BP-Branded Service Station Bonnyrigg	451 North Liverpool ROAD	Service Station	Regulation under CLM Act not required	-33.89416327	150.8578378
BOOLAROO	Cardiff West Estate - Pasminco Cockle Creek	Adjacent to PCC Smelter at 13A Main ROAD	Metal Industry	Regulation under CLM Act not required	-32.93950137	151.6349183
BOOLAROO	Cockle Creek and Cockle Bay Sediments	Off Creek Reserve ROAD	Metal Industry	Contamination currently regulated under CLM Act	-32.96079541	151.6141327
BOOLAROO	Pasminco Cockle Creek Smelter	Lake ROAD	Metal Industry	Contamination currently regulated under CLM Act	-32.94434593	151.6307345

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
BOOLAROO	Incitec Pivot	13 Main STREET	Other Industry	Contamination formerly regulated under the CLM Act	-32.94803538	151.6302187
BOOLAROO	Bunnings Site - Pasminco Cockle Creek	13a Main ROAD	Metal Industry	Contamination formerly regulated under the CLM Act	-32.94364503	151.6252316
BOOLAROO	Part Lot 2 DP1127713 (proposed Lot G) - Pasminco Cockle Creek Smelter site	13a Main ROAD	Metal Industry	Contamination formerly regulated under the CLM Act	-32.94364503	151.6252316
BOOLAROO	Lot 600 DP1228699 (formerly Part Lot 2 DP1127713 & proposed 'Lot D') - Pasminco	Main ROAD	Metal Industry	Contamination formerly regulated under the CLM Act	-32.944397	151.626397
BOOROWA	Former Mobil Depot	14-16 Brial STREET	Other Petroleum	Regulation under CLM Act not required	-34.43673234	148.7300821
BOOROWA	Mobil Service Station	63-69 Marsden STREET	Service Station	Contamination formerly regulated under the CLM Act	-34.44157331	148.7162391
BOTANY	Former Aerosols of Australia	1617 Botany ROAD	Chemical Industry	Regulation under CLM Act not required	-33.9529386	151.2037468
BOTANY	Nuplex Resins	49-61 Stephen ROAD	Chemical Industry	Contamination currently regulated under CLM Act	-33.952588	151.21101
BOTANY	Former Tannery	2 Daniel STREET	Other Industry	Regulation under CLM Act not required	-33.94126194	151.1991087
BOTANY	Botany, Underwood	14a Underwood AVENUE	Unclassified	Contamination being managed via the planning process (EP&A Act)	-33.94508532	151.1947626
BOTANY	Roads and Maritime Service	5 - 9 Lord STREET	Other Industry	Regulation under CLM Act not required	-33.94100279	151.1968763
BOTANY	Former Industrial Site	28 Folkestone PARADE	Unclassified	Contamination being managed via the planning process (EP&A Act)	-33.95187539	151.1960537
BOURKE	Caltex Service Station	82-86 Anson STREET	Service Station	Regulation under CLM Act not required	-30.09500388	145.9414388
BOURKE	Former Shell Bourke Depot	94-106 Anson STREET	Service Station	Regulation under CLM Act not required	-30.09548497	145.9436745
BOWENFELS	Bowenfels Field Support Centre	9-13 Coerwull ROAD	Other Petroleum	Regulation under CLM Act not required	-33.47514572	150.1323899
BOWRAL	Shell Coles Express Bowral Service Station	430 Bong Bong STREET	Service Station	Regulation under CLM Act not required	-34.48269596	150.417389
BOWRAL	Former Gasworks	Merrigang STREET	Gasworks	Contamination currently regulated under CLM Act	-34.4783957	150.4255053

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
BOX HILL	Former Waste Management Facility	25 Terry ROAD	Landfill	Regulation under CLM Act not required	-33.65559259	150.8977986
BOX HILL	Former Poultry Farm	27-33 Boundary ROAD	Other Industry	Regulation under CLM Act not required	-33.64866563	150.8815467
BOX HILL	Former Poultry Farm	19-25 Boundary ROAD	Other Industry	Under assessment	-33.65087576	150.88063
BRANXTON	Former Service Station Branxton	Part of 70 Maitland STREET	Service Station	Contamination currently regulated under CLM Act	-32.65647051	151.3516199
BRANXTON	Branxton Wastewater Treatment Works	2151 New England HIGHWAY	Other Industry	Regulation under CLM Act not required	-32.66069944	151.3625572
BREWARRINA	Dowell's Fuel	39 Doyle STREET	Service Station	Regulation under CLM Act not required	-29.96152786	146.8612561
BRIGHTON-LE-SANDS	Shell Service Station Brighton Le Sands & adjacent land	2 General Holmes DRIVE	Service Station	Contamination formerly regulated under the CLM Act	-33.9579214	151.1578665
BRIGHTON-LE-SANDS	Cook Park	General Holmes DRIVE	Service Station	Contamination formerly regulated under the CLM Act	-33.9581072	151.1579572
BROADMEADOW	Former Industrial Site	16 Broadmeadow ROAD	Service Station	Regulation under CLM Act not required	-32.91444096	151.7300112
BROADMEADOW	Nineways Broadmeadow Coles Express SS	Corner Brunner Road and Lambton ROAD	Service Station	Regulation under CLM Act not required	-32.92511185	151.7364247
BROKEN HEAD	South Byron Sewage Treatment Works	Broken Head ROAD	Other Industry	Regulation under CLM Act not required	-28.67233626	153.6148974
BROKEN HILL	Former Caltex Depot	3 Kanandah ROAD	Service Station	Regulation under CLM Act not required	-31.98341823	141.4332211
BROKEN HILL	Former Caltex Service Station	167-173 Argent STREET	Service Station	Regulation under CLM Act not required	-31.96066663	141.4624175
BROKEN HILL	Caltex Service Station	535 Argent STREET	Service Station	Regulation under CLM Act not required	-31.95311924	141.4745274
BROKEN HILL	Tasco Petroleum (Former Mobil) Depot	5 Kanandah ROAD	Other Petroleum	Regulation under CLM Act not required	-31.9843986	141.4329127
BROKEN HILL	Former Mobil Aviation Refuelling Facility, Broken Hill Airport	Airport ROAD	Other Petroleum	Regulation under CLM Act not required	-31.99928312	141.4685759
BROKEN HILL	Caltex Service Station	73-87 Oxide STREET	Service Station	Contamination formerly regulated under the CLM Act	-31.95519591	141.4658647

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
BROKEN HILL	Former Mobil Depot	Corner Of Talc Street and Gossan STREET	Other Petroleum	Regulation under CLM Act not required	-31.96018102	141.4514752
BROKEN HILL	Former Gasworks	Cornish STREET	Gasworks	Contamination formerly regulated under the CLM Act	-31.96330562	141.4470611
BROOKLYN	Former Oyster Farm	139 Brooklyn (Off Government) ROAD	Unclassified	Regulation under CLM Act not required	-33.54716867	151.2229744
BROOKVALE	Coles Express Service Station Brookvale	198 Harbord ROAD	Service Station	Regulation under CLM Act not required	-33.76332299	151.2794028
BROOKVALE	Woolworths Petrol Brookvale	756 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.76170587	151.2762411
BROOKVALE	Caltex Service Station Brookvale	740-742 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.76146721	151.2745358
BROOKVALE	Harrison Manufacturing	75 Old Pittwater ROAD	Other Industry	Regulation under CLM Act not required	-33.76497282	151.2637961
BROOKVALE	Brookvale Bus Depot	630-636 Pittwater ROAD	Other Petroleum	Regulation under CLM Act not required	-33.76641698	151.2705659
BROOKVALE	Warringah Mall	Cnr Condamine Street, Old Pittwater Rd & Cross STREET	Other Industry	Regulation under CLM Act not required	-33.76729923	151.2657272
BROOKVALE	Littles Dry Cleaning	123 Old Pittwater ROAD	Other Industry	Regulation under CLM Act not required	-33.76759121	151.2625932
BROWNSVILLE	Caltex Service Station	342 Kanahooka ROAD	Service Station	Regulation under CLM Act not required	-34.48591734	150.8064373
BRUNSWICK HEADS	Caltex Service Station	5 Tweed STREET	Service Station	Regulation under CLM Act not required	-28.5381619	153.5487135
BUDGEWOI	Colongra Power Station	Off Scenic DRIVE	Other Industry	Under assessment	-33.21463137	151.5529338
BULAHDELAH	Caltex Service Station	8 Red Gum Road, Corner Mahogany STREET	Service Station	Regulation under CLM Act not required	-32.39837094	152.2106015
BULAHDELAH	Former Caltex Service Station	53-59 Bulahdelah WAY	Service Station	Regulation under CLM Act not required	-32.40721638	152.2110291
BULAHDELAH	BP-branded (former Mobil) Service Station	73-75 Bulahdelah WAY	Service Station	Regulation under CLM Act not required	-32.40971018	152.2105785
BULLABURRA	Former Burmah Bullaburra Service Station	367 - 369 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.72482995	150.4124537

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
BULLI	Scrap Yard	7 Molloy STREET	Other Industry	Contamination formerly regulated under the CLM Act	-34.33663195	150.9131154
BULLI	Bulli Brickworks	Quilkey PLACE	Other Industry	Regulation under CLM Act not required	-34.33263113	150.9086247
BUNGALORA	Former landfill area	Part of 840 Terranora ROAD	Other Industry	Regulation under CLM Act not required	-28.245029	153.476206
BUNGENDORE	Former Timber Treatment Plant	Corner King Street and Butmaroo STREET	Other Industry	Contamination formerly regulated under the CLM Act	-35.26151273	149.4434907
BURONGA	Caltex Service Station	Sturt Hwy Cnr Silver City HIGHWAY	Service Station	Regulation under CLM Act not required	-34.17056496	142.1813847
BURWOOD	Burwood STA Depot	Cnr Shaftesbury and Parramatta ROADS	Other Industry	Contamination formerly regulated under the CLM Act	-33.86982934	151.1089057
BYRON BAY	Residential Development	Lot 15 Seaview STREET	Unclassified	Regulation under CLM Act not required	-28.65214464	153.6165573
BYRON BAY	Butler Street Reserve Byron Bay	Butler STREET	Landfill	Under preliminary investigation order	-28.6434329	153.6101099
CABARITA	Dulux (Orica Australia)	Cabarita ROAD	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.84643972	151.1157115
CABARITA	Wellcome Soil Containment Cells Cabarita	47 and 48 Phillips STREET	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.85250251	151.1176366
CABRAMATTA	Caltex Service Station Cabramatta	168 John STREET	Service Station	Regulation under CLM Act not required	-33.89422314	150.9279279
CABRAMATTA	Cabramatta Creek	17 A and 19A Liverpool Street STREET	Unclassified	Regulation under CLM Act not required	-33.90282	150.941563
CABRAMATTA WEST	BP Lansvale	115-119 Hume HIGHWAY	Service Station	Under assessment	-33.894709	150.960511
CALGA	Former service station	101 Peats Ridge ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.37592138	151.2254951
CALLALA BEACH	Callala Beach General Store	(formerly 1 Quay Rd) 114A Quay ROAD	Service Station	Regulation under CLM Act not required	-35.0101817	150.6964322
CAMBRIDGE GARDENS	Caltex Cambridge Park	1 Boomerang PLACE	Service Station	Regulation under CLM Act not required	-33.74068794	150.717174
CAMDEN	Camden High School (former)	John STREET	Gasworks	Regulation under CLM Act not required	-34.05114079	150.6951285



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
CAMDEN	Caltex Camden Service Station	21 Barsden STREET	Service Station	Regulation under CLM Act not required	-34.05808413	150.6914744
CAMDEN SOUTH	Coles Express Service Station Camden South	273 Old Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.08660995	150.6945444
CAMELLIA	Hymix Concrete	14 Grand AVENUE	Metal Industry	Contamination currently regulated under CLM Act	-33.82243454	151.044789
CAMELLIA	Mauri Foods	15 Grand AVENUE	Other Industry	Regulation being finalised	-33.81996985	151.0335725
CAMELLIA	James Hardie Factory (former, eastern portion)	1 Grand AVENUE	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.8182384	151.0261019
CAMELLIA	Bitumen Manufacturer	12 Grand AVENUE	Other Industry	Contamination currently regulated under CLM Act	-33.82189695	151.0429251
CAMELLIA	Hambear	14 Thackeray STREET	Metal Industry	Regulation under CLM Act not required	-33.81920482	151.0419394
CAMELLIA	Former Asciano Properties	39 Grand AVENUE	Chemical Industry	Contamination currently regulated under CLM Act	-33.82056014	151.0443331
CAMELLIA	Railway Land	27 Grand AVENUE	Other Industry	Regulation under CLM Act not required	-33.81910822	151.0382483
CAMELLIA	Wrigg	13 Grand AVENUE	Metal Industry	Under preliminary investigation order	-33.81971361	151.0321525
CAMELLIA	Former Akzo Nobel site	6 Grand AVENUE	Chemical Industry	Contamination currently regulated under CLM Act	-33.82238826	151.0319264
CAMELLIA	Former Shell Clyde Refinery	Durham STREET	Other Industry	Contamination currently regulated under POEO Act	-33.82804924	151.0378966
CAMELLIA	Council Reserve	11B Grand AVENUE	Metal Industry	Regulation under CLM Act not required	-33.81850502	151.0302425
CAMELLIA	Veolia	37 Grand AVENUE	Chemical Industry	Contamination currently regulated under CLM Act	-33.81980027	151.0430689
CAMELLIA	Sydney Water	41 Grand AVENUE	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.8217493	151.0453367
CAMELLIA	Maritime Services Board	33A Grand AVENUE	Metal Industry	Regulation under CLM Act not required	-33.81836086	151.0401249
CAMMERAY	Tunks Park	Brothers AVENUE	Landfill	Contamination formerly regulated under the CLM Act	-33.81734704	151.2113338



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
CAMMERAY	Coles Express Cammeray	477-483 Miller STREET	Service Station	Regulation under CLM Act not required	-33.82141124	151.2108658
CAMPBELLTOWN	Mobil Service Station	96-98 Queen STREET	Service Station	Regulation under CLM Act not required	-34.06407588	150.8170082
CAMPBELLTOWN	BP Macarthur Service Station	Cnr Blaxland ROAD and Campbelltown ROAD	Service Station	Regulation under CLM Act not required	-34.05312872	150.8234349
CAMPBELLTOWN	Former vehicle wrecking yard	38 Blaxland ROAD	Other Industry	Regulation under CLM Act not required	-34.06055735	150.8130598
CAMPERDOWN	Former Gee Graphics	27 Church STREET	Other Industry	Regulation under CLM Act not required	-33.88737747	151.1773616
CAMPERDOWN	O'Dea Reserve	Salisbury LANE	Landfill	Contamination formerly regulated under the CLM Act	-33.89072786	151.1736948
CAMPERDOWN	The Spruce	12-14 Marsden STREET	Other Industry	Regulation under CLM Act not required	-33.88720632	151.1784514
CAMPSIE	Budget Petroleum and adjacent property	403 Canterbury Road and 1 Una STREET	Service Station	Contamination currently regulated under CLM Act	-33.91605617	151.1086596
CAMPSIE	Former Sunbeam factory	60 Charlotte STREET	Other Industry	Contamination formerly regulated under the CLM Act	-33.92254225	151.1025796
CANLEY HEIGHTS	Former Caltex Canley Heights	368 Canley Vale ROAD	Service Station	Regulation under CLM Act not required	-33.88271081	150.9154176
CANLEY HEIGHTS	Caltex Canley Heights Service Station	280-286 Canley Vale ROAD	Service Station	Regulation under CLM Act not required	-33.88393501	150.9241656
CANLEY VALE	Coles Express Lansvale	99 Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-33.89295753	150.9606136
CANLEY VALE	Former Mobil Service Station	96 Canley Vale ROAD	Service Station	Regulation under CLM Act not required	-33.88591573	150.9369801
CANOWINDRA	BP-branded Jasbe Service Station	76 Rodd STREET	Service Station	Regulation under CLM Act not required	-33.56131773	148.6682805
CANTERBURY	Metro Petroleum Service Station	13-19 Canterbury ROAD	Service Station	Contamination currently regulated under CLM Act	-33.90783455	151.125207
CARDIFF	7-Eleven Service Station	399 Main ROAD	Service Station	Regulation under CLM Act not required	-32.93391137	151.6562111
CARDIFF	Former Caltex Service Station	367 Main ROAD	Service Station	Regulation under CLM Act not required	-32.93761223	151.6577781

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
CARDIFF	Maneela Oval	Main ROAD	Other Industry	Regulation under CLM Act not required	-32.93018443	151.6435559
CARDIFF	Former Mobil Depot	7 Ranton STREET	Other Petroleum	Regulation under CLM Act not required	-32.94516764	151.6470387
CARDIFF	BP Service Station (Reliance Petroleum)	Corner Sturt and Main ROADS	Service Station	Regulation under CLM Act not required	-32.93792229	151.6569905
CARDIFF	Woolworths (former Mobil) Cardiff Service Station	43 Macquarie ROAD	Service Station	Regulation under CLM Act not required	-32.94118246	151.6578195
CARINGBAH	Adjacent to Spirent Australia	101-103 Cawarra ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-34.03360747	151.1245577
CARINGBAH	Former Consumer Health Products Manufacturer	32-40 Cawarra ROAD	Other Industry	Regulation under CLM Act not required	-34.03024369	151.1277755
CARINGBAH	Caltex Lilli Pilli Service Station	477-481 Port Hacking ROAD	Service Station	Regulation under CLM Act not required	-34.05243807	151.1216353
CARINGBAH	7-Eleven Service Station	367 The KINGSWAY	Service Station	Regulation under CLM Act not required	-34.03948677	151.1203268
CARINGBAH	Spirent Australia	105 Cawarra ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-34.03425343	151.1245092
CARINGBAH	BP Caringbah	54 Captain Cook DRIVE	Service Station	Under assessment	-34.032652	151.125487
CARLINGFORD	Caltex Service Station Carlingford	131 Pennant Hills ROAD	Service Station	Regulation under CLM Act not required	-33.78762398	151.0279422
CARLINGFORD	Caltex Service Station	797 Pennant Hills ROAD	Service Station	Regulation under CLM Act not required	-33.7757819	151.0516532
CARLTON	Shell Coles Express Service Station	277 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-33.9748579	151.1272732
CARRINGTON	Commercial Metals Company (CMC) Australia Pty Ltd	117-121 Bourke STREET	Other Industry	Regulation under CLM Act not required	-32.9148832	151.7677193
CARRINGTON	Carrington redevelopment site	11 Howden STREET	Other Industry	Regulation under CLM Act not required	-32.91309509	151.7625341
CARRINGTON	Forgacs Dockyard	81 Denison STREET	Other Industry	Regulation under CLM Act not required	-32.9207441	151.764816
CARRINGTON	NAT vacant land	Bourke STREET	Unclassified	Regulation under CLM Act not required	-32.91276029	151.7685894

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
CARRINGTON	Dyke Point Containment Cell	Dyke ROAD	Other Industry	Regulation under CLM Act not required	-32.91763422	151.7727101
CARRINGTON	Carrington Coal Tar Pavements	Bourke Street to Dyke ROAD	Other Industry	Regulation under CLM Act not required	-32.91441348	151.770271
CARRINGTON	Pasminco Ship Loader	Dyke Berth 2 (off Bourke Street) OTHER	Metal Industry	Regulation under CLM Act not required	-32.9148698	151.7716837
CARSS PARK	Vacant Property	334 Princes HIGHWAY	Other Industry	Regulation under CLM Act not required	-33.98628486	151.1133908
CARWELL	Cement Australia Carwell Creek Quarries	Quarry ROAD	Other Industry	Regulation under CLM Act not required	-32.85413742	149.923172
CASINO	Caltex Service Station and Depot Casino	28 & 32 Dyraaba STREET	Service Station	Regulation under CLM Act not required	-28.85488567	153.044806
CASINO	Caltex Service Station	96 Centre STREET	Service Station	Regulation under CLM Act not required	-28.86539567	153.0450654
CASINO	Former Gasworks	134-136 North STREET	Gasworks	Regulation under CLM Act not required	-28.86080712	153.0526043
CASINO	Woolworths Service Station Casino	130 Canterbury STREET	Service Station	Regulation under CLM Act not required	-28.86231341	153.0464642
CASINO	18 Beith Street, Casino	18 Beith STREET	Unclassified	Regulation under CLM Act not required	-28.84951426	153.0446585
CASINO	Corner Store	30 Barker STREET	Service Station	Regulation under CLM Act not required	-28.86316792	153.0389124
CASINO	Casino Roadhouse	86 Johnston STREET	Service Station	Under assessment	-28.85960698	153.0562429
CASULA	Caltex Casula Service Station	646 Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-33.95641262	150.8934783
CATHERINE HILL BAY	Catherine Hill Bay Coal Handling and Preparation Plant	1A Keene STREET	Other Industry	Regulation under CLM Act not required	-33.16120556	151.6302456
CESSNOCK	Caltex Cessnock Service Station	103-105 Wollombi (Cnr James Street) ROAD	Service Station	Regulation under CLM Act not required	-32.83936243	151.3430078
CESSNOCK	Former Mobil Service Station	102 Wollombi ROAD	Service Station	Regulation under CLM Act not required	-32.83844074	151.3436022
CESSNOCK	Former Service Station	2-4 Allandale ROAD	Service Station	Regulation under CLM Act not required	-32.83118911	151.3560677

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
CHARBON	Charbon Colliery	Charbon ROAD	Other Industry	Regulation under CLM Act not required	-32.92390131	149.9839098
CHARLESTOWN	7-Eleven Charlestown	273 Charlestown ROAD	Service Station	Under assessment	-32.95802555	151.6897931
CHARLESTOWN	Caltex Service Station	81 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-32.96708479	151.6955919
CHARLESTOWN	Caltex Woolworths (Former BP)	91-93 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-32.96633569	151.6959051
CHARLESTOWN	Ausgrid Powell Street Depot	8 Powell STREET	Other Industry	Regulation under CLM Act not required	-32.95912375	151.6944136
CHARMHAVEN	Caltex Charmhaven Service Station	13-15 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.21655768	151.5091452
CHATSWOOD	Former Caltex Chatswood Service Station	607 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.80396472	151.1795766
CHATSWOOD	Woolworths Chatswood	364-366 Eastern Valley WAY	Service Station	Regulation under CLM Act not required	-33.78667419	151.2010828
CHATSWOOD	Caltex Service Station Chatswood	572 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.80381271	151.1789656
CHATSWOOD	Auto Repairs	2 Devonshire STREET	Service Station	Regulation under CLM Act not required	-33.8015482	151.1859632
CHATSWOOD	Coles Express Service Station Chatswood	877-879 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.79182176	151.1804867
CHATSWOOD WEST	Chatswood Toyota	728 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.79654247	151.1776136
CHERRYBROOK	Caltex Service Station	67 Shepherds DRIVE	Service Station	Regulation under CLM Act not required	-33.72069183	151.0451415
CHESTER HILL	Former Orica, Chester Hill	127 Orchard ROAD	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.8869823	150.9952873
CHIPPENDALE	Frasers Development	Wellington STREET	Chemical Industry	Under preliminary investigation order	-33.88669108	151.2015805
CHIPPING NORTON	Former Solchem (Mobil) Depot Chipping Norton	49-51 Riverside ROAD	Other Petroleum	Regulation under CLM Act not required	-33.91621314	150.9696948
CHIPPING NORTON	Former ACR	85-107 Alfred STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.92226795	150.9586496

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
CHISWICK	Former Sydney Wiremills (BHP) site	Blackwall Point ROAD	Other Industry	Regulation under CLM Act not required	-33.85131849	151.1369131
CHITTAWAY BAY	Former Caltex Chittaway Point	100 Chittaway ROAD	Service Station	Regulation under CLM Act not required	-33.32707555	151.4293546
CHULLORA	Chullora Railway Workshops	Worth STREET	Other Industry	Regulation under CLM Act not required	-33.88639388	151.0598201
CLARENCE	Clarence Colliery	Chifley ROAD	Other Industry	Regulation under CLM Act not required	-33.46450217	150.2522729
CLARENDON	Coles Express Clarendon Service Station	244 Hawkesbury Valley WAY	Service Station	Regulation under CLM Act not required	-33.6083729	150.7890956
CLEARFIELD	Former Pamplings Dip Site	Off Clearfield ROAD	Cattle Dip	Regulation under CLM Act not required	-29.16287185	152.882974
CLYBUCCA	BP Service Station	2171 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-30.93845014	152.9422791
CLYDE	7-Eleven Clyde	3 Parramatta (Cnr Harbord Street) ROAD	Service Station	Regulation under CLM Act not required	-33.83494433	151.0222628
COBAR	Former Caltex (Bogas) Service Station Cobar	56-58 Marshall STREET	Service Station	Regulation under CLM Act not required	-31.49793339	145.8346684
COBAR	Mckinnons Gold Mine	Cobar ROAD	Metal Industry	Regulation under CLM Act not required	-31.78179755	145.693
COBAR	Caltex Service Station Cobar	99 Marshall (formerly Cnr Barrier Highway and Bathurst Street) STREET	Service Station	Regulation under CLM Act not required	-31.49631924	145.8275727
COBAR	Caltex Service Station	Lot 10 Railway PARADE	Service Station	Regulation under CLM Act not required	-31.49350124	145.8442372
COFFS HARBOUR	BP Service Station	134-136 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-30.29187037	153.1182106
COFFS HARBOUR	Dan Murphy's Coffs Harbour	10 Elbow STREET	Service Station	Regulation under CLM Act not required	-30.29439262	153.115069
COFFS HARBOUR	Mobil Service Station	314-316 Harbour DRIVE	Service Station	Contamination formerly regulated under the CLM Act	-30.3056983	153.131966
COFFS HARBOUR	Mobil Coffs Harbour Airport	Aviation DRIVE	Other Petroleum	Contamination formerly regulated under the CLM Act	-30.313385	153.1175018
COFFS HARBOUR	Woolworths Petrol	Park Beach Plaza, Arthur STREET	Service Station	Regulation under CLM Act not required	-30.28101154	153.132027

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
COFFS HARBOUR	Caltex Service Station	157 Orlando STREET	Service Station	Regulation under CLM Act not required	-30.28975334	153.1306354
COFFS HARBOUR	Coffs Harbour Slipway	38 Marina DRIVE	Other Industry	Regulation under CLM Act not required	-30.30325637	153.1441437
COFFS HARBOUR	Aussitel Backpackers Hostel	312 Harbour DRIVE	Service Station	Contamination formerly regulated under the CLM Act	-30.3057	153.132
COLEAMBALLY	Former Mobil Coleambally Depot	19 Bencubbin AVENUE	Other Petroleum	Regulation under CLM Act not required	-34.80279552	145.8945239
COLLARENEBRI	Former Shell Depot	Corner Narran Street and Queen STREET	Other Petroleum	Regulation under CLM Act not required	-29.54114772	148.5789365
COLONGRA	Munmorah Colliery	Scenic DRIVE	Other Industry	Regulation under CLM Act not required	-33.21297737	151.5416882
COLONGRA	Endeavour Colliery	Scenic DRIVE	Other Industry	Regulation under CLM Act not required	-33.21297737	151.5416882
COLYTON	Ampol Service Station	88 Great Western HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.77552363	150.7953105
CONCORD	Caltex Service Station	89 Parramatta ROAD	Service Station	Regulation under CLM Act not required	-33.86785624	151.0993769
CONCORD WEST	Caltex Service Station	369-375 Concord ROAD	Service Station	Regulation under CLM Act not required	-33.84113835	151.0888843
CONDOBOLIN	BP-Branded Service Station	38 Denison Street, corner Molong STREET	Service Station	Regulation under CLM Act not required	-33.08520378	147.1524976
CONDOBOLIN	Former Mobil Depot	6 Burnett STREET	Other Petroleum	Contamination currently regulated under CLM Act	-33.08010515	147.1642972
CONDOBOLIN	Former Ampol Depot	Cnr Parkes Road and Goobang STREET	Service Station	Regulation under CLM Act not required	-33.08034753	147.1642436
CONDOBOLIN	Former Caltex Depot	Parkes ROAD	Service Station	Regulation under CLM Act not required	-33.08255593	147.1585922
CONDOBOLIN	Mobil Condobolin Depot Railway Siding	Railway Siding behind 6 Burnett STREET	Other Petroleum	Regulation under CLM Act not required	-33.08058612	147.164225
CONSTITUTION HILL	Sydney Water Land	Caloola ROAD	Unclassified	Regulation under CLM Act not required	-33.79776636	150.9697715
COOGEE	Caltex Coogee Service Station	146-148 Coogee Bay (Cnr Mount St) ROAD	Service Station	Regulation under CLM Act not required	-33.91989232	151.2517454



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
COOKS HILL	Former Council Depot Cooks Hill	152 Bruce Street and 115 Corlette STREET	Other Industry	Regulation under CLM Act not required	-32.93525537	151.7641074
COOLAC	Coolac Service Station	Corner Hume Highway and Coleman STREET	Service Station	Regulation under CLM Act not required	-34.95435052	148.1595525
COOLAH	BP Depot (Reliance Petroleum)	72 (formerly 17-23) Cunningham STREET	Other Petroleum	Regulation under CLM Act not required	-31.82275896	149.7243171
COOLONGOLOOK	Caltex Service Station	Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-32.21648325	152.322813
COOMA	Caltex Cooma Service Station	44 Sharp (Cnr Baron St) STREET	Service Station	Regulation under CLM Act not required	-36.23323489	149.1304134
COOMA	Former Mobil Cooma Depot	2 Commissioner STREET	Other Petroleum	Regulation under CLM Act not required	-36.23267537	149.1346338
COOMA	Former Caltex Cooma Depot	2 Short STREET	Service Station	Regulation under CLM Act not required	-36.2338672	149.1348862
COOMA	Lowes Petroleum Cooma Depot and Service Station (Former BP Reliance Petroleum)	2-4 Sharp STREET	Other Petroleum	Regulation under CLM Act not required	-36.22862603	149.1356483
COOMA	Woolworths Caltex Cooma Service Station	Bombala Street Cnr Massie STREET	Service Station	Regulation under CLM Act not required	-36.23364626	149.1267469
COOMA	Former Shell Depot	48-50 Bradley STREET	Other Petroleum	Regulation under CLM Act not required	-36.23448955	149.1347987
COOMA	Former Shell Service Station	48-52 Sharp STREET	Service Station	Contamination formerly regulated under the CLM Act	-36.23350402	149.1299514
COONABARABRAN	Former Mobil Depot	49 Cowper STREET	Other Petroleum	Regulation under CLM Act not required	-31.27096226	149.2818461
COONABARABRAN	Shell Coles Express Service Station	2-6 John STREET	Service Station	Regulation under CLM Act not required	-31.27706775	149.27836
COONABARABRAN	Former Shell Coonabarabran CVRO	Corner Cowper St and Dawson St, formerly 51 Cowper STREET	Other Petroleum	Regulation under CLM Act not required	-31.27003745	149.281788
COONABARABRAN	Caltex Service Station	Cnr Dawson & Drummond STREET	Service Station	Regulation under CLM Act not required	-31.26994941	149.28183
COONABARABRAN	Caltex Service Station	85-87 John STREET	Service Station	Regulation under CLM Act not required	-31.27231215	149.2771297
COONAMBLE	Former Shell Coonamble Depot	Corner Aberford Street and Quambone ROAD	Other Petroleum	Regulation under CLM Act not required	-30.95349182	148.3793432



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
COONAMBLE	Caltex Service Station	Quambone ROAD	Service Station	Regulation under CLM Act not required	-30.95410067	148.3792167
COORANBONG	Former Poultry Farm - 91 Alton Road, Cooranbong	64 - 98 Alton ROAD	Unclassified	Regulation under CLM Act not required	-33.06860138	151.4512156
COORANBONG	Avondale Auto Centre	677 Freemans DRIVE	Service Station	Regulation under CLM Act not required	-33.06968809	151.4636293
COOTAMUNDRA	Former BP Depot	1-5 Murray STREET	Other Petroleum	Regulation under CLM Act not required	-34.62915841	148.0306962
COOTAMUNDRA	Caltex Service Station	26-34 Hovell STREET	Service Station	Regulation under CLM Act not required	-34.63624703	148.0347479
COOTAMUNDRA	Former Caltex Depot	219 Sutton STREET	Other Petroleum	Regulation under CLM Act not required	-34.65126548	148.0145283
COOTAMUNDRA	Former Ampol Service Station	72 Parker STREET	Service Station	Regulation under CLM Act not required	-34.63471008	148.0296112
COOTAMUNDRA	Cootamundra Gasworks	140-146 Hovell STREET	Gasworks	Contamination currently regulated under CLM Act	-34.64572841	148.0255049
COOTAMUNDRA	Former Amoco Depot	68-72 Hovell STREET	Other Petroleum	Contamination currently regulated under CLM Act	-34.63871124	148.0321134
COOTAMUNDRA	Former Ampol Cootamundra Rail Siding	Back Brawlin ROAD	Other Petroleum	Under assessment	-34.65326425	148.0143068
CORAMBA	Martin Street	End of Martin Street and adjacent car park OTHER	Service Station	Ongoing maintenance required to manage residual contamination (CLM Act)	-30.22125208	153.0156997
COROWA	Corowa Shire Council Works Depot	24 Poseidon ROAD	Other Petroleum	Regulation under CLM Act not required	-35.98807923	146.3652266
COROWA	Former Ampol Corowa	10 Bow STREET	Service Station	Regulation under CLM Act not required	-35.99364786	146.3901259
COROWA	Cignall Corowa	280 Hume STREET	Service Station	Under assessment	-36.00996015	146.3760437
CORRIMAL	Woolworths Petrol - Corrimal	275-277 Princes HIGHWAY	Service Station	Under assessment	-34.37527426	150.8962637
CORRIMAL	7-Eleven Corrimal	138-146 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.36986923	150.8978271
COWRA	Landmark Fertiliser Storage Facility	Corner Young Road & Waratah STREET	Chemical Industry	Regulation under CLM Act not required	-33.84321832	148.6722578

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
COWRA	Lowes Petroleum (former BP Cowra Depot)	12 Campbell STREET	Other Petroleum	Regulation under CLM Act not required	-33.83803706	148.6977873
COWRA	Former Gasworks	30 Brougham STREET	Gasworks	Contamination currently regulated under CLM Act	-33.8389659	148.6963482
COWRA	Shell Depot	34 Brougham STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-33.83932421	148.6976295
CRANGAN BAY	Big T Road House.	555 and 565 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.17326538	151.6083864
CREMORNE	Shell Coles Express Service Station	225 Military ROAD	Service Station	Regulation under CLM Act not required	-33.83063306	151.226223
CRESTWOOD	Former Caltex Depot Queanbeyan	36 Kendall (Cnr Stephens Rd) AVENUE	Other Petroleum	Regulation under CLM Act not required	-35.34615546	149.207807
CRESTWOOD	Former BP Queanbeyan	64 Uriarra ROAD	Service Station	Regulation under CLM Act not required	-35.34646177	149.2246263
CRONULLA	Breen Holdings	Bate Bay ROAD	Other Industry	Regulation under CLM Act not required	-34.03861737	151.1614114
CROWS NEST	Caltex Service Station	111-121 Falcon STREET	Service Station	Regulation under CLM Act not required	-33.82868236	151.2060317
CROYDON	Caltex Service Station	404-410 Liverpool ROAD	Service Station	Regulation under CLM Act not required	-33.88853994	151.115879
CROYDON	BP Ashfield	584 Parramatta ROAD	Service Station	Regulation under CLM Act not required	-33.87399409	151.1267296
CROYDON PARK	Mobil Service Station	334 Georges River ROAD	Service Station	Regulation under CLM Act not required	-33.89771626	151.0999194
CULCAIRN	Caltex Service Station	2883 Olympic HIGHWAY	Service Station	Regulation under CLM Act not required	-35.67441635	147.0356845
CULLEN BULLEN	Baal Bone Colliery	Castlereagh HIGHWAY	Other Industry	Regulation under CLM Act not required	-33.27193875	150.0587194
CUNDLETOWN	Caltex Service Station (1 Manning River Drive)	Old Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-31.89329598	152.5068225
CURL CURL	John Fisher Park	Corner Harbord and Abbott ROADS	Landfill	Regulation under CLM Act not required	-33.76352692	151.2798462
DACEYVILLE	Astrolabe Park	Cook AVENUE	Landfill	Regulation under CLM Act not required	-33.92963704	151.221773

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
DAPTO	RailCorp Dapto	(Rear of property) 12-14 Hamilton STREET	Other Industry	Regulation under CLM Act not required	-34.50045405	150.787353
DAPTO	Nicheinvest Pty Ltd	133-139 Lakelands DRIVE	Service Station	Under assessment	-34.50335	150.803144
DARLINGHURST	Proposed Retail Unit	139-155 Palmer STREET	Unclassified	Regulation under CLM Act not required	-33.87504688	151.2168106
DARLINGHURST	Cross City Tunnel	Riley Street and William STREET	Service Station	Contamination was addressed via the planning process (EP&A Act)	-33.87424636	151.2158305
DARLINGHURST	18-28 Neild Avenue, Darlinghurst	18-28 Neild AVENUE	Landfill	Regulation under CLM Act not required	-33.87876581	151.2276546
DEE WHY	United Dee Why	1 The Strand STREET	Service Station	Contamination currently regulated under POEO Act	-33.75569207	151.2959451
DEE WHY	Caltex Service Station	793-797 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.74566596	151.2920719
DEE WHY	Dee Why Town Centre	Pittwater ROAD	Other Industry	Regulation under CLM Act not required	-33.753169	151.2875805
DEE WHY	Roche Products Dee Why Facility	Inman ROAD	Other Industry	Contamination currently regulated under CLM Act	-33.73834964	151.2876392
DENHAM COURT	Service Station and Caravan Park Denham Court	505 Campbelltown ROAD	Service Station	Under assessment	-33.98208395	150.8459471
DENILIQUIN	Shell Coles Express Service Station	336 Victoria STREET	Service Station	Contamination formerly regulated under the CLM Act	-35.52373613	144.9807345
DENILIQUIN	Former Deniliquin Gasworks	365, 369 and 329-331 George and 380 and 386 Charlotte STREET	Gasworks	Under assessment	-35.52663588	144.9634994
DENILIQUIN	Landmark Fertiliser Storage Facility	99-101 Davidson STREET	Chemical Industry	Regulation under CLM Act not required	-35.52534735	144.975142
DENILIQUIN	Former Deniliquin Caltex Depot	116-118 Hardinge (Cnr Wood St) STREET	Service Station	Regulation under CLM Act not required	-35.53196985	144.9544597
DENILIQUIN	BP Depot (Reliance Petroleum)	125 - 127 Hardinge STREET	Service Station	Regulation under CLM Act not required	-35.53222124	144.9517397
DENILIQUIN	Former Shell Depot	143-147 Napier STREET	Other Petroleum	Regulation under CLM Act not required	-35.5342355	144.953169
DENMAN	Former Industrial Site	10 Fontana WAY	Metal Industry	Regulation under CLM Act not required	-32.37945456	150.6868239

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
DENMAN	Former Industrial Site	9 Fontana WAY	Metal Industry	Regulation under CLM Act not required	-32.37911159	150.6869866
DORA CREEK	Former Service Station	4 Doree PLACE	Service Station	Under assessment	-33.08452746	151.502415
DOYALSON	Part Lot 3 DP 259306	Off David STREET	Other Industry	Regulation under CLM Act not required	-33.20436131	151.5232558
DOYALSON	Munmorah Power Station	(Central Coast Highway) Scenic DRIVE	Unclassified	Regulation under CLM Act not required	-33.20678347	151.540795
DOYALSON	Manning Colliery (formerly Wyee)	Rutleys ROAD	Other Industry	Regulation under CLM Act not required	-33.17179576	151.5419248
DOYALSON NORTH	Caltex Service Station	235 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.18501024	151.5526114
DOYALSON NORTH	Shell Coles Express Service Station	260-270 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.18636608	151.5482399
DRUMMOYNE	Coles Express Service Station Drummoynes (Eastbound)	36-46 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.85576628	151.1593519
DRUMMOYNE	Former Dry Cleaners	225 Victoria ROAD	Chemical Industry	Regulation under CLM Act not required	-33.8507152	151.1537113
DRUMMOYNE	Coles Express Service Station Drummoynes South (Westbound)	39-45 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.85606575	151.1589061
DRUMMOYNE	Caltex Service Station	191-195 Lyons ROAD	Service Station	Regulation under CLM Act not required	-33.85699216	151.1460356
DUBBO	BP Reliance Petroleum Service Station (Former Mobil Depot)	107 Erskine STREET	Other Petroleum	Regulation under CLM Act not required	-32.24441287	148.6111704
DUBBO	Dubbo Police Station	143 Brisbane STREET	Other Petroleum	Regulation under CLM Act not required	-32.24652288	148.6034702
DUBBO	Shell Coles Express Service Station	131-133 Cobra STREET	Service Station	Regulation under CLM Act not required	-32.25511317	148.6126147
DUBBO	Shell Coles Express Service Station	45-49 Whylandra STREET	Service Station	Regulation under CLM Act not required	-32.2474598	148.5932769
DUBBO	Former Mobil depot	40-44 Morgan STREET	Other Petroleum	Regulation under CLM Act not required	-32.23912277	148.6182711
DUBBO	Caltex Service Station, Dubbo	60 Windsor PARADE	Service Station	Regulation under CLM Act not required	-32.25459322	148.6318

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
DUBBO	BP-Branded Service Station Dubbo West	51-63 Whylandra STREET	Service Station	Regulation under CLM Act not required	-32.24827657	148.5927084
DUBBO	Lowes Petroleum (BP-Branded) Depot, Dubbo	105 Erskine STREET	Service Station	Regulation under CLM Act not required	-32.24423247	148.6101676
DUBBO	Inland Petroleum (Former Shell) Depot	109 Erskine STREET	Other Petroleum	Regulation under CLM Act not required	-32.24470512	148.6124108
DUBBO	Former Caltex Depot	Phillip (corner Fitzroy) STREET	Service Station	Regulation under CLM Act not required	-32.24534863	148.6150144
DUBBO	Caltex Service Station	119 Bourke STREET	Service Station	Regulation under CLM Act not required	-32.24336464	148.6091931
DUBBO	Former Ambulance Station	165 Brisbane STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-32.24850755	148.6031749
DUBBO	United (former Volume Plus) Service Station	219-223 Cobra STREET	Service Station	Regulation under CLM Act not required	-32.2565155	148.6228586
DUBBO	Caltex Service Station, Dubbo	Cnr Brisbane Street and Cobra STREET	Service Station	Contamination currently regulated under CLM Act	-32.25322183	148.603164
DULWICH HILL	Former Tyre Recapping	115-117 Constitution ROAD	Other Industry	Regulation under CLM Act not required	-33.90300876	151.1387724
DULWICH HILL	Denison Road Playground	194 Denison ROAD	Landfill	Regulation under CLM Act not required	-33.90121956	151.1404637
DUNEDOO	Former Shell Depot Dunedoo	Cnr Bolaro and Redbank STREET	Other Petroleum	Regulation under CLM Act not required	-32.01565761	149.3922418
DUNGOG	Lot 54 Common Rd	54 Common ROAD	Unclassified	Regulation under CLM Act not required	-32.39490989	151.739821
DUNGOG	Former HWC Maintenance Depot for Civil Engineering Works	86 Abelard STREET	Other Industry	Regulation under CLM Act not required	-32.40429396	151.7514073
DUNMORE	Equestrian Centre	71 Fig Hill LANE	Unclassified	Regulation under CLM Act not required	-34.62313393	150.8421544
DURAL	Caltex Dural Service Station	917-923 Old Northern ROAD	Service Station	Regulation under CLM Act not required	-33.68312075	151.0287519
DURAL	BP Dural Service Station	580 Old Northern ROAD	Service Station	Regulation under CLM Act not required	-33.69569985	151.0283357
DURAL	Caltex Service Station	530 Old Northern ROAD	Service Station	Regulation under CLM Act not required	-33.69348472	151.0202716

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
DURAL	Woolworths Service Station	532 Old Northern ROAD	Service Station	Regulation under CLM Act not required	-33.69348472	151.0202716
EAGLE VALE	BP Service Station	Corner Eagle Vale Drive and Gould ROAD	Service Station	Regulation under CLM Act not required	-34.03128043	150.816363
EARLWOOD	RTA Land	3 Jackson PLACE	Unclassified	Contamination being managed via the planning process (EP&A Act)	-33.9272087	151.1432854
EARLWOOD	Wolli Creek Aqueduct	Unwin STREET	Unclassified	Regulation under CLM Act not required	-33.92788788	151.1480807
EARLWOOD	2, 4 & 6 Unwin Street Earlwood	2, 4 & 6 Unwin STREET	Landfill	Regulation under CLM Act not required	-33.92683423	151.1495176
EAST BALLINA	Caltex East Ballina Service Station	34 Links AVENUE	Service Station	Regulation under CLM Act not required	-28.85009113	153.5829246
EAST GOSFORD	Presbyterian Aged Care Facility	8-18 Enid CRESCENT	Landfill	Regulation under CLM Act not required	-33.4376675	151.3577947
EAST GOSFORD	Mobil Service Station	44 Victoria STREET	Service Station	Contamination formerly regulated under the CLM Act	-33.43804781	151.353303
EAST GOSFORD	Hylton Moore Park	Althrop STREET	Landfill	Under assessment	-33.43521607	151.3600229
EAST MAITLAND	United Service Station East Maitland	164 (also known as 250) Newcastle STREET	Service Station	Regulation under CLM Act not required	-32.75248998	151.5869338
EAST MAITLAND	Woolworths Caltex Green Hills	14 Mitchell DRIVE	Service Station	Regulation under CLM Act not required	-32.76182386	151.5927863
EAST MAITLAND	Former Gasworks Site	Corner Melbourne Street and Brisbane STREET	Gasworks	Regulation under CLM Act not required	-32.74939199	151.5788783
EAST MAITLAND	Caltex East Maitland Service Station	Newcastle Road, Corner William STREET	Service Station	Regulation under CLM Act not required	-32.74883712	151.5829296
EAST TAMWORTH	Caltex Service Station	350-362 Armidale ROAD	Service Station	Regulation under CLM Act not required	-31.11401974	150.9613327
EASTERN CREEK	Caltex Service Station	M4 (Eastbound) MOTORWAY	Service Station	Regulation under CLM Act not required	-33.801607	150.8857989
EASTERN CREEK	Caltex Service Station M4 Motorway Westbound	M4 (Westbound) MOTORWAY	Service Station	Regulation under CLM Act not required	-33.80255701	150.8829211
EASTERN CREEK	Fulton Hogan Industries (formerly Pioneer Road Services)	Honeycomb DRIVE	Other Industry	Regulation under CLM Act not required	-33.80231274	150.8288299



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
EASTGARDENS	130-150 Bunnerong Road Eastgardens	130 - 150 Bunnerong ROAD	Other Industry	Regulation under CLM Act not required	-33.94230414	151.2248138
EASTLAKES	Former Shell Rosebery service station and adjacent land	275-279 Gardeners ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.92470279	151.2100722
EASTLAKES	Eastlakes Reserve	Evans AVENUE	Service Station	Contamination formerly regulated under the CLM Act	-33.92497291	151.2102725
EASTLAKES	Budget Petroleum Eastlakes	102 Maloney STREET	Service Station	Contamination formerly regulated under the CLM Act	-33.93096702	151.2056606
EASTLAKES	Budget Petroleum Eastlakes	102 Maloney STREET	Service Station	Contamination formerly regulated under the CLM Act	-33.93120382	151.2054267
EASTLAKES	73 Gardeners Road	73 Gardeners ROAD	Unclassified	Regulation under CLM Act not required	-33.92541594	151.2182856
EASTWOOD	Former Mobil Service Station Eastwood	3-5 Trelawney (Cnr Rutledge St) STREET	Service Station	Regulation under CLM Act not required	-33.79273381	151.079584
EDEN	Caltex Service Station	159 Imlay STREET	Service Station	Regulation under CLM Act not required	-37.06324099	149.9044022
EDEN	Former Caltex Eden Depot	80-82 Imlay STREET	Service Station	Contamination currently regulated under CLM Act	-37.0570984	149.9038538
EDENSOR PARK	Caltex Bonnyrigg Service Station, Edensor Park	549 Elizabeth DRIVE	Service Station	Regulation under CLM Act not required	-33.88840816	150.8822609
EDENSOR PARK	7-Eleven (former Mobil) Service Station	615-621 Cowpasture Road (Cnr Elizabeth) DRIVE	Service Station	Regulation under CLM Act not required	-33.88326139	150.865591
EDGECLIFF	BP-branded (former Coles Express) Service Station	73-85A New South Head ROAD	Service Station	Regulation under CLM Act not required	-33.8769602	151.2311617
EDGEWORTH	Caltex Service Station	662 Main ROAD	Service Station	Regulation under CLM Act not required	-32.92566329	151.6278888
EDGEWORTH	Caltex-Woolworths Branded Service Station Edgeworth	738-742 Main ROAD	Service Station	Under assessment	-32.92455492	151.6202897
EMERALD BEACH	Shell Coles Express Woolgoolga Service Station	1850 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-30.16450856	153.1826673
EMERTON	7-Eleven Emerton	135-137 Poondetta ROAD	Service Station	Regulation under CLM Act not required	-33.74463908	150.8102251
EMU HEIGHTS	7-Eleven Service Station	126 Old Bathurst ROAD	Service Station	Regulation under CLM Act not required	-33.74299098	150.6547098



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
EMU HEIGHTS	Woolworths Service Station	132 Old Bathurst ROAD	Service Station	Regulation under CLM Act not required	-33.7429739	150.6559655
EMU PLAINS	Woolworths Service Station	283 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.75371349	150.6530165
ENGADINE	Former Caltex Service Station	995 Old Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.06413459	151.0155734
ENGADINE	BP Service Station	1234 Princes HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-34.07735416	151.01121
ENGADINE	BP Branded Service Station	963 Old Princes HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-34.06428454	151.0167121
EPPING	7-Eleven (former Mobil) Service Station	246 Beecroft ROAD	Service Station	Regulation under CLM Act not required	-33.77073552	151.080581
ERINA	Coles Express Service Station Erina	211 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.43547804	151.3850522
ERINA	7-Eleven Erina	214 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.43494257	151.3879511
ERINA	7-Eleven Service Station	96 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.43786868	151.3729331
ERINA	Former Frozen Food Distribution Depot	1 Aston ROAD	Other Petroleum	Contamination currently regulated under CLM Act	-33.434878	151.3845431
ERINA	Caltex Service Station	155 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.43824871	151.3801096
ERMINGTON	Blue Star Ermington	700 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.80859566	151.0660133
ERMINGTON	Caltex Service Station	562 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.81392814	151.0547543
ERSKINE PARK	Western Sydney Service Centre	25-55 Templar ROAD	Other Industry	Regulation under CLM Act not required	-33.81897822	150.7937394
ERSKINEVILLE	Redevelopment Site (Former Industrial Park) Erskineville	36/1A Coulson STREET	Other Industry	Regulation under CLM Act not required	-33.90325501	151.1855668
ERSKINEVILLE	Department of Housing	52 John STREET	Other Industry	Regulation under CLM Act not required	-33.8982925	151.1840284
ERSKINEVILLE	RailCorp land	Coulson STREET	Other Industry	Regulation under CLM Act not required	-33.90279502	151.1846827

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
ERSKINEVILLE	Lot 4/1A Coulson Street	Coulson STREET	Other Industry	Under assessment	-33.90316549	151.1867963
ERSKINEVILLE	Area B - Public Domain / The Roadway	1A Coulson STREET	Other Petroleum	Regulation under CLM Act not required	-33.90479634	151.1871194
EUABALONG WEST	BP Euabalong West Depot (Reliance Petroleum)	12 Illewong STREET	Other Petroleum	Regulation under CLM Act not required	-33.05720426	146.3946386
EVANS HEAD	Evans Head Aerodrome	Memorial Airport DRIVE	Other Industry	Regulation under CLM Act not required	-29.10389976	153.4216791
EVANS HEAD	Bundjalung National Park	The Gap ROAD	Unclassified	Regulation under CLM Act not required	-29.24433977	153.3626472
EVANS HEAD	Evans Head Residential subdivision	Bounded by Currajong, Woodburn, Carrabeen Streets and Tuckeroo CRESCENT	Unclassified	Regulation under CLM Act not required	-29.1080969	153.4243577
EVELEIGH	Macdonaldtown Triangle	Burren STREET	Gasworks	Contamination being managed via the planning process (EP&A Act)	-33.89803492	151.186059
EVELEIGH	Australian Technology Park	Henderson ROAD	Other Industry	Regulation under CLM Act not required	-33.89634136	151.1944915
FAIRFIELD	Endeavour Energy Fairfield Zone Substation	22 Hedges STREET	Other Industry	Regulation under CLM Act not required	-33.86133019	150.9555899
FAIRFIELD EAST	Speedway-Branded Service Station Fairfield	251 The Horsley DRIVE	Service Station	Regulation under CLM Act not required	-33.8711661	150.9630077
FAIRFIELD HEIGHTS	7-Eleven Fairfield Heights	234 Hamilton (Cnr The Boulevard) ROAD	Service Station	Regulation under CLM Act not required	-33.87208474	150.9373134
FAIRY MEADOW	Woolworths Petrol Service Station	47 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.39399705	150.8925369
FAIRY MEADOW	Caltex Fuel Depot and adjoining land	46 Montague STREET	Service Station	Contamination formerly regulated under the CLM Act	-34.40050499	150.8953125
FAIRY MEADOW	Deynal (Seeman)	51-59 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.39437085	150.8924666
FARLEY	Farley Wastewater Treatment Works	Owlpen LANE	Other Industry	Regulation under CLM Act not required	-32.74431314	151.5194217
FASSIFERN	Newstan Colliery	Fassifern ROAD	Other Industry	Regulation under CLM Act not required	-32.97942521	151.5660046
FASSIFERN	Former Arsenic Smelter	Fassifern ROAD	Other Industry	Regulation under CLM Act not required	-32.99649819	151.5618283

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
FEDERAL	Federal General Store	3-6 Federal DRIVE	Service Station	Contamination formerly regulated under the CLM Act	-28.65190728	153.4552976
FERN BAY	Former service station	37 Fullerton (1006 Nelson Bay Road) STREET	Service Station	Regulation under CLM Act not required	-32.87245004	151.7939904
FIVE DOCK	7-Eleven Five Dock Service Station	231-235 Great North ROAD	Service Station	Regulation under CLM Act not required	-33.86488376	151.130002
FIVE DOCK	Caltex Five Dock Service Station	47 Ramsay Road, corner Fairlight STREET	Service Station	Regulation under CLM Act not required	-33.87002804	151.1301835
FORBES	BP (Former Mobil) Depot Forbes	3-15 Union STREET	Other Petroleum	Regulation under CLM Act not required	-33.37751977	148.0101422
FORBES	Former Gasworks	24-26 Union STREET	Gasworks	Contamination currently regulated under CLM Act	-33.37752036	148.0090064
FORBES	Woolworths (Former Save on Fuel) Service Station	26 Dowling STREET	Service Station	Regulation under CLM Act not required	-33.38148764	148.0109845
FORBES	BP Service Station Forbes	29 Dowling STREET	Other Petroleum	Regulation under CLM Act not required	-33.38121776	148.0100351
FORBES	Former Shell Depot	Stephen STREET	Other Petroleum	Regulation under CLM Act not required	-33.37704755	148.0103001
FORBES	Caltex Service Station Forbes	Parkes ROAD	Service Station	Regulation under CLM Act not required	-33.36333714	148.0223727
FORESTVILLE	BP Service Station	632 Warringah ROAD	Service Station	Contamination currently regulated under CLM Act	-33.75997969	151.2142944
FORESTVILLE	Shell Service Station	667 Warringah ROAD	Service Station	Contamination currently regulated under CLM Act	-33.76035336	151.2184929
FORRESTERS BEACH	Caltex Service Station	The Entrance Rd Cnr Bellevue ROAD	Service Station	Regulation under CLM Act not required	-33.40057818	151.4687631
FORSTER	Caltex Service Station	16-18 Lake STREET	Service Station	Regulation under CLM Act not required	-32.18306967	152.5162492
FORSTER	Shell (Kneebone's) Service Station	2-6 The Lakes WAY	Service Station	Regulation under CLM Act not required	-32.1946108	152.5145662
FORSTER	Enhance (Former Mobil) Service Station	86-88 Macintosh STREET	Service Station	Regulation under CLM Act not required	-32.19079468	152.5154847
FREDERICKTON	Former Service station	2-4 Great North ROAD	Service Station	Regulation under CLM Act not required	-31.03513998	152.8794105

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
FRENCHS FOREST	Former BP Service Station	Russell AVENUE	Service Station	Regulation under CLM Act not required	-33.75018093	151.2245005
FRENCHS FOREST	Former 7-Eleven / Mobil Beacon Hill Service Station, Frenchs Forest	312 Warringah ROAD	Service Station	Regulation under CLM Act not required	-33.75129647	151.2469656
FRESHWATER	Prime Service Station Freshwater	117 Harbord ROAD	Service Station	Regulation under CLM Act not required	-33.77286748	151.2794354
GEORGETOWN	Former Caltex Service Station	4 Georgetown ROAD	Service Station	Regulation under CLM Act not required	-32.91121105	151.7319693
GERRINGONG	Gerringong Cooperative	18 Belinda STREET	Other Petroleum	Regulation under CLM Act not required	-34.74518835	150.8181054
GILGANDRA	United (Former Mobil) Service Station	13 Castlereagh STREET	Service Station	Regulation under CLM Act not required	-31.71715641	148.6581574
GILGANDRA	Former Mobil Depot	2 Federation STREET	Other Petroleum	Regulation under CLM Act not required	-31.70937362	148.6522102
GILGANDRA	Former Mobil Depot	20 Federation STREET	Other Petroleum	Regulation under CLM Act not required	-31.70771744	148.6514198
GILGANDRA	Caltex Service Station Gilgandra	6425 Newell HIGHWAY	Service Station	Regulation under CLM Act not required	-31.72545524	148.65281
GILLENBAH	Caltex (Former Mobil) Narrandera Service Station	16321 - 16335 Newell HIGHWAY	Service Station	Regulation under CLM Act not required	-34.76124219	146.5398604
GIRRAWEE	Industrial Galvanizers site	20-22 Amax AVENUE	Metal Industry	Contamination currently regulated under POEO Act	-33.80500693	150.9396743
GIRRAWEE	Caltex Pendle Hill Service Station Girraween	602 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.80827518	150.9421511
GLADESVILLE	Caltex Service Station	287-295 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.8285374	151.1268639
GLADESVILLE	Road Reserve	Pittwater ROAD	Other Industry	Regulation under CLM Act not required	-33.81603924	151.1355085
GLADESVILLE	Caltex Service Station	116 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.83575319	151.1277863
GLADESVILLE	Glade View Business Park	436-484 Victoria ROAD	Other Industry	Under assessment	-33.82382382	151.1223941
GLEBE	The Hill and Jubilee Embankment	12 Maxwell ROAD	Other Industry	Regulation under CLM Act not required	-33.87573032	151.1776027

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
GLEN INNES	Ambulance Station	106 Bourke STREET	Unclassified	Regulation under CLM Act not required	-29.73805854	151.7313138
GLEN INNES	Telstra Depot Glen Innes	126 Lambeth STREET	Unclassified	Regulation under CLM Act not required	-29.73565341	151.7278271
GLEN INNES	Caltex Glen Innes Service Station	Meade Street, corner Church STREET	Service Station	Regulation under CLM Act not required	-29.73699014	151.7379335
GLEN INNES	Former Shell Depot	Lambeth STREET	Other Petroleum	Regulation under CLM Act not required	-29.7376309	151.7276309
GLEN INNES	Former Caltex Depot, Glen Innes	Lot 1 DP785636 Lambeth STREET	Other Petroleum	Regulation under CLM Act not required	-29.73525485	151.7279167
GLEN INNES	Council-owned Laneway	Lot 2 Lang STREET	Gasworks	Regulation under CLM Act not required	-29.74385432	151.7323049
GLEN INNES	Caltex Service Station	Cnr Taylor Street & Church STREET	Service Station	Regulation under CLM Act not required	-29.73289036	151.739653
GLEN INNES	Caltex Glen Innes Paddock	9979 New England HIGHWAY	Service Station	Regulation under CLM Act not required	-29.75608853	151.7344106
GLENBROOK	Caltex Service Station Glenbrook	78 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.76545234	150.6215447
GLENDALE	Coles Express Glendale	593 Main ROAD	Service Station	Regulation under CLM Act not required	-32.92709242	151.637946
GLENDALE	Settlement Pond	65 Glendale DRIVE	Unclassified	Regulation under CLM Act not required	-32.93411399	151.6483695
GLENDALE	Former Service Station	334-342 Lake ROAD	Unclassified	Regulation under CLM Act not required	-32.92775076	151.6433463
GLENDALE	Woolworths Service Station	Stockland DRIVE	Service Station	Regulation under CLM Act not required	-32.93250548	151.6404097
GLENDENNING	7-Eleven Plumpton Service Station Glendenning	1 Dublin Street, corner Richmond ROAD	Service Station	Regulation under CLM Act not required	-33.73988232	150.8603323
GLENORIE	Caltex Glenorie Service Station	912 Old Northern ROAD	Service Station	Regulation under CLM Act not required	-33.60550946	151.0126731
GLENTHORNE	Caltex Taree Service Station	Manning River DRIVE	Service Station	Regulation under CLM Act not required	-31.94415251	152.4703511
GLOUCESTER	Caltex Service Station	141 Church STREET	Service Station	Regulation under CLM Act not required	-32.01222514	151.9579521

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
GOOLMANGAR	Goolmangar General Store	851 Nimbin ROAD	Service Station	Regulation under CLM Act not required	-28.74694441	153.225401
GOONELLABAH	Former Invercauld Road Cattle Dip	161 Invercauld ROAD	Cattle Dip	Contamination formerly regulated under the CLM Act	-28.8308417	153.3098878
GOSFORD	United (former Mobil) Depot	Corner Merinee Road and Bowen CRESCENT	Other Petroleum	Regulation under CLM Act not required	-33.41523225	151.3257069
GOULBURN	Former Goulburn Gasworks	1 Blackshaw ROAD	Gasworks	Contamination currently regulated under CLM Act	-34.75237525	149.725507
GOULBURN	Goulburn Tannery	13 Gibson STREET	Other Industry	Regulation under CLM Act not required	-34.73756525	149.72059
GOULBURN	Caltex Depot	13 Sloane STREET	Other Petroleum	Regulation under CLM Act not required	-34.77423152	149.7088626
GOULBURN	Metro Goulburn Depot	23 Braidwood ROAD	Other Petroleum	Regulation under CLM Act not required	-34.76217302	149.7170897
GOULBURN	Caltex Service Station	72-74 Clinton STREET	Service Station	Regulation under CLM Act not required	-34.75728157	149.7135824
GOULBURN	Caltex Service Station	68 Goldsmith STREET	Service Station	Regulation under CLM Act not required	-34.75054432	149.7192098
GOULBURN	Former Shell Autoport Service Station	Corner Bruce Street and Lagoon STREET	Service Station	Regulation under CLM Act not required	-34.74807885	149.7266246
GOULBURN	Coles Express Service Station	90 Cowper (Corner Clinton Street) STREET	Service Station	Regulation under CLM Act not required	-34.75566648	149.7107831
GOULBURN	Mobil Service Station	129 Lagoon STREET	Service Station	Contamination formerly regulated under the CLM Act	-34.74618793	149.7330484
GOULBURN	Caltex Service Station	315 Auburn, corner Bradley STREET	Service Station	Regulation under CLM Act not required	-34.74942293	149.7232692
GOULBURN	Former Mobil Service Station Goulburn	422-426 Auburn STREET	Service Station	Regulation under CLM Act not required	-34.74869879	149.7229392
GRAFTON	Former General Store and Service Station Grafton	161 Turf STREET	Service Station	Regulation under CLM Act not required	-29.67412811	152.9336609
GRAFTON	Lowes Petroleum (BP-Branded) Depot, Grafton	13 Orara STREET	Other Petroleum	Regulation under CLM Act not required	-29.67016421	152.918161
GRAFTON	Former Shell Depot	2 Milton STREET	Other Petroleum	Regulation under CLM Act not required	-29.67723019	152.9205374



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
GRAFTON	Grafton Works Depot	26-28 Bruce STREET	Other Petroleum	Regulation under CLM Act not required	-29.67975507	152.9249357
GRAFTON	Former BP Service Station (Reliance Petroleum)	202 Queen STREET	Service Station	Regulation under CLM Act not required	-29.67645469	152.9423977
GRAFTON	Woolworths Petrol	75 - 77 Fitzroy Street Cnr of Duke STREET	Service Station	Regulation under CLM Act not required	-29.69221713	152.9343562
GRAFTON	Caltex Service Station	Corner Villiers St and Fitzroy STREET	Service Station	Regulation under CLM Act not required	-29.69296308	152.9366431
GRAFTON	BP Service Station (Reliance Petroleum)	14 Villiers (Cnr Fitzroy) STREET	Service Station	Regulation under CLM Act not required	-29.69345456	152.9373123
GRAFTON	Former Mobil Depot Grafton	2-16 Bruce STREET	Other Petroleum	Regulation under CLM Act not required	-29.68093591	152.9231289
GRAFTON	Caltex Service Station	179 Prince STREET	Service Station	Regulation under CLM Act not required	-29.68600117	152.9371093
GRANVILLE	Caltex Service Station	144 Parramatta ROAD	Service Station	Regulation under CLM Act not required	-33.83039605	151.0109216
GRANVILLE	Australand	15-17 Berry STREET	Other Industry	Contamination being managed via the planning process (EP&A Act)	-33.83600073	151.0211988
GRANVILLE	Woolworths Service Station Granville	158 Clyde STREET	Service Station	Regulation under CLM Act not required	-33.84623338	151.0124885
GRANVILLE	Commercial Property	2B Factory STREET	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.84173556	151.0165687
GRANVILLE	Old Granville Depot	23 Elizabeth STREET	Unclassified	Regulation under CLM Act not required	-33.83765925	151.008528
GRANVILLE	7-Eleven Service Station	154-160 Parramatta ROAD	Service Station	Regulation under CLM Act not required	-33.83022685	151.0101322
GRANVILLE	A'Becketts Creek	Albert STREET	Unclassified	Under assessment	-33.82735397	151.0113643
GREENACRE	Former Plating Works	12 Claremont STREET	Unclassified	Regulation under CLM Act not required	-33.89992254	151.0386128
GREENACRE	7-Eleven (former Mobil) Service Station	301-305 Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-33.90524488	151.0419971
GREENACRE	Caltex Service Station	87 - 91 Roberts ROAD	Service Station	Regulation under CLM Act not required	-33.90461089	151.0648581



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
GREENWICH	Gore Creek Reserve - Drainage Line	St Vincents ROAD	Other Industry	Regulation under CLM Act not required	-33.82888693	151.1819101
GRENFELL	Former SRA Fuel Depot	Grafton STREET	Other Petroleum	Regulation under CLM Act not required	-33.89351237	148.1560188
GRENFELL	Grenfell Gasworks	Corner Gooloogong Road & Bourke STREET	Gasworks	Regulation under CLM Act not required	-33.89006016	148.1615443
GRETA	Coles Express Greta	122 New England HIGHWAY	Service Station	Regulation under CLM Act not required	-32.67656357	151.3872818
GRETA	redevelopment site	112-114 High STREET	Other Industry	Regulation under CLM Act not required	-32.67706709	151.3876682
GRETA	Former landfill	Hollingshed ROAD	Landfill	Regulation under CLM Act not required	-32.66705287	151.3923474
GREYSTANES	Metro Branded (former Mobil) Service Station	73 Ettalong ROAD	Service Station	Regulation under CLM Act not required	-33.81822648	150.9513946
GRIFFITH	Liberty Depot (former Shell CVRO) Griffith	6-10 Mackay AVENUE	Other Petroleum	Regulation under CLM Act not required	-34.2910045	146.063824
GRIFFITH	Former Murrumbidgee Irrigation Depot	55-77 Banna AVENUE	Other Industry	Regulation under CLM Act not required	-34.28858242	146.0567509
GRIFFITH	Mobil Depot - Griffith Airport	Off Remembrance DRIVE	Other Petroleum	Regulation under CLM Act not required	-34.25618872	146.0620449
GRIFFITH	Former Ampol Depot	32-34 Mackay AVENUE	Other Petroleum	Regulation under CLM Act not required	-34.2933331	146.0679503
GRIFFITH	Caltex Service Station and Depot	2-4 Mackay AVENUE	Service Station	Regulation under CLM Act not required	-34.2908766	146.0630815
GRIFFITH	Former Landmark Fertiliser Storage Facility	2-8 Jensen ROAD	Chemical Industry	Regulation under CLM Act not required	-34.29365599	146.0536413
GRIFFITH	Belford Petroleum (former Mobil) Depot	30 Banna AVENUE	Service Station	Regulation under CLM Act not required	-34.29042827	146.0595497
GRIFFITH	Former BP Service Station (Reliance Petroleum)	81 Banna AVENUE	Service Station	Regulation under CLM Act not required	-34.28851251	146.0540815
GUILDFORD	7-Eleven Service Station Guildford West	176 Fowler ROAD	Service Station	Regulation under CLM Act not required	-33.85149493	150.9722491
GULGONG	Lowes Petroleum (former BP) Depot Gulgong	6 Railway STREET	Other Petroleum	Regulation under CLM Act not required	-32.35950625	149.5461499

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
GULGONG	The Oval Site	Queen STREET	Unclassified	Regulation under CLM Act not required	-32.36169815	149.531075
GULMARRAD	BP Service Station Maclean	3976 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-29.48537407	153.2004311
GUMLY GUMLY	Caltex Service Station	3723 Sturt HIGHWAY	Service Station	Regulation under CLM Act not required	-35.13590309	147.4424551
GUMLY GUMLY	Brick Kiln Reserve	Eunony Bridge ROAD	Landfill	Regulation under CLM Act not required	-35.12098411	147.4196309
GUNDAGAI	Former Mobil Depot	98 Mount STREET	Other Petroleum	Regulation under CLM Act not required	-35.08206783	148.096221
GUNNEDAH	Caltex Service Station	21 Abbott STREET	Service Station	Regulation under CLM Act not required	-30.98021001	150.2561856
GUNNEDAH	Former Shell Depot Gunnedah	85-89 Barber STREET	Other Petroleum	Regulation under CLM Act not required	-30.97949284	150.2507401
GUNNEDAH	Mobil Gunnedah Depot	16-24 Wentworth STREET	Other Petroleum	Regulation under CLM Act not required	-30.98428725	150.260609
GUNNEDAH	BP Depot Gunnedah	103 Mathias ROAD	Other Petroleum	Under assessment	-30.96665001	150.2326526
GUNNEDAH	BP Service Station	Corner Conadilly Street & Henry STREET	Service Station	Contamination formerly regulated under the CLM Act	-30.98116266	150.2583066
GUNNEDAH	Mobil Service Station	341 Conadilly STREET	Service Station	Contamination formerly regulated under the CLM Act	-30.9807394	150.2578428
GUNNEDAH	Property NSW Site	35-37 Abbott STREET	Other Petroleum	Regulation under CLM Act not required	-30.9789841	150.25737
GUNNEDAH	Former Telstra Line Depot	81 Barber STREET	Other Petroleum	Regulation under CLM Act not required	-30.97933809	150.2503121
GUNNEDAH	Adjacent to Service Station	Intersection of Henry Street and Conadilly STREET	Service Station	Contamination formerly regulated under the CLM Act	-30.98072588	150.2582802
GUNNEDAH	Former Caltex Depot	61 Railway AVENUE	Other Petroleum	Contamination formerly regulated under the CLM Act	-30.97953242	150.2494457
GUNNING	Gunning Motors	56 Yass STREET	Service Station	Regulation under CLM Act not required	-34.78159326	149.2684791
GUYRA	Guyra Fourways Service Centre	87-89 Bradley STREET	Service Station	Regulation under CLM Act not required	-30.24580085	151.6701156

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
GUYRA	Caltex-branded Service Station	4352 New England HIGHWAY	Service Station	Regulation under CLM Act not required	-30.20601937	151.6757291
GUYRA	StateRail land leased to Incitec	Starr ROAD	Other Industry	Regulation under CLM Act not required	-30.23157011	151.6707135
GWANDALAN	Metro Petroleum Gwandalan (Formerly Gwandalan Auto Care)	47 Orana ROAD	Service Station	Regulation under CLM Act not required	-33.13632941	151.5813396
GWANDALAN	Former Gwandalan Landfill	Kanangra DRIVE	Landfill	Regulation under CLM Act not required	-33.17497722	151.5917107
GYMEA	7-Eleven (former Mobil) Gynea Service Station	110 Gynea Bay ROAD	Service Station	Regulation under CLM Act not required	-34.03745848	151.0848547
GYMEA	Coles Express Kirrawee	470 Princes (Cnr The Boulevard) HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-34.02735302	151.0845079
GYMEA	Former Shell Service Station Gynea	Gynea Bay ROAD	Service Station	Regulation under CLM Act not required	-34.04129676	151.0841328
HABERFIELD	7-Eleven Haberfield	25-35 Parramatta ROAD	Service Station	Contamination currently regulated under CLM Act	-33.88794591	151.14287
HALEKULANI	Former Halekulani Landfill	Macleay DRIVE	Landfill	Regulation under CLM Act not required	-33.21446301	151.5527625
HAMILTON	SRA Land	10 Maitland ROAD	Unclassified	Regulation under CLM Act not required	-32.91994358	151.7512417
HAMILTON	Taxi Services	116 Tudor STREET	Service Station	Contamination formerly regulated under the CLM Act	-32.92351606	151.7454742
HAMILTON	Caltex Hamilton	59-63 Tudor STREET	Service Station	Regulation under CLM Act not required	-32.92498593	151.7509313
HAMILTON	Newcastle Toyota	65 Tudor STREET	Other Petroleum	Regulation under CLM Act not required	-32.925171	151.7504048
HAMILTON	Hamilton Bus Depot	Cnr Denison Street and Gordon AVENUE	Other Petroleum	Regulation under CLM Act not required	-32.92542648	151.7512512
HAMILTON NORTH	Shell Newcastle Terminal	5 Chatham ROAD	Other Petroleum	Contamination currently regulated under CLM Act	-32.91630469	151.7408712
HAMILTON NORTH	Former Black and Decker Site	56 Clyde STREET	Metal Industry	Contamination currently regulated under CLM Act	-32.91080413	151.7358236
HAMILTON NORTH	Hamilton Gasworks	1 Chatham ROAD	Gasworks	Contamination currently regulated under CLM Act	-32.91362741	151.7406241

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
HAMILTON NORTH	Former ELMA Site	54 Clyde STREET	Other Industry	Contamination currently regulated under CLM Act	-32.91145768	151.7367691
HARBORD	Former Dry Cleaners	121 Wyndora AVENUE	Other Industry	Regulation under CLM Act not required	-33.77425321	151.2821553
HARDEN	SRA Site	31 Aurvill ROAD	Unclassified	Regulation under CLM Act not required	-34.54998656	148.3689577
HARDEN	SRA Site	51 Whitton LANE	Unclassified	Contamination formerly regulated under the CLM Act	-34.55396035	148.3713349
HARDEN	South West Fuel Harden	294 Albury STREET	Service Station	Regulation under CLM Act not required	-34.550176	148.351276
HARRIS PARK	Dalley Street Reserve	2A Dalley STREET	Other Industry	Regulation under CLM Act not required	-33.82749118	151.0097545
HARTLEY VALE	Former Shale Oil Refinery	Lot 52 Hartley Vale ROAD	Unclassified	Contamination currently regulated under CLM Act	-33.52925119	150.24216
HASTINGS POINT	Coles Express Hastings Point	99 Tweed Coast ROAD	Service Station	Regulation under CLM Act not required	-28.36914103	153.5725676
HAY	SRA Land	429, 431, 435, 437 & 439 Murray STREET	Other Industry	Regulation under CLM Act not required	-34.49965611	144.840976
HAY	SRA Land	443 Murray STREET	Other Industry	Contamination formerly regulated under the CLM Act	-34.49966753	144.8410778
HAY	Former Shell Hay Depot	391 Murray STREET	Other Petroleum	Regulation under CLM Act not required	-34.50028195	144.8463999
HAY	Former Mobil Depot Hay	397-399 Murray STREET	Other Petroleum	Regulation under CLM Act not required	-34.50019184	144.8456578
HAY SOUTH	Caltex Service Station	429-431 Moama STREET	Service Station	Regulation under CLM Act not required	-34.52001427	144.8380121
HAZELBROOK	Caltex Service Station Hazelbrook	198 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.72106175	150.4520976
HEATHCOTE	Caltex Service Station	1344 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.08841066	151.0072048
HEATHCOTE	Caltex Service Station	1403 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.09059834	151.003752
HEATHCOTE	Shell Coles Express Service Station	1355 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.08780042	151.0069741

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
HEATHERBRAE	Bogas (Former Caltex) Service Station	3 Speedy Lock LANE	Service Station	Regulation under CLM Act not required	-32.78057822	151.7372135
HEATHERBRAE	Shell Coles Express Motto Farm Service Station	2137 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-32.79835449	151.7176284
HEXHAM	QR National - Hexham Precinct	179 & 3/67 Maitland ROAD	Other Industry	Regulation under CLM Act not required	-32.83474038	151.6821895
HEXHAM	Caltex Diesel Stop	360 Maitland ROAD	Service Station	Regulation under CLM Act not required	-32.82844873	151.6851063
HEXHAM	Cummins Newcastle Facility Hexham	21 Gallegan STREET	Other Industry	Regulation under CLM Act not required	-32.83186739	151.686709
HEXHAM	BP Service Station (Reliance Petroleum)	Corner Pacific Highway and Old Maitland ROAD	Service Station	Regulation under CLM Act not required	-32.82756403	151.6846929
HEXHAM	Former Forgacs Site	21 Sparke STREET	Chemical Industry	Contamination currently regulated under CLM Act	-32.85464558	151.6988053
HEXHAM	Caltex-Bogas Warehouse	239 Old Maitland ROAD	Service Station	Regulation under CLM Act not required	-32.82899942	151.6861849
HEXHAM	Industrial Galvanizers	312 Pacific HIGHWAY	Metal Industry	Contamination currently regulated under POEO Act	-32.83457186	151.6884941
HEXHAM	14 Sparke St Hexham	14 Sparke STREET	Metal Industry	Under assessment	-32.85394328	151.6960863
HILLSTON	Former BP Depot Hillston	141-143 Cowper STREET	Other Petroleum	Regulation under CLM Act not required	-33.48823546	145.5381623
HOLBROOK	Caltex Truckstop	Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-35.71332625	147.3207237
Homebush	Ausgrid Mason Park Substation	1 Underwood ROAD	Other Industry	Regulation under CLM Act not required	-33.85674677	151.0747044
Homebush Bay	SUEZ Waste Recycling Centre (WRC) and Cleanaway Liquid Waste Treatment Plant (LWTP)	Corner Pondage Link and Hill ROAD	Landfill	Regulation under CLM Act not required	-33.84359299	151.0593656
Homebush West	Caltex Service Station Homebush West	334-336 Parramatta ROAD	Service Station	Regulation under CLM Act not required	-33.8581543	151.0681261
Homebush West	Former Ford Landfill	22 Mandemar AVENUE	Landfill	Under preliminary investigation order	-33.86180526	151.0635664
HORNSBY	Midas Car Care Centre Hornsby	2A Linda STREET	Unclassified	Regulation under CLM Act not required	-33.70052215	151.1004786

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
HORNSBY	Coles Express Hornsby	194- 206 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.7071993	151.0991452
HORNSBY	Hornsby Train Maintenance Centre	1B Stephen STREET	Other Industry	Regulation under CLM Act not required	-33.69342449	151.1035295
HOXTON PARK	Endeavour Energy Hoxton Park	490 Hoxton Park ROAD	Other Industry	Regulation under CLM Act not required	-33.92766437	150.8689069
HUNTERS HILL	Coles Express Hunters Hill	4 Ryde ROAD	Service Station	Regulation under CLM Act not required	-33.8317985	151.141655
HUNTERS HILL	Foreshore Land	Rear of 7, 9 & 11 Nelson PARADE	Other Industry	Contamination currently regulated under CLM Act	-33.84248362	151.1649249
HUNTERS HILL	7, 9 and 11 Nelson Parade Hunters Hill	7, 9 and 11 Nelson PARADE	Other Industry	Regulation under CLM Act not required	-33.84218911	151.164968
HURLSTONE PARK	Former Telstra Depot	82 Canterbury ROAD	Service Station	Regulation under CLM Act not required	-33.90803171	151.1258121
HURLSTONE PARK	Former Speedway Petroleum Service Station	610 - 618 New Canterbury ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.90541228	151.1322009
HURLSTONE PARK	7-Eleven Hurlstone Park	670 New Canterbury ROAD	Service Station	Regulation under CLM Act not required	-33.90510388	151.1299825
HURSTVILLE GROVE	Moore Reserve	Morshead DRIVE	Landfill	Contamination currently regulated under CLM Act	-33.97920603	151.0873578
INGLEBURN	7-Eleven Ingleburn	63 Oxford St (Cnr Cumberland St) STREET	Service Station	Under assessment	-33.9999965	150.8680085
INVERELL	Former Shell Depot	25 Edward STREET	Other Petroleum	Regulation under CLM Act not required	-29.76151684	151.1182033
INVERELL	Former Service Station	20 Oliver STREET	Service Station	Regulation under CLM Act not required	-29.77229743	151.1152692
INVERELL	Former Caltex Depot Inverell	4 Edward STREET	Service Station	Regulation under CLM Act not required	-29.76123104	151.1147983
INVERELL	Former Mobil Inverell Depot	29-33 Edward STREET	Other Petroleum	Regulation under CLM Act not required	-29.76135322	151.1171412
INVERELL	Caltex Service Station	55-59 Ring STREET	Service Station	Regulation under CLM Act not required	-29.76204512	151.1141737
INVERELL	Former Mobil Service Station	Corner Otho Street and Henderson STREET	Service Station	Regulation under CLM Act not required	-29.7786926	151.1149921



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
INVERELL	Former Caltex Service Station	141 Otho STREET	Service Station	Regulation under CLM Act not required	-29.77819403	151.1145699
ISLINGTON	Caltex Service Station	240 Maitland ROAD	Service Station	Regulation under CLM Act not required	-32.91138644	151.7457701
ISLINGTON	Shell Pipeline Easement (vacant land)	24 Fern STREET	Other Petroleum	Regulation under CLM Act not required	-32.91706254	151.7473809
JAMISONTOWN	BP Service Station Jamisontown	124 - 128 Mulgoa ROAD	Service Station	Regulation under CLM Act not required	-33.76978323	150.6764977
JAMISONTOWN	Former Caltex Jamisontown	229-231 Mulgoa ROAD	Service Station	Regulation under CLM Act not required	-33.76661447	150.6784735
JAMISONTOWN	7-Eleven Service Station	92 Mulgoa ROAD	Service Station	Contamination currently regulated under CLM Act	-33.7667231	150.6796488
JANNALI	Former Mobil Service Station	121 Georges River ROAD	Service Station	Regulation under CLM Act not required	-34.01614613	151.0681921
JANNALI	Former IGA	541 Box ROAD	Other Industry	Regulation under CLM Act not required	-34.01602134	151.0660384
JENNINGS	Jennings Former Arsenic Poison Factory	Duke Street, Manor Street, and Ballandean STREET	Chemical Industry	Contamination currently regulated under CLM Act	-28.929342	151.9298622
JESMOND	Caltex Service Station	27 Bluegum ROAD	Service Station	Regulation under CLM Act not required	-32.9029287	151.691164
JINDABYNE	BP Service Station (Reliance Petroleum)	8 Kosciuszko ROAD	Service Station	Regulation under CLM Act not required	-36.41478692	148.6178882
JINDABYNE	Caltex Service Station	50 Kosciuszko ROAD	Service Station	Regulation under CLM Act not required	-36.41395847	148.6225113
JINGELLIC	Former Jingellic School	3179 River ROAD	Other Industry	Regulation under CLM Act not required	-35.926501	147.701011
JUNEE	Subdivision Proposal	5858 Gundagai ROAD	Unclassified	Regulation under CLM Act not required	-34.87783587	147.6067578
KANAHOOKA	Former Smelter Site	Kanahooka ROAD	Metal Industry	Under assessment	-34.49406369	150.8227583
KANDOS	Cement Australia Kandos Cement Works	1 Jamison STREET	Other Industry	Regulation under CLM Act not required	-32.86399912	149.9779259
KANWAL	Kanwal General Store and Fuel Supplies and Adjacent Land	68 and part of 70 Craigie AVENUE	Service Station	Contamination currently regulated under CLM Act	-33.263026	151.482125



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
KANWAL	Former Bus and Truck Rental Yard	645-647 Pacific Highway HIGHWAY	Other Petroleum	Regulation under CLM Act not required	-33.26233802	151.4825469
KARIONG	Coles Express Kariong	6 Central Coast HIGHWAY	Service Station	Regulation under CLM Act not required	-33.43443192	151.2963401
KARIONG	Caltex Service Station	Lot 2 Langford DRIVE	Service Station	Regulation under CLM Act not required	-33.43934827	151.2935447
KARUAH	BP Roadhouse Karuah	403 Tarean ROAD	Service Station	Regulation under CLM Act not required	-32.65371781	151.9629963
KATOOMBA	Aldi Stores	201 Katoomba STREET	Service Station	Regulation under CLM Act not required	-33.71756625	150.3101649
KATOOMBA	Former Katoomba/Leura Gasworks	Megalong STREET	Gasworks	Contamination currently regulated under CLM Act	-33.71318559	150.3187284
KELLYVILLE	Caltex Service Station	3-5 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.71436125	150.9602175
KELLYVILLE	BP Service Station Kellyville	19-23 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.71280997	150.9590756
KELSO	Caltex Service Station Kelso	19 Sydney ROAD	Service Station	Regulation under CLM Act not required	-33.41904247	149.6023985
KELSO	BP Service Station (Reliance Petroleum)	63 Sydney ROAD	Service Station	Regulation under CLM Act not required	-33.41925328	149.6076677
KEMBLA GRANGE	ShawCor Australia	66 West Dapto ROAD	Other Petroleum	Regulation under CLM Act not required	-34.46875328	150.8106326
KEMBLAWARRA	Griffins Bay, Lake Illawarra	Shellharbour ROAD	Landfill	Regulation under CLM Act not required	-34.49653984	150.8943776
KEMPS CREEK	Caltex-branded Service Station	1163 Mamre ROAD	Service Station	Regulation under CLM Act not required	-33.86972102	150.7966074
KEMPSEY	Kempsey Showground	19 Sea STREET	Unclassified	Contamination being managed via the planning process (EP&A Act)	-31.07334836	152.8308795
KEMPSEY	Former Shell Depot	43-51 Gladstone STREET	Other Petroleum	Regulation under CLM Act not required	-31.07500944	152.8346699
KEMPSEY	Former Mobil Depot	14 Hopetoun STREET	Other Petroleum	Regulation under CLM Act not required	-31.07603107	152.8350132
KEMPSEY	Shell Coles Express Service Station Kempsey	165 Smith STREET	Service Station	Regulation under CLM Act not required	-31.07036743	152.8461571

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
KEMPSEY	Mobil Depot	154 Belgrave STREET	Service Station	Regulation under CLM Act not required	-31.07965043	152.8326303
KEMPSEY	Liberty (Former Mobil) Service Station	108-112 Smith STREET	Service Station	Regulation under CLM Act not required	-31.07492508	152.8431945
KENSINGTON	7-Eleven Kensington	135 Anzac PARADE	Service Station	Regulation under CLM Act not required	-33.91035885	151.2228537
KENSINGTON	Former Ampol Service Station	76-82 Anzac PARADE	Service Station	Regulation under CLM Act not required	-33.9059246	151.2242891
KENSINGTON	Footpath adjacent to 10-20 Anzac Parade	10-20 Anzac PARADE	Service Station	Regulation under CLM Act not required	-33.9032124	151.2237836
KENSINGTON	Caltex Service Station	211-213 Anzac PARADE	Service Station	Regulation under CLM Act not required	-33.91460752	151.2251266
KENTHURST	Vacant Land	259 McCylmonts ROAD	Unclassified	Regulation under CLM Act not required	-33.61283529	150.9425303
KHANCOBAN	Khancoban Tip	Alpine WAY	Landfill	Regulation under CLM Act not required	-36.21994191	148.1542718
KIAMA	Former Gasworks	105 to 109 and 113 Shoalhaven STREET	Gasworks	Regulation under CLM Act not required	-34.67416881	150.8504143
KIAMA HEIGHTS	Former Mobil Service Station Kiama	7-9 South Kiama DRIVE	Service Station	Regulation under CLM Act not required	-34.69553931	150.8437977
KILLARA	7-Eleven Service Station (Former Mobil)	496 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.77146554	151.1606903
KILLARA	Former Caltex Service Station	692B-694 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.76306802	151.1550109
KILLARA	Killara Garage	544 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.76974164	151.1599696
KILLARA	Former BP Service Station Lindfield	478 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.7719298	151.1613874
KILLARA	Land Adjacent to Former Service Station Site	684-684a, 690, 692 and 696 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.76312226	151.1549237
KINCUMBER	Frost Reserve	Avoca DRIVE	Landfill	Under assessment	-33.47065695	151.3909044
KINGS PARK	Multi-Fill	14 Garling ROAD	Unclassified	Regulation being finalised	-33.74478046	150.9111964

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
KINGS PARK	Former Dow Corning Factory	21 Tattersall ROAD	Chemical Industry	Regulation under CLM Act not required	-33.75012653	150.9138477
KINGSFORD	Caltex Service Station	603-611 Anzac PARADE	Service Station	Regulation under CLM Act not required	-33.93435787	151.2371198
KINGSFORD	Coles Express Service Station Kingsford	58 Gardeners ROAD	Service Station	Regulation under CLM Act not required	-33.9250054	151.2257601
KINGSGROVE	Shell Coles Express Service Station	137 Kingsgrove ROAD	Service Station	Regulation under CLM Act not required	-33.93276948	151.099026
KINGSGROVE	Caltex Kingsgrove	351-357 Stoney Creek ROAD	Service Station	Regulation under CLM Act not required	-33.95132175	151.0926872
KINGSGROVE	State Transit Authority Depot	17-23 Richland STREET	Other Petroleum	Regulation under CLM Act not required	-33.93646086	151.0973617
KIRRAWEE	Ingal Civil Products	127-141 Bath ROAD	Metal Industry	Regulation under CLM Act not required	-34.03029516	151.0754469
KIRRAWEE	7-Eleven (former Mobil) Service Station	542-546 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.03238179	151.0758071
KIRRAWEE	Caltex-branded Kirrawee Service Station	(1-3 Waratah Street) 487 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.02915971	151.0808279
KOGARAH	Scarborough Park South	184R Production AVENUE	Landfill	Regulation being finalised	-33.97922253	151.140276
KOGARAH	Caltex Service Station	29 President AVENUE	Service Station	Regulation under CLM Act not required	-33.96516866	151.141145
KOGARAH	7-Eleven Service Station	736 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-33.96406472	151.1376011
KOGARAH	Woolworths Petrol Service Station	69 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-33.96330397	151.1371182
KOOLKHAN	Former Koolkhan Power Station	Summerland WAY	Other Industry	Regulation under CLM Act not required	-29.61688704	152.9300645
KOORAGANG	NPC, berths 2 and 3	Heron ROAD	Metal Industry	Regulation being finalised	-32.89260063	151.7742527
KOORAGANG	Kooragang Island Waste Facility	Off Cormorant ROAD	Metal Industry	Contamination currently regulated under POEO Act	-32.88250732	151.7466125
KOORAGANG	Orica Kooragang Island	15 Greenleaf ROAD	Chemical Industry	Contamination currently regulated under CLM Act	-32.89654619	151.7771372

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
KOORAGANG	Former Boral Timber Export Facility	16 Heron ROAD	Other Industry	Regulation under CLM Act not required	-32.89710295	151.7739966
KOORAGANG	Cleanaway Technical Services	19 Egret STREET	Unclassified	Regulation under CLM Act not required	-32.8634857	151.7414904
KOORAGANG	Industrial Facility	39 Heron ROAD	Chemical Industry	Under assessment	-32.89106439	151.7784064
KOORAGANG	Vacant Land	Raven Street and Cormorant ROAD	Unclassified	Regulation under CLM Act not required	-32.88410199	151.7701334
KOORAGANG	Linx Logistics	240 Cormorant ROAD	Other Industry	Regulation under CLM Act not required	-32.87480951	151.7757352
KOORINGAL	Former Shell Wagga Depot	11-15 Lake Albert ROAD	Other Petroleum	Regulation under CLM Act not required	-35.12273113	147.3786005
KOORINGAL	Caltex Service Station	265-267 Lake Albert ROAD	Service Station	Regulation under CLM Act not required	-35.14078443	147.3755442
KOORINGAL	Caltex-branded (former Mobil) Service Station	24 Lake Albert ROAD	Service Station	Regulation under CLM Act not required	-35.12239591	147.3769936
KOSCIUSZKO	Smiggin Holes Snow Clearing Shed	Link ROAD	Landfill	Regulation under CLM Act not required	-36.39098211	148.4304981
KOSCIUSZKO	Khancoban Spoil Dump	Alpine WAY	Landfill	Regulation under CLM Act not required	-36.21982803	148.1527401
KOSCIUSZKO	Sawpit Creek landfill	13km from Jindabyne, off Kosciuszko ROAD	Landfill	Regulation under CLM Act not required	-36.34858097	148.5673374
KURMOND	BP Service Station	501 Bells Line of road ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.55096662	150.6911676
KURNELL	Former Phillips Imperial Chemicals site	260 Captain Cook DRIVE	Chemical Industry	Regulation under CLM Act not required	-34.02493837	151.1952149
KURNELL	Abbott Australasia	Captain Cook DRIVE	Chemical Industry	Contamination formerly regulated under the CLM Act	-34.02339937	151.19921
KURNELL	Former Caltex Kurnell Service Station	Corner Captain Cook Drive and Solander STREET	Service Station	Regulation under CLM Act not required	-34.01269846	151.2094347
KURRI KURRI	Caltex Service Station Kurri Kurri	279-281 Lang STREET	Service Station	Contamination currently regulated under CLM Act	-32.82047175	151.477646
KURRI KURRI	Kurri Kurri Smelter	Hart ROAD	Metal Industry	Regulation under CLM Act not required	-32.7873063	151.4828827

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
KYOGLE	Caltex Service Station	22-24 Summerland WAY	Service Station	Regulation under CLM Act not required	-28.61806766	153.003862
LAKE HAVEN	Caltex Service Station	Goobarabah Ave Cnr Gorokan DRIVE	Service Station	Regulation under CLM Act not required	-33.24337276	151.5065335
LAKEMBA	Former Lakemba Police Station	59 Quigg STREET	Unclassified	Regulation under CLM Act not required	-33.92199239	151.079412
LAKEMBA	Caltex Service Station - Corner Punchbowl Rd and Wangee Rd	81 Wangee ROAD	Service Station	Regulation under CLM Act not required	-33.91153044	151.073306
LAKEMBA	Caltex Service Station	961-967 Canterbury ROAD	Service Station	Regulation under CLM Act not required	-33.92671102	151.0814905
LAMBTON	Caltex Service Station	422 Newcastle ROAD	Service Station	Regulation under CLM Act not required	-32.9095592	151.7109684
LANE COVE	7-Eleven Service Station	203 Burns Bay ROAD	Service Station	Regulation under CLM Act not required	-33.81458334	151.1543844
LANE COVE	BP-branded Jasbe Service Station	62-70 Epping ROAD	Service Station	Regulation under CLM Act not required	-33.81108427	151.1641531
LANE COVE	Pacific Power	Sirius ROAD	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.80701776	151.1449658
LANE COVE	Coles Express Service Station Burns Bay	254 Burns Bay ROAD	Service Station	Regulation under CLM Act not required	-33.81719214	151.1518774
LANE COVE NORTH	Former Caltex Service Station	428-432 Mowbray ROAD	Service Station	Regulation under CLM Act not required	-33.80804563	151.1721538
LANE COVE NORTH	BP Artarmon Service Station, Lane Cove North	432 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.8112038	151.175547
LANE COVE WEST	Caltex Lane Cove West	235-245 Burns Bay ROAD	Service Station	Regulation under CLM Act not required	-33.81719214	151.1518774
LANE COVE WEST	Ventemans Reach Bushland	Off Mars ROAD	Unclassified	Regulation under CLM Act not required	-33.80615015	151.1451474
LANSVALE	Mobil Service Station	161 Hume HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.89442261	150.9571507
LANSVALE	Mobil Service Station	44 Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-33.89172416	150.9656537
LAURIETON	Camden Haven Tyre and Brake Centre (Former Caltex Service Station)	461 Ocean DRIVE	Service Station	Regulation under CLM Act not required	-31.64367775	152.7977735

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
LAVENDER BAY	SRA Land	French STREET	Unclassified	Regulation under CLM Act not required	-33.84560621	151.2030148
LAVINGTON	Former Caltex Service Station	373-375 Wagga ROAD	Service Station	Regulation under CLM Act not required	-36.04797551	146.9385325
LAVINGTON	Caltex Service Station	436 Wagga (corner Dick Road) ROAD	Service Station	Regulation under CLM Act not required	-36.04500034	146.9444932
LAVINGTON	Former ERS liquid waste treatment and storage facility	819 Knights ROAD	Other Industry	Regulation under CLM Act not required	-36.06763885	146.942143
LEETON	Former Mobil Depot	108 Calrose STREET	Other Petroleum	Regulation under CLM Act not required	-34.55813326	146.3921296
LEETON	Caltex Service Station	1 Belah STREET	Service Station	Regulation under CLM Act not required	-34.55421752	146.3998431
LEETON	Yenda Producers (formerly Incitec) Leeton	1 - 2 Canal STREET	Other Petroleum	Regulation under CLM Act not required	-34.55184684	146.3862573
LEETON	Former Fuel Depot, Leeton	1-3 Short STREET	Other Petroleum	Regulation under CLM Act not required	-34.55253237	146.3864507
LEICHHARDT	SRA Land	10-11 Balmain ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-33.87774852	151.1590952
LEICHHARDT	Former Kolotex site	22 George STREET	Other Industry	Contamination currently regulated under CLM Act	-33.88855307	151.1482106
LEICHHARDT	Former Labelcraft Site	30-40 George STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.88778798	151.1484773
LEICHHARDT	Leichhardt Bus Depot Area E	240 Balmain Road, corner City West LINK	Other Industry	Regulation under CLM Act not required	-33.87589727	151.1598073
LEICHHARDT	RailCorp Leichhardt	7 Darley ROAD	Other Industry	Regulation under CLM Act not required	-33.87520846	151.1539012
LENNOX HEAD	Former Caltex Lennox Head	Byron STREET	Service Station	Regulation under CLM Act not required	-28.79189328	153.5883225
LENNOX HEAD	Spoors Dip	13 Fig Tree Hill DRIVE	Cattle Dip	Contamination formerly regulated under the CLM Act	-28.78258175	153.5752527
LEPPINGTON	Coles Express Leppington	1443 Camden Valley WAY	Service Station	Regulation under CLM Act not required	-33.96631609	150.8154793
LEUMEAH	Caltex Service Station	6 Rudd ROAD	Service Station	Regulation under CLM Act not required	-34.05398325	150.8299209



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
LEURA	Former Leura Garage	126-128 Leura MALL	Service Station	Regulation under CLM Act not required	-33.7125311	150.3315386
LIDCOMBE	Metro Lidcombe (former Liberty)	134 John STREET	Service Station	Contamination currently regulated under POEO Act	-33.85466534	151.04675
LIDDELL	Liddell Power Station	New England HIGHWAY	Other Industry	Regulation under CLM Act not required	-32.37393962	150.9756283
LIDSDALE	Angus Place Colliery	Wolgan ROAD	Other Industry	Regulation under CLM Act not required	-33.35274573	150.0996773
LIDSDALE	Kerosene Vale Colliery	Wolgan ROAD	Other Industry	Regulation under CLM Act not required	-33.38145755	150.0940097
LIGHTNING RIDGE	Former Ambulance Station	18 - 42 Pandora STREET	Other Industry	Regulation under CLM Act not required	-29.43133877	147.9812981
LIGHTNING RIDGE	Caltex Service Station	Onyx Street, corner Morilla STREET	Service Station	Regulation under CLM Act not required	-29.42922885	147.9747954
LILLIAN ROCK	Former 'Peters Dip' Cattle Tick Dip Site	427 Lillian Rock ROAD	Cattle Dip	Regulation under CLM Act not required	-28.5314327	153.1556392
LINDFIELD	7-Eleven (former Mobil) Service Station	238 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.7788603	151.1689594
LISAROW	OneSteel Recycling	902A Pacific HIGHWAY	Metal Industry	Regulation under CLM Act not required	-33.38420179	151.3655856
LISMORE	Caltex Lismore Service Station	136 Woodlark STREET	Service Station	Regulation under CLM Act not required	-28.80807597	153.2807591
LISMORE	Shell Coles Express Service Station	100 Dawson STREET	Service Station	Regulation under CLM Act not required	-28.81140865	153.2800472
LISMORE	Former Shell Depot	116 Wilson STREET	Other Petroleum	Regulation under CLM Act not required	-28.81070081	153.2621577
LISMORE	Caltex Service Station	73-75 Dawson STREET	Service Station	Regulation under CLM Act not required	-28.80894415	153.2809619
LISMORE	Lismore Gasworks	Cnr John Street & Keen STREET	Gasworks	Contamination formerly regulated under the CLM Act	-28.81764489	153.2710196
LISMORE	SRA Land	Norco LANE	Unclassified	Regulation under CLM Act not required	-28.810742	153.2702306
LISMORE HEIGHTS	Coles Express Lismore Heights	426 Ballina ROAD	Service Station	Contamination currently regulated under CLM Act	-28.81068067	153.3053065



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
LISMORE HEIGHTS	Beardow Street Road Reserve	22 New Ballina ROAD	Unclassified	Under preliminary investigation order	-28.804051	153.291801
LITHGOW	Former Shell CVRO and Depot	77 Bridge Street and 6 Gas Works LANE	Other Petroleum	Regulation under CLM Act not required	-33.47995091	150.162216
LITHGOW	Lithgow Thales	4 Martini PARADE	Metal Industry	Contamination formerly regulated under the CLM Act	-33.49012248	150.1415389
LITHGOW	Former Mobil Depot	353 Main STREET	Other Petroleum	Regulation under CLM Act not required	-33.48235166	150.1383012
LITHGOW	Former Gasworks	Mort STREET	Gasworks	Regulation under CLM Act not required	-33.47995167	150.1635401
LITHGOW	Jasbe BP-branded Service Station (Former Reliance Petroleum)	1106 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.48426647	150.134992
LITHGOW	Caltex Lithgow (Quota Park)	Adjacent to 1131 Great Western HIGHWAY	Unclassified	Regulation under CLM Act not required	-33.47927554	150.1366238
LIVERPOOL	AC McGrath (Wholesale) Pty Ltd	20 Shepherd Street and 6A & 6B Atkinson STREET	Other Industry	Regulation under CLM Act not required	-33.9320192	150.9236862
LIVERPOOL	Former Car Park	4 - 6 Rose STREET	Unclassified	Regulation under CLM Act not required	-33.93258955	150.9157936
LIVERPOOL	Woolworths Service Station	59-67 Orange Grove ROAD	Service Station	Regulation under CLM Act not required	-33.90711248	150.9178855
LIVERPOOL	68 Speed Street, Liverpool NSW	68 Speed STREET	Gasworks	Under assessment	-33.929889	150.92243
LOFTUS	BP Freedom Fuel Service Station Loftus	127 Loftus AVENUE	Service Station	Regulation under CLM Act not required	-34.04570765	151.0508004
LONG JETTY	Metro Petroleum Service Station Long Jetty	326 The Entrance ROAD	Service Station	Under assessment	-33.35897356	151.4847709
LONG JETTY	Caltex Service Station	431 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.36022468	151.4826553
LONG JETTY	Westside Petroleum Service Station	290-294 The Entrance ROAD	Service Station	Contamination currently regulated under CLM Act	-33.35688982	151.4862246
LONG JETTY	7-Eleven (former Mobil) Service Station	184-186 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.35089363	151.4924904
LONGUEVILLE	Caltex Service Station	5-7 Northwood ROAD	Service Station	Regulation under CLM Act not required	-33.82452775	151.1725758

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
LUCAS HEIGHTS	Harringtons Quarry	access from Little Forest ROAD	Landfill	Contamination currently regulated under CLM Act	-34.03555347	150.9751826
LUCAS HEIGHTS	IWC landfill	Little Forest ROAD	Landfill	Contamination currently regulated under CLM Act	-34.03214889	150.9753474
LUDDENHAM	Caltex Service Station	3019-3035 The Northern ROAD	Service Station	Regulation under CLM Act not required	-33.87536093	150.6888872
MACKSVILLE	Caltex Service Station	Pacific (22-24 Cooper Street) HIGHWAY	Service Station	Regulation under CLM Act not required	-30.70977455	152.9198448
MACLEAN	MacLean Outdoors	255 River STREET	Service Station	Regulation under CLM Act not required	-29.45782683	153.1970725
MACQUARIE FIELDS	Caltex Service Station	68 Harold STREET	Service Station	Regulation under CLM Act not required	-33.98557276	150.8933681
MACQUARIE PARK	Caltex North Ryde Service Station	41-43 Epping ROAD	Service Station	Regulation under CLM Act not required	-33.79138236	151.1312248
MACQUARIE PARK	1-7 Waterloo Road, Macquarie Park	1-7 Waterloo ROAD	Other Petroleum	Regulation under CLM Act not required	-33.78806877	151.1332148
MACQUARIE PARK	Porters Creek Depot - Proposed Operations Centre Site	160 Wicks ROAD	Landfill	Regulation under CLM Act not required	-33.785348	151.13663
MACQUARIE PARK	De Burghs Cycleway - Lane Cove National Park	Riverside DRIVE	Other Petroleum	Regulation under CLM Act not required	-33.77802854	151.1367529
MAITLAND	Maitland Gasworks	Charles STREET	Gasworks	Contamination currently regulated under CLM Act	-32.73603658	151.5578926
MAITLAND	Hannan and High Street	Hannan Street and High STREET	Service Station	Regulation under CLM Act not required	-32.72731682	151.5515673
MAITLAND	Coles Express Service Station	235 High STREET	Service Station	Regulation under CLM Act not required	-32.73923807	151.5620399
MALABAR	ANZAC Rifle Range former landfill	Franklin STREET	Landfill	Regulation being finalised	-33.95792671	151.2566373
MANDALONG	Mandalong Mine	Mandalong ROAD	Other Industry	Regulation under CLM Act not required	-33.11725583	151.4616452
MANGROVE MOUNTAIN	Poultry Litter Containment Pit site	258 Waratah ROAD	Unclassified	Regulation under CLM Act not required	-33.28917277	151.167235
MANILLA	Tamworth Regional Council Works Depot - Manilla	73 River STREET	Other Petroleum	Regulation under CLM Act not required	-30.74879943	150.7181011

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
MANLY	Caltex Service Station	86 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.79306889	151.2858638
MANLY	Former Little Manly Point Gasworks	End of Stuart STREET	Gasworks	Regulation under CLM Act not required	-33.80842005	151.2877784
MANLY	St Patrick's Estate	151 Darley ROAD	Unclassified	Regulation under CLM Act not required	-33.8044568	151.2938595
MANLY	Little Manly Point	Stuart STREET	Gasworks	Contamination formerly regulated under the CLM Act	-33.80814626	151.2876245
MANLY VALE	Caltex Service Station Manly Vale	236-238 Condamine STREET	Service Station	Regulation under CLM Act not required	-33.78508231	151.2674386
MANLY VALE	Former Landfill Addiscombe Road	Addiscombe ROAD	Landfill	Contamination currently regulated under CLM Act	-33.78307439	151.2747846
MANNERING PARK	Parkview General Store (a former service station)	2 Vales ROAD	Service Station	Regulation under CLM Act not required	-33.14753814	151.5387832
MANNERING PARK	Mannering Park Mini Mart	70 Vales ROAD	Service Station	Regulation under CLM Act not required	-33.15236501	151.5371767
MARAYONG	7-Eleven (former Mobil Blacktown West) Service Station Marayong	173 Richmond ROAD	Service Station	Regulation under CLM Act not required	-33.75472796	150.8913605
MARAYONG	Woolworths Petrol Service Station Marayong	Corner Vardys Road and Turbo ROAD	Service Station	Regulation under CLM Act not required	-33.7452356	150.9041601
MARDI	Former Mardi Landfill	70-90 McPherson ROAD	Landfill	Regulation under CLM Act not required	-33.29273289	151.4100941
MARKS POINT	Former Mobil Service Station (now 7-Eleven)	770-772 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.05646268	151.6533795
MARKS POINT	Former Mobil Aviation Depot Belmont Airport	864 Pacific HIGHWAY	Other Petroleum	Regulation under CLM Act not required	-33.06657244	151.6497674
MAROUBRA	Coles Express Pagewood Service Station, Maroubra	299 Bunnerong PARADE	Service Station	Regulation under CLM Act not required	-33.94071282	151.2285063
MARRANGAROO	United (Former Mobil) Service Station Marrangaroo	394-398 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.45253322	150.1181023
MARRICKVILLE	Former Mobil Service Station	384 Illawarra ROAD	Service Station	Regulation under CLM Act not required	-33.91534969	151.1506717
MARRICKVILLE	TRW Steering and Suspension	22-28 Carrington ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-33.92012667	151.1566181

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
MARRICKVILLE	Woolworths Petrol Service Station Marrickville	490 Illawarra ROAD	Service Station	Regulation under CLM Act not required	-33.91845177	151.1459951
MARRICKVILLE	RailCorp	361 Victoria ROAD	Other Industry	Regulation under CLM Act not required	-33.91404835	151.1557132
MARRICKVILLE	Mackey Park	Cnr Richardsons Crescent and Carrington ROAD	Landfill	Regulation under CLM Act not required	-33.9220263	151.1547903
MARRICKVILLE	Cooks River Aqueduct	Thornley STREET	Unclassified	Contamination formerly regulated under the CLM Act	-33.92204604	151.1480332
MARRICKVILLE	2 Carrington Road	2 Carrington ROAD	Unclassified	Regulation under CLM Act not required	-33.91596071	151.1597199
MARRICKVILLE	Former Dry Cleaners and Loading Dock (adjacent Lot 1 DP612551)	Smidmore STREET	Other Industry	Contamination currently regulated under CLM Act	-33.90707592	151.171701
MARSDEN PARK	226 Grange Avenue	226 Grange AVENUE	Unclassified	Regulation under CLM Act not required	-33.70259609	150.83825
MARSFIELD	Coles Express Service Station Marsfield	189 Epping ROAD	Service Station	Regulation under CLM Act not required	-33.77519246	151.1053691
MARULAN	BP Express Marulan (Northbound)	(Northbound) Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.7188332	149.9949547
MARULAN	BP Service Station	(Southbound) Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.71932066	150.0014827
MARYVILLE	7-Eleven Service Station	184-188 Hannell STREET	Service Station	Contamination currently regulated under CLM Act	-32.91336028	151.7579315
MASCOT	Former Zinc Smelter and Paint Manufacturing Facility	163 O'Riordan STREET	Metal Industry	Regulation under CLM Act not required	-33.92526513	151.1892582
MASCOT	Caltex Service Station	125 O'Riordan STREET	Service Station	Regulation under CLM Act not required	-33.92309169	151.1911539
MASCOT	Mascot Pioneer Plating	25-29 Ricketty STREET	Metal Industry	Contamination currently regulated under CLM Act	-33.92075288	151.1824801
MASCOT	Heritage Business Centre	5-9 Ricketty STREET	Unclassified	Regulation under CLM Act not required	-33.92029202	151.1816656
MASCOT	Telstra Exchange	904-922 Botany ROAD	Other Industry	Regulation under CLM Act not required	-33.9293166	151.1942777
MASCOT	Former Shell Service Station Mascot	746 Botany ROAD	Service Station	Contamination currently regulated under CLM Act	-33.92352295	151.1955852

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
MASCOT	ING Industrial Fund (unoccupied Land and General Parking)	19-33 Kent ROAD	Landfill	Regulation under CLM Act not required	-33.922765	151.185262
MASCOT	Former Mascot Galvanising	336-348 King STREET	Metal Industry	Contamination currently regulated under CLM Act	-33.92902126	151.185874
MASCOT	Sokol Corporation	50-56 Robey STREET	Other Industry	Regulation under CLM Act not required	-33.93162265	151.1904955
MASCOT	Linear Park	Off O'Riordan STREET	Landfill	Regulation under CLM Act not required	-33.92278693	151.1904751
MATRAVILLE	Port Botany Bus Depot	7 Bumborah Point ROAD	Other Petroleum	Regulation under CLM Act not required	-33.96880413	151.2255889
MATRAVILLE	Former Golden Fleece Terminal No2	151 Beauchamp ROAD	Other Petroleum	Contamination formerly regulated under the CLM Act	-33.95719404	151.2259884
MATRAVILLE	Former Rieco Incinerator	Kain AVENUE	Other Industry	Contamination being managed via the planning process (EP&A Act)	-33.95980534	151.2423679
MATRAVILLE	7-Eleven Service Station Matraville	515 Bunnerong ROAD	Service Station	Contamination currently regulated under CLM Act	-33.95943536	151.2317598
MATRAVILLE	Former Golden Fleece Terminal No1	133 -149 Beauchamp ROAD	Other Petroleum	Contamination formerly regulated under the CLM Act	-33.95776666	151.2248518
MATRAVILLE	Vacant Lot	3 Wilkes AVENUE	Other Industry	Regulation under CLM Act not required	-33.96006406	151.2431087
MATRAVILLE	Eastern Suburbs Memorial Park	12 Military ROAD	Chemical Industry	Under assessment	-33.9719906	151.2274386
MAYFIELD	7-Eleven (Former Mobil) Service Station	412-416 Maitland ROAD	Service Station	Regulation under CLM Act not required	-32.89292005	151.7300948
MAYFIELD	Shell Coles Express Service Station	63-69 Maud STREET	Service Station	Regulation under CLM Act not required	-32.89358962	151.7221298
MAYFIELD	BHP Closure Site (Hunter River Sediments)	Bed Sediments of the Hunter adjacent to Lot 221 DP1013964 RIVER	Metal Industry	Contamination formerly regulated under the CLM Act	-32.89203741	151.7646702
MAYFIELD	Australian Tube Mills Newcastle Site	Industrial DRIVE	Metal Industry	Under assessment	-32.88835767	151.7450751
MAYFIELD	BHP Steel River	The Buffer Zone' extending directly adjacent to the Hunter River; near the Tourle Street	Metal Industry	Contamination currently regulated under CLM Act	-32.8773556	151.7252427
MAYFIELD	BHPB Supply site	Lot 223 South and West - Industrial DRIVE	Metal Industry	Contamination currently regulated under CLM Act	-32.88583041	151.7388423

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
MAYFIELD	Waratah Steel Mill	23 Frith STREET	Metal Industry	Regulation under CLM Act not required	-32.89426592	151.7257429
MAYFIELD	OneSteel (BHP)	Industrial DRIVE	Metal Industry	Contamination currently regulated under CLM Act	-32.88366987	151.7449491
MAYFIELD NORTH	OneSteel - Newcastle Wire, Rod and Bar Mills	141 & 151 Ingall STREET	Metal Industry	Under assessment	-32.89008485	151.752949
MAYFIELD WEST	Stevenson Park landfill	2/559 Maitland ROAD	Landfill	Regulation under CLM Act not required	-32.88472556	151.7224791
MAYFIELD WEST	Koppers Coal Tar	East of Woodstock Street and Tourle STREET	Other Industry	Contamination currently regulated under CLM Act	-32.88554791	151.7368545
MAYFIELD WEST	Tourle Street Bridge Project	Tourle STREET	Landfill	Regulation under CLM Act not required	-32.88075518	151.7330073
MCDUGALLS HILL	Caltex Service Station	4949 New England HIGHWAY	Service Station	Regulation under CLM Act not required	-32.54484714	151.1490757
MEADOWBANK	Former Council Works Depot	2 Parsonage STREET	Unclassified	Regulation under CLM Act not required	-33.82191421	151.0951974
MENAI	7-Eleven (Former Mobil) Service Station Menai	289 Menai ROAD	Service Station	Regulation under CLM Act not required	-34.01579095	151.0131737
MENAI	Caltex Service Station Menai	1 Carter Road ROAD	Service Station	Regulation under CLM Act not required	-34.01654043	151.0124133
MEREWETHER	Merewether Childcare Centre	2/23 Caldwell STREET	Unclassified	Regulation under CLM Act not required	-32.94249653	151.7504279
MERIMBULA	Caltex Service Station	19-25 Merimbula DRIVE	Service Station	Regulation under CLM Act not required	-36.88757881	149.9089159
MERIMBULA	Former Mobil Service Station	27 Market STREET	Service Station	Regulation under CLM Act not required	-36.88941693	149.9103485
MERRYLANDS	Former Timber Yard and Hardware	11-19 Centenary ROAD	Other Petroleum	Regulation under CLM Act not required	-33.83083025	150.9698915
MERRYLANDS	Caltex Service Station	229 Woodville ROAD	Service Station	Regulation under CLM Act not required	-33.84547463	150.9983413
MERRYLANDS	Caltex Service Station Merrylands	148 Woodville ROAD	Service Station	Regulation under CLM Act not required	-33.83818499	150.9997199
MERRYLANDS	Stockland Merrylands Court	249-259 Merrylands ROAD	Service Station	Regulation under CLM Act not required	-33.83560037	150.9869735



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
MERRYLANDS	7-Eleven Merrylands Service Station	295-297 Merrylands (Cnr Windsor Rd) ROAD	Service Station	Regulation under CLM Act not required	-33.83533205	150.9851801
MERRYLANDS	Former Stockfeed Manufacturing Site	1-7 & 9-11 Neil STREET	Other Petroleum	Regulation under CLM Act not required	-33.83390257	150.9947449
MERRYLANDS WEST	Former Mobil Service Station	3 Centenary ROAD	Service Station	Regulation under CLM Act not required	-33.83214226	150.9698958
MILLER	Caltex Service Station	86 Cartwright AVENUE	Service Station	Regulation under CLM Act not required	-33.91878146	150.8827514
MILLERS FOREST	Chichester Trunk Gravity Main	water pipeline	Other Industry	Contamination currently regulated under POEO Act	-32.772877	151.6826841
MILLERS POINT	Former AGL Gasworks	30 - 34 Hickson ROAD	Gasworks	Regulation under CLM Act not required	-33.86179594	151.2031726
MILLERS POINT	Moores Wharf UPSS	4 Towns PLACE	Other Petroleum	Regulation under CLM Act not required	-33.85581123	151.2024759
MILLERS POINT	Former AGL Gasworks	38 Hickson and road reserve ROAD	Gasworks	Contamination being managed via the planning process (EP&A Act)	-33.86280104	151.2032452
MILLERS POINT	Former AGL Gasworks	Berths 5, 6 and 7 (already demolished) and part Hickson ROAD	Gasworks	Contamination currently regulated under CLM Act	-33.86053571	151.2015022
MILLERS POINT	Former AGL Gasworks	Road reserve fronting 30-38 Hickson ROAD	Gasworks	Contamination currently regulated under CLM Act	-33.86241531	151.2024634
MILLERS POINT	Former AGL Gasworks 36 Hickson Road	36 Hickson ROAD	Gasworks	Contamination formerly regulated under the CLM Act	-33.86243824	151.2032514
MILPERRA	Heatcraft Australia Pty Ltd	286 Horsley ROAD	Other Industry	Regulation under CLM Act not required	-33.94031556	150.9958606
MILPERRA	United Group Rail Pty Limited	373 Horsley ROAD	Landfill	Regulation under CLM Act not required	-33.93286283	150.9934071
MILPERRA	Bankstown Golf Club	70 Ashford AVENUE	Other Petroleum	Regulation under CLM Act not required	-33.93531	150.988153
MILPERRA	Caltex Service Station	264 Milperra ROAD	Service Station	Regulation under CLM Act not required	-33.93018101	150.9910964
MILPERRA	Former Landfill	479 Henry Lawson DRIVE	Landfill	Regulation under CLM Act not required	-33.933968	150.977629
MILTON	Former Sanitary Depot	Slaughterhouse ROAD	Other Industry	Regulation under CLM Act not required	-35.33819825	150.4471917



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
MILTON	Caltex Milton Service Station and Depot	331 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-35.33154474	150.4492852
MINCHINBURY	7-Eleven (former Mobil) Service Station	815 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.78812909	150.8495992
MINCHINBURY	BP Service Station	1055 Great Western Highway corner Archbold ROAD	Service Station	Regulation under CLM Act not required	-33.78211857	150.8244185
MINTO	Land adjacent to Former Shell depot	Airds Road and Essex STREET	Other Petroleum	Regulation under CLM Act not required	-34.02140447	150.8415134
MINTO	Shell Coles Express Service Station	73 Pembroke STREET	Service Station	Regulation under CLM Act not required	-34.02316454	150.8503118
MINTO	Former Endeavour Energy Depot	Pembroke ROAD	Other Petroleum	Regulation under CLM Act not required	-34.0408973	150.8451837
MINTO	Logistics Hub - Culverston Road, Minto	Culverston ROAD	Other Petroleum	Regulation under CLM Act not required	-34.0421711	150.833825
MIRANDA	Woolworth's Service Station	455 Kingsway OTHER	Service Station	Contamination currently regulated under CLM Act	-34.03492814	151.1124681
MITTAGONG	Enhance (former Coles Express) Service Station	224 Old Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.44746118	150.4326183
MITTAGONG	Lots 1 and 2 Alfred St.	Alfred STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-34.44738105	150.4565159
MITTAGONG	Caltex Mittagong Service Station	65 Bowral ROAD	Service Station	Regulation under CLM Act not required	-34.45245915	150.4381291
MOAMA	Caltex Moama Service Station	73 Meninya (Cnr Regent St) STREET	Service Station	Regulation under CLM Act not required	-36.10815134	144.752849
MOLONG	Cabonne BP Service Station	2 Gidley STREET	Service Station	Contamination currently regulated under CLM Act	-33.09026307	148.8695809
MOLONG	Former Gasworks	Hill STREET	Gasworks	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.09074595	148.8703262
MONA VALE	Mona Vale Bus Depot	58 Darley STREET	Other Petroleum	Contamination currently regulated under CLM Act	-33.67452414	151.3074246
MONA VALE	Former Caltex service station and adjacent properties	79 Barrenjoey Road, 2 Polo Avenue, 6 Polo Avenue, 45 Bassett STREET	Service Station	Contamination formerly regulated under the CLM Act	-33.6743659	151.3096932
MONA VALE	7-Eleven (former Mobil) Service Station	24 Barrenjoey ROAD	Service Station	Regulation under CLM Act not required	-33.676909	151.3082515

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
MONA VALE	BP Peninsula Express Service Station	Corner Barrenjoey Road and Darley Street East STREET	Service Station	Regulation under CLM Act not required	-33.67670799	151.3090068
MONA VALE	BP Service Station Mona Vale	1721 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.68043443	151.3023553
MONA VALE	Caltex Investigation Area	Polo Ave, Perak STREET	Service Station	Contamination formerly regulated under the CLM Act	-33.67431333	151.3091148
MOOBALL	Mooball General Store	5913 Tweed Valley WAY	Service Station	Regulation under CLM Act not required	-28.44204594	153.4887648
MOONBI	Caltex Moonbi Service Station	New England HIGHWAY	Service Station	Regulation under CLM Act not required	-31.02264369	151.069094
MOORE PARK	Area 2, Moore Park	Driver AVENUE	Unclassified	Regulation under CLM Act not required	-33.89426868	151.2226839
MOOREBANK	Caltex Service Station	216 Newbridge ROAD	Service Station	Regulation under CLM Act not required	-33.92930835	150.9551469
MOOREBANK	Joyce Foam Products	5-9 Bridges ROAD	Chemical Industry	Regulation under CLM Act not required	-33.92596302	150.9335273
MOOREBANK	ABB Australia Pty Ltd	(a) 1 Bapaume ROAD	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.94143741	150.9208754
MOOREBANK	Caltex Service Station Moorebank	2 Bridges ROAD	Service Station	Regulation under CLM Act not required	-33.92839682	150.9327012
MOOREBANK	Former Concrete Recyclers property, Newbridge Road, Moorebank	Newbridge ROAD	Landfill	Under assessment	-33.938825	150.965169
MOORLAND	Caltex Service Station	99 Jericho ROAD	Service Station	Regulation under CLM Act not required	-31.79436622	152.6514849
MOREE	Former Freedom Service Station Site Moree	1 Dover STREET	Service Station	Contamination currently regulated under CLM Act	-29.4715814	149.8440279
MOREE	Caltex Depot	101 Gosport STREET	Other Petroleum	Regulation under CLM Act not required	-29.47603684	149.8476728
MOREE	Former Golden Fleece Depot	Gosport STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-29.47698315	149.8477108
MOREE	Former Mobil Depot	Gosport STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-29.47771921	149.8478438
MOREE	Moree Airport Evaporation Pond	Newell HIGHWAY	Unclassified	Regulation under CLM Act not required	-29.50289837	149.8411301

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
MOREE	Caltex Service Station	54 Alice STREET	Service Station	Contamination currently regulated under CLM Act	-29.47158492	149.8433182
MOREE	Former Shell Depot	Adelaide STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-29.47655335	149.8465698
MOREE	Shell Coles Express Service Station	Corner Gwydir and Balo STREET	Service Station	Regulation under CLM Act not required	-29.46081826	149.8419975
MOREE	BP Truckstop and Depot Moree	Newell Highway - 423 Frome STREET	Service Station	Regulation under CLM Act not required	-29.48223274	149.8463679
MOREE	Sunnyside Road	Sunnyside ROAD	Unclassified	Regulation under CLM Act not required	-29.456633	149.8225
MORISSET	Railcorp Station Masters Cottage	24 Dora STREET	Unclassified	Regulation under CLM Act not required	-33.10849681	151.4880317
MORISSET	Morisset High School	Bridge STREET	Unclassified	Regulation under CLM Act not required	-33.10475221	151.4866482
MORPETH	Telstra Cable Installation and RTA Bridge work	Northumberland STREET	Other Petroleum	Regulation under CLM Act not required	-32.72489729	151.6266795
MORPETH	Former Service Station	Swan STREET	Service Station	Regulation under CLM Act not required	-32.72477413	151.6250642
MORTLAKE	Former Petroleum Storage Site	108-116 Tennyson ROAD	Other Petroleum	Regulation under CLM Act not required	-33.83979033	151.1064889
MORTLAKE	Kendall Bay Sediments	Kendall BAY	Gasworks	Contamination currently regulated under CLM Act	-33.83905999	151.1120458
MORTLAKE	Former AGL site	Tennyson ROAD	Gasworks	Contamination formerly regulated under the CLM Act	-33.84287407	151.1109313
MORTLAKE	Majors Bay Redevelopment	14-22 Hilly STREET	Other Industry	Regulation under CLM Act not required	-33.839553	151.105554
MORUYA	Former Fuel Depot Moruya	11 to 13 Ford STREET	Other Petroleum	Regulation under CLM Act not required	-35.9112243	150.0826475
MORUYA	Caltex Service Station Moruya	80-84 Campbell STREET	Service Station	Regulation under CLM Act not required	-35.91195596	150.0824213
MORUYA	Caltex Service Station	26 Campbell STREET	Service Station	Regulation under CLM Act not required	-35.9104985	150.0711419
MOSMAN	7-Eleven Mosman	162A Spit Road Corner Mitchell ROAD	Service Station	Regulation under CLM Act not required	-33.81747016	151.2433633

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
MOSMAN	BP Service Station	175 Ourimbah ROAD	Service Station	Regulation under CLM Act not required	-33.82106757	151.233291
MOSMAN	7-Eleven Service Station Mosman	45 Spit ROAD	Service Station	Regulation under CLM Act not required	-33.82302718	151.2435627
MOSMAN	Allan Border Oval	Myahgah ROAD	Landfill	Regulation under CLM Act not required	-33.82685	151.241919
MOSS VALE	Woolworths Service Station Moss Vale	609 Argyle STREET	Service Station	Regulation under CLM Act not required	-34.55409411	150.3609797
MOSS VALE	Coles Express Service Station	579 Argyle STREET	Service Station	Regulation under CLM Act not required	-34.55313422	150.364684
MOSS VALE	Moss Vale Refuelling Facility	Lackey ROAD	Other Petroleum	Regulation under CLM Act not required	-34.54662421	150.3721525
MOUNT ANNAN	Woolworths Caltex Mount Annan	157 Narellan (Corner Smeaton Grange Road) ROAD	Service Station	Under assessment	-34.04685527	150.7610434
MOUNT ANNAN	Great Southern Railways Aqueduct	Off Narellan ROAD	Unclassified	Regulation under CLM Act not required	-34.07308479	150.7707436
MOUNT COLAH	Caltex Service Station Mount Colah	603 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.67034662	151.1151861
MOUNT COLAH	Foxglove Oval	Mount Colah ROAD	Landfill	Regulation being finalised	-33.65829855	151.1229638
MOUNT DRUITT	Caltex (former Mobil) Service Station	17 Mount STREET	Service Station	Regulation under CLM Act not required	-33.76567994	150.8244544
MOUNT HUTTON	Woolworths Service Station	46 Wilsons ROAD	Service Station	Regulation under CLM Act not required	-32.9836378	151.67309
MOUNT PRITCHARD	7-Eleven Service Station	352 Elizabeth DRIVE	Service Station	Regulation under CLM Act not required	-33.90260656	150.8963326
MOUNT THORLEY	Bulga Surface Operations	Broke ROAD	Other Industry	Regulation under CLM Act not required	-32.68325751	151.1206158
MOUNT THORLEY	Lowes Petroleum (Former BP) Depot Mount Thorley	74 Mount Thorley ROAD	Other Petroleum	Regulation under CLM Act not required	-32.62443074	151.1025122
MOUNT VICTORIA	Former Mobil Service Station	81 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.5889727	150.2511783
MOUNT VICTORIA	Caltex Service Station	36a Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.58436517	150.2465528

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
MUDGEES	Caltex Service Station	114-116 Church STREET	Service Station	Regulation under CLM Act not required	-32.59428029	149.5876199
MUDGEES	Shell Coles Express Service Station	47 Church STREET	Service Station	Regulation under CLM Act not required	-32.59347493	149.5884623
MUDGEES	BP Service Station Mudgee	77 Church STREET	Service Station	Regulation under CLM Act not required	-32.59545872	149.588123
MUDGEES	Mobil Depot	47 Douro STREET	Other Petroleum	Contamination currently regulated under CLM Act	-32.60023979	149.5823448
MUDGEES	Mudgee Gasworks	Mortimer Street and Court STREET	Gasworks	Regulation under CLM Act not required	-32.59168859	149.5817705
MUDGEES	Former Essential Energy Depot	27-31 Inglis STREET	Other Industry	Regulation under CLM Act not required	-32.60073	149.585658
MUDGEES	Former Caltex Depot Mudgee	cnr Nicholson Street & Atkinson STREET	Other Petroleum	Regulation under CLM Act not required	-32.60125298	149.5851398
MULGRAVE	7-Eleven (former Mobil) Service Station	Corner Windsor Road and Mulgrave ROAD	Service Station	Regulation under CLM Act not required	-33.61687781	150.8341809
MULWALA	Mulwala ADI Explosives Factory	Bayly STREET	Other Industry	Regulation being finalised	-35.97572689	145.9809786
MURWILLUMBAH	Puma Murwillumbah (formerly Matilda )	182 Tweed Valley WAY	Service Station	Contamination currently regulated under CLM Act	-28.3263681	153.4103824
MURWILLUMBAH	Murwillumbah Ambulance Depot	27 Queen STREET	Other Petroleum	Regulation under CLM Act not required	-28.32552576	153.4000182
MURWILLUMBAH SOUTH	Former Norco Butter Factory (Eastern Portion)	230 Tweed Valley WAY	Other Petroleum	Regulation under CLM Act not required	-28.32791359	153.4073052
MUSWELLBROOK	Former Caltex Depot	1 Lower William STREET	Other Petroleum	Regulation under CLM Act not required	-32.26614257	150.8865136
MUSWELLBROOK	Vacant Rail Land	27 Brook STREET	Unclassified	Regulation under CLM Act not required	-32.26346086	150.8873181
MUSWELLBROOK	United Branded (Former Mobil) Service Station Muswellbrook	49-51 Maitland STREET	Service Station	Regulation under CLM Act not required	-32.27218162	150.8900206
MUSWELLBROOK	Former Mobil Depot Muswellbrook	43-51 Ford STREET	Other Petroleum	Regulation under CLM Act not required	-32.2599725	150.887573
MUSWELLBROOK	Woolworths Petrol	72 Brook STREET	Service Station	Regulation under CLM Act not required	-32.26325377	150.8905966

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
MUSWELLBROOK	Caltex Muswellbrook Service Station	84-86 Maitland STREET	Service Station	Regulation under CLM Act not required	-32.27793094	150.8980938
MUSWELLBROOK	Former Gasworks	Corner Carl Street and Foley STREET	Gasworks	Regulation under CLM Act not required	-32.26672337	150.8935982
MUSWELLBROOK	Bayswater Power Station	New England HIGHWAY	Other Industry	Regulation under CLM Act not required	-32.3954046	150.9502683
MUSWELLBROOK	Former Industrial Site	Lot 89 Rathmore STREET	Other Industry	Regulation under CLM Act not required	-32.30544071	150.8823657
MUSWELLBROOK	Caltex Service Station	12-16 Sydney STREET	Service Station	Regulation under CLM Act not required	-32.26785559	150.8879601
MUSWELLBROOK	Former Caltex Depot	47-50 Victoria STREET	Service Station	Regulation under CLM Act not required	-32.26788823	150.8930609
MUSWELLBROOK	Former Pit Top No. 1 Colliery Muswellbrook Coal	Corner Clendinning Street and Victoria STREET	Other Industry	Regulation under CLM Act not required	-32.27031992	150.9009981
NABIAC	Caltex Service Station NABIAC	3964 Wallanbah (Cnr Wallanbah Rd and Pacific Hwy) ROAD	Service Station	Regulation under CLM Act not required	-32.09864883	152.3754346
NAMBUCCA HEADS	Former Mobil Service Station	6 Bowra STREET	Service Station	Regulation under CLM Act not required	-30.64282127	153.0035884
NARELLAN	Caltex Service Station Narellan	1 George Hunter DRIVE	Service Station	Regulation under CLM Act not required	-34.03963992	150.7432386
NARELLAN	Former Landfill	1 Elyard STREET	Landfill	Regulation under CLM Act not required	-34.043474	150.7393256
NAROOMA	Narooma Service Station	60 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-36.21617955	150.126261
NAROOMA	Former Caltex - Narooma	82 Princes HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-36.21711766	150.1279305
NARRABEEN	Caltex Service Station	1509-1511 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.70455756	151.2969352
NARRABEEN	Shell Coles Express Service Station	1418 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.70013931	151.3002782
NARRABEEN	Narrabeen Shotgun Range Sydney Academy of Sport	Wakehurst PARKWAY	Unclassified	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.72138423	151.2642798
NARRABEEN	7-Eleven Service Station	1234 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.71958892	151.298272



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
NARRABRI	Caltex Service Station	13 Doyle STREET	Service Station	Regulation under CLM Act not required	-30.3239182	149.7843052
NARRABRI	Lowes Petroleum (Former Mobil) Narrabri Depot	3 Old Gunnedah ROAD	Other Petroleum	Regulation under CLM Act not required	-30.33473586	149.789587
NARRABRI	Caltex Service Station	31-35 Cooma ROAD	Service Station	Regulation under CLM Act not required	-30.33968576	149.7657241
NARRABRI	Caltex Narrabri Service Station	31 Dangar (Cnr Anne and Dangar) STREET	Service Station	Regulation under CLM Act not required	-30.32989667	149.7756598
NARRABRI	Caltex Service Station	12 Reid STREET	Other Petroleum	Regulation under CLM Act not required	-30.32282764	149.7901182
NARRABRI	Cargill Soapstock Disposal Site	Westport ROAD	Unclassified	Contamination formerly regulated under the CLM Act	-30.4698458	149.6981931
NARRABRI	Caltex Service Station	7-13 James STREET	Service Station	Regulation under CLM Act not required	-30.33016168	149.7940732
NARRANDERA	Former Mobil Narrandera Depot	24 Whitton STREET	Other Petroleum	Regulation under CLM Act not required	-34.7410523	146.5620667
NARRANDERA	Former Mobil Emoleum Narrandera Depot	5-7 Margaret STREET	Other Petroleum	Regulation under CLM Act not required	-34.74105391	146.5628144
NARROMINE	Narromine Fuel (Former Caltex) Service Station	Cnr Burraway Street and Algalah STREET	Service Station	Regulation under CLM Act not required	-32.23565321	148.2454259
NELLIGEN	Former Clay Target Shooting Range	1398 Kings Highway and adjoining land on Old Bolaro Mountain ROAD	Unclassified	Contamination currently regulated under CLM Act	-35.64392469	150.0955224
NELLIGEN	Lot 2 Old Bolaro Road	Old Bolaro ROAD	Unclassified	Contamination formerly regulated under the CLM Act	-35.64485609	150.0937341
NELSON BAY	Shell Coles Express Service Station	25 Stockton STREET	Service Station	Regulation under CLM Act not required	-32.72265762	152.1437317
NELSON BAY	Former Caltex Service Station Nelson Bay	38 Stockton STREET	Service Station	Regulation under CLM Act not required	-32.72335662	152.1429384
NEMINGHA	Caltex Service Station and Depot Nemingha	428 Armidale (previously 16 New England Highway) ROAD	Service Station	Regulation under CLM Act not required	-31.12425169	150.9909054
NEUTRAL BAY	Caltex Service Station	16-38 Military ROAD	Service Station	Regulation under CLM Act not required	-33.82907162	151.2163342
NEUTRAL BAY	Shell Coles Express Service Station	200-204 Ben Boyd ROAD	Service Station	Regulation under CLM Act not required	-33.82915781	151.219437



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
NEW LAMBTON	Caltex Service Station New Lambton	144 Bridges ROAD	Service Station	Regulation under CLM Act not required	-32.93283668	151.7141748
NEW LAMBTON	BP Service Station	105 St James ROAD	Service Station	Regulation under CLM Act not required	-32.92910325	151.7155801
NEW LAMBTON	7-Eleven (former Mobil) Service Station	291 Turton ROAD	Service Station	Regulation under CLM Act not required	-32.91773864	151.7243096
NEWCASTLE	Reclaimed Land	26-28 Honeysuckle DRIVE	Unclassified	Contamination formerly regulated under the CLM Act	-32.92604705	151.7649508
NEWCASTLE	Wharf Road Newcastle Car Park	313-317 Wharf ROAD	Unclassified	Regulation under CLM Act not required	-32.92570385	151.7744076
NEWCASTLE	Newcastle Foreshore	40 Stevenson Place STREET	Other Industry	Regulation under CLM Act not required	-32.92556503	151.7876742
NEWCASTLE	BHP Steelworks (Closure site)	Bound by Hunter River, Selwyn Street & Industrial DRIVE	Metal Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-32.89436064	151.7590762
NEWCASTLE	SRA Land	Scott STREET	Gasworks	Regulation under CLM Act not required	-32.92641425	151.7837817
NEWCASTLE WEST	Former Mobil Service Station	113 Parry STREET	Service Station	Regulation under CLM Act not required	-32.92560628	151.7558542
NEWPORT	7-Eleven (former Mobil) Service Station	307 Barrenjoey ROAD	Service Station	Regulation under CLM Act not required	-33.65632902	151.3182089
NEWPORT	Former Caltex Service Station Newport	316-324 Barrenjoey ROAD	Service Station	Regulation under CLM Act not required	-33.65634516	151.3191571
NEWTOWN	Caltex Service Station Newtown	26 - 36 Enmore ROAD	Service Station	Regulation under CLM Act not required	-33.89851331	151.17714
NEWTOWN	Former Service Station	81 Wilson STREET	Service Station	Contamination formerly regulated under the CLM Act	-33.89626791	151.1827556
NEWTOWN	Aluminium Enterprises	66 Brocks LANE	Metal Industry	Contamination was addressed via the planning process (EP&A Act)	-33.89467126	151.1847528
NEWTOWN	Adjacent to Former Service Station	79 Wilson STREET	Service Station	Contamination formerly regulated under the CLM Act	-33.89630155	151.1826567
NORAVILLE	Former Toukley Landfill	Wilfred Barrett DRIVE	Landfill	Regulation under CLM Act not required	-33.27734185	151.5537784
NORTH ALBURY	Caltex Service Station and Diesel Stop	79 Union ROAD	Service Station	Regulation under CLM Act not required	-36.05496713	146.9487635

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
NORTH BOAMBEE VALLEY	Caltex Service Station	Cnr Pacific Hwy & Halls ROAD	Service Station	Regulation under CLM Act not required	-30.30639482	153.1007996
NORTH BONDI	Caltex Service Station North Bondi	321 Old South Head ROAD	Service Station	Regulation under CLM Act not required	-33.88463526	151.268551
NORTH NARRABEEN	7-Eleven Service Station	1501-1503 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.70749859	151.296351
NORTH RICHMOND	Caltex Service Station	50 Bells Line Of ROAD	Service Station	Regulation under CLM Act not required	-33.57991338	150.7202346
NORTH ROCKS	7-Eleven Service Station North Rocks	340 North Rocks ROAD	Service Station	Regulation under CLM Act not required	-33.76895144	151.0305952
NORTH ST MARYS	BP Service Station	76 Glossop STREET	Service Station	Regulation under CLM Act not required	-33.76020183	150.7818149
NORTH STRATHFIELD	Budget Service Station	143 Concord ROAD	Service Station	Regulation under CLM Act not required	-33.85945248	151.0927853
NORTH STRATHFIELD	Former Caltex Service Station	92a Concord ROAD	Service Station	Regulation under CLM Act not required	-33.86244297	151.0932434
NORTH SYDNEY	Iora Complex	1 Kiara PLACE	Gasworks	Regulation under CLM Act not required	-33.843145	151.2161142
NORTH SYDNEY	Neutral Bay Sediments	Adjacent to Sub Base Platypus, High STREET	Gasworks	Contamination formerly regulated under the CLM Act	-33.842724	151.2174523
NORTH SYDNEY	Sub Base Platypus (previously HMAS Platypus)	High STREET	Gasworks	Contamination formerly regulated under the CLM Act	-33.84325935	151.2170347
NORTH WOLLONGONG	Former Mobil Depot	122-126 Montague STREET	Other Petroleum	Regulation under CLM Act not required	-34.40988259	150.8939374
NORTHMEAD	Former Prestige Plastics	1C Redbank ROAD	Other Industry	Regulation under CLM Act not required	-33.79716925	150.989926
NORTHMEAD	Coles Express Service Station Northmead	197 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.77741733	151.0001719
NORTHMEAD	Sydney Water Land	51c Hammers ROAD	Landfill	Regulation under CLM Act not required	-33.7887535	150.9858088
NORTHMEAD	Caltex Service Station	98-100 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.78786563	150.9945909
NORTHMEAD	7-Eleven Service Station Northmead	56 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.79090731	150.9967332

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
NOWRA	Former Gasworks Managers Residence	24 Osborne STREET	Gasworks	Regulation under CLM Act not required	-34.8708875	150.5992586
NOWRA	Fire Station	69 Bridge ROAD	Gasworks	Regulation under CLM Act not required	-34.87081582	150.6004881
NOWRA	Historically Filled Land	70 Bridge ROAD	Unclassified	Regulation under CLM Act not required	-34.87081809	150.6013231
NOWRA	Shell Coles Express Service Station	55 Kinghorne STREET	Service Station	Regulation under CLM Act not required	-34.87633757	150.6023481
NOWRA	Former gasworks	Lamonds LANE	Gasworks	Contamination currently regulated under CLM Act	-34.87111182	150.6000803
NOWRA	Former Hollingworth Scrap Yard	72-74 Jervis and 117 East STREET	Other Industry	Regulation under CLM Act not required	-34.88324216	150.6034361
NOWRA	Woolworths Service Station	60 North Street STREET	Service Station	Under assessment	-34.87266278	150.6014052
NOWRA	Harry Sawkins Park	Bounded by Princes Hwy, Graham St & McGrath AVENUE	Gasworks	Regulation under CLM Act not required	-34.87093993	150.6037157
NOWRA EAST	Mobil Service Station	Lot 3 Kalandar STREET	Service Station	Contamination formerly regulated under the CLM Act	-34.88850535	150.6093504
NYNGAN	Caltex Service Station	39-41 Pangee STREET	Service Station	Regulation under CLM Act not required	-31.56101006	147.1914997
NYNGAN	Caltex Service Station	126 Pangee STREET	Service Station	Regulation under CLM Act not required	-31.56482841	147.2002892
OAK FLATS	Shellharbour City Works Depot	132 Industrial ROAD	Other Industry	Regulation under CLM Act not required	-34.56546013	150.8087225
OBERON	Caltex Service Station and Depot	Lowes Mount ROAD	Service Station	Regulation under CLM Act not required	-33.69509055	149.8570553
OBERON	Oberon Timber Complex	Lowes Mount ROAD	Other Industry	Regulation under CLM Act not required	-33.69264862	149.8564588
OBERON	Former Shell Depot	32 O'Connell ROAD	Other Petroleum	Regulation under CLM Act not required	-33.6997172	149.8450057
OBERON	CSR Ltd Property and King's Stockyard Creek	Off Endeavour STREET	Other Industry	Contamination formerly regulated under the CLM Act	-33.6922152	149.8686909
OCEAN SHORES	Former Ocean Shores Service Station	Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-28.51270299	153.5301496

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
OLD GUILDFORD	Caltex Service Station	636-644 Woodville ROAD	Service Station	Regulation under CLM Act not required	-33.86670857	150.9879189
ORANGE	Former Fuel Depot	24-28 Peisley STREET	Other Petroleum	Contamination currently regulated under CLM Act	-33.29624293	149.1017277
ORANGE	Caltex Orange Depot	184 Byng STREET	Service Station	Regulation under CLM Act not required	-33.28285589	149.1050273
ORANGE	Woolworths Orange Service Station	357-361 Summer Street, corner William STREET	Service Station	Regulation under CLM Act not required	-33.28445811	149.1053604
ORANGE	BP Orange Service Station (Reliance Petroleum)	81 Summer STREET	Service Station	Regulation under CLM Act not required	-33.2825884	149.0951535
ORANGE	BP-Branded Lowes Petroleum Depot	197 - 201 Margaret STREET	Other Petroleum	Regulation under CLM Act not required	-33.27145977	149.1078103
ORANGE	Caltex Summer Street Service Station Orange	70-74 Summer Street, corner Hill STREET	Service Station	Regulation under CLM Act not required	-33.28311722	149.0940712
ORANGE	Lowes Petroleum (BP-branded) Service Station	76 Peisley STREET	Service Station	Regulation under CLM Act not required	-33.29025034	149.1027194
ORANGE	Former Mobil Service Station	24-28 Bathurst ROAD	Service Station	Regulation under CLM Act not required	-33.2866912	149.1066505
ORANGE	BP (Reliance Petroleum) Service Station Orange	56-60 Bathurst ROAD	Service Station	Regulation under CLM Act not required	-33.28980053	149.1086212
ORANGE	Former Mobil Service Station	168 Peisley STREET	Service Station	Regulation under CLM Act not required	-33.28525478	149.1037259
ORANGE	5-7 Edward St Orange	5-7 Edward STREET	Other Industry	Contamination currently regulated under CLM Act	-33.29874849	149.1038449
OURIMBAH	Palmdale Service Centre Pty Ltd	3130 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.3381336	151.374586
OURIMBAH	Shell Coles Express Service Station	78-80 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.3468202	151.3710098
OXLEY VALE	Hayes Transport Services	10 Manilla ROAD	Other Petroleum	Regulation under CLM Act not required	-31.06991417	150.9101381
OYSTER BAY	Shell Coles Express Service Station	20 Carvers ROAD	Service Station	Contamination currently regulated under CLM Act	-34.00934475	151.0758626
OYSTER COVE	Cove Marine Pty Ltd	60 Frederick STREET	Unclassified	Contamination currently regulated under POEO Act	-32.73549959	151.952446

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
PADDINGTON	7-Eleven Service Station	59 Oxford STREET	Service Station	Contamination currently regulated under CLM Act	-33.88322921	151.2205024
PADDINGTON	Former Workshop	52 Hopewell STREET	Other Industry	Regulation under CLM Act not required	-33.881947	151.222074
PADSTOW	Caltex Padstow	115 Fairford ROAD	Service Station	Regulation under CLM Act not required	-33.9434571	151.0345671
PADSTOW	Selleys / Dulux	1-29 Gow STREET	Chemical Industry	Regulation under CLM Act not required	-33.93904125	151.0381725
PADSTOW	Former Exide Battery Manufacturing & Recycling	55 Bryant STREET	Other Industry	Contamination currently regulated under CLM Act	-33.94265241	151.0378986
PADSTOW	Galvatech	49 Gow STREET	Metal Industry	Contamination currently regulated under POEO Act	-33.93808679	151.0346862
PADSTOW	Foseco Australia	7 Stuart STREET	Chemical Industry	Regulation under CLM Act not required	-33.94342957	151.0377316
PADSTOW	Sebel Furniture	Parts 64 and 92 Gow STREET	Other Industry	Regulation under CLM Act not required	-33.93606752	151.0322057
PAGEWOOD	Former Email Site	Corner of Page Street and Holloway STREET	Metal Industry	Contamination currently regulated under CLM Act	-33.94302462	151.2132036
PAMBULA	Offsite area (roadways) adjacent to United Service Station Pambula (former Shell)	Corner Quondola Street and Bullara STREET	Service Station	Regulation under CLM Act not required	-36.93104481	149.8746763
PARKES	Caltex Service Station Parkes	352-360 Clarinda STREET	Service Station	Regulation under CLM Act not required	-33.13317454	148.173643
PARKES	Former Caltex Parkes (Mugincoble) Depot - Eugowra Rd, Mugincoble	Eugowra ROAD	Service Station	Regulation under CLM Act not required	-33.19007031	148.224822
PARKES	BP Truckstop	(Newell Highway) 1 Forbes ROAD	Other Petroleum	Regulation under CLM Act not required	-33.14309226	148.1710282
PARKES	Former BP Telescope Service Station	339-341 Clarinda STREET	Service Station	Regulation under CLM Act not required	-33.13216152	148.1743239
PARKES	BP Reliance East End Service Station Parkes	46 Clarinda STREET	Service Station	Regulation under CLM Act not required	-33.14243539	148.1846227
PARKLEA	Caltex Parklea Service Station	Old Windsor (north of Miami Street) ROAD	Service Station	Regulation under CLM Act not required	-33.72427108	150.9388531
PARRAMATTA	BP Service Station	435 Church STREET	Service Station	Regulation under CLM Act not required	-33.80498714	151.0056151

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
PARRAMATTA	Coleman Oval Embankment	Cnr of Pitt STREET and Maquarie STREET	Unclassified	Regulation under CLM Act not required	-33.80441625	150.9954841
PARRAMATTA	7-Eleven (former Mobil) Service Station	81 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.80919769	151.0142894
PARRAMATTA	Parramatta Park Toilet Block Demolition	The Cresent Toilet Block Parramatta PARK	Unclassified	Regulation under CLM Act not required	-33.81054034	150.9961968
PAUPONG	Former Timber Treatment Plant	Off Paupong ROAD	Other Industry	Regulation under CLM Act not required	-36.57657408	148.6624998
PENDLE HILL	7-Eleven Service Station	217 Wentworth AVENUE	Service Station	Regulation under CLM Act not required	-33.8017814	150.9577994
PENNANT HILLS	Shell Coles Express Pennant Hills West	386 Pennant Hills ROAD	Service Station	Contamination currently regulated under CLM Act	-33.73928611	151.0679704
PENRITH	Mirvac Industrial Site	2101 Castlereagh ROAD	Other Industry	Regulation under CLM Act not required	-33.73497514	150.6954097
PENRITH	7-Eleven (former Mobil) Service Station	212-222 Andrews ROAD	Service Station	Regulation under CLM Act not required	-33.73059678	150.6952571
PENRITH	Lowes Petroleum (Former Mobil) Depot Penrith	174 Coreen AVENUE	Other Petroleum	Regulation under CLM Act not required	-33.74484268	150.6980504
PENRITH	Caltex Service Station	Castlereagh Rd Cnr Lugard STREET	Service Station	Regulation under CLM Act not required	-33.73426843	150.6933382
PENRITH	BP Express Service Station	Corner Coreen Avenue and Castlereagh ROAD	Service Station	Regulation under CLM Act not required	-33.74385498	150.6925743
PENRITH	Crane Enfield Metals	Castlereagh ROAD	Metal Industry	Contamination currently regulated under CLM Act	-33.73734959	150.696442
PENRITH	7-Eleven Service Station Penrith	30 Henry STREET	Service Station	Regulation under CLM Act not required	-33.75408799	150.7045594
PENRITH	Caltex Penrith Service Station	153 Coreen AVENUE	Service Station	Regulation under CLM Act not required	-33.74287244	150.6927071
PENRITH	Jet 60 Dry Cleaners	Shop 3 134-138 Henry STREET	Unclassified	Regulation under CLM Act not required	-33.75231953	150.6964541
PENRITH	St Mary's Shopping Village	Charles Hackett DRIVE	Other Industry	Regulation under CLM Act not required	-33.766814	150.770363
PENRITH	Former Dry Cleaners	Shop 3, 134-138 Henry STREET	Other Industry	Regulation under CLM Act not required	-33.75231953	150.6964541



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
PENSHURST	7-Eleven Service Station	612 Forest ROAD	Service Station	Regulation under CLM Act not required	-33.96153533	151.0793525
PENSHURST	Caltex Service Station	641 King Georges ROAD	Service Station	Regulation under CLM Act not required	-33.95985335	151.0891118
PERISHER VALLEY	Perisher Centre Loading Dock	Kosciuszko ROAD	Other Petroleum	Regulation under CLM Act not required	-36.40392862	148.4111593
PERISHER VALLEY	Perisher Ski Resort	Kosciuszko ROAD	Other Petroleum	Regulation under CLM Act not required	-36.41106374	148.4005469
PETERSHAM	Fanny Durack Aquatic Centre	Station STREET	Unclassified	Regulation under CLM Act not required	-33.89194583	151.151824
PHEASANTS NEST	7-Eleven Service Station	(Southbound) Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.28291571	150.6394606
PHEASANTS NEST	7-Eleven (former Mobil) Service Station	(Northbound) Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.28303112	150.6363145
PICTON	Coles Express Picton	93-99 Argyle STREET	Service Station	Regulation under CLM Act not required	-34.16844337	150.6114236
PICTON	McDonalds	69 -71 Argyle STREET	Service Station	Regulation under CLM Act not required	-34.16711877	150.6121524
PITT TOWN	Whites Water Service	1 Canning PLACE	Other Petroleum	Under assessment	-33.574095	150.881258
PLUMPTON	Woolworths Service Station Plumpton (Plumpton Marketplace Shops)	260 Jersey ROAD	Service Station	Regulation under CLM Act not required	-33.74478874	150.8369408
PORT BOTANY	Vopak B	20 Friendship ROAD	Chemical Industry	Regulation under CLM Act not required	-33.97946548	151.2121752
PORT BOTANY	Vopak A	49 Friendship ROAD	Chemical Industry	Regulation under CLM Act not required	-33.97426175	151.2206228
PORT BOTANY	Terminals	45 Friendship ROAD	Chemical Industry	Regulation under CLM Act not required	-33.97609287	151.2174402
PORT BOTANY	Bunnerong Canal	Between Brotherson Dock and Bumborah Point ROAD	Unclassified	Regulation under CLM Act not required	-33.96800557	151.2227633
PORT BOTANY	Bulk Liquids Berth UPSS, Port Botany	Charlotte ROAD	Other Petroleum	Regulation under CLM Act not required	-33.97386329	151.2120157
PORT BOTANY	Port Operations Centre UPSS, Port Botany	Penrhyn ROAD	Other Petroleum	Regulation under CLM Act not required	-33.96803686	151.2205968



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
PORT BOTANY	Port Botany Railway Corridors	Friendship ROAD	Other Industry	Regulation under CLM Act not required	-33.95467008	151.2178012
PORT BOTANY	Smith Bros	4 Bumborah Point ROAD	Other Petroleum	Regulation under CLM Act not required	-33.9681757	151.2239505
PORT BOTANY	Vopak Terminals	21 Fishburn ROAD	Other Industry	Under assessment	-33.978961	151.217144
PORT KEMBLA	Coates Hire Facility (Eastern Portion)	1 Flinders STREET	Other Industry	Regulation under CLM Act not required	-34.47104817	150.89162
PORT KEMBLA	Shell Port Kembla CVRO	87-89 Flinders STREET	Other Petroleum	Regulation under CLM Act not required	-34.46964995	150.8953859
PORT KEMBLA	Darcy Road Rail Sidings	Darcy ROAD	Other Industry	Regulation under CLM Act not required	-34.47792834	150.9105503
PORT KEMBLA	No 2 Steelworks	Five Islands ROAD	Metal Industry	Regulation under CLM Act not required	-34.45965024	150.8844432
PORT KEMBLA	Port Kembla Orica	Foreshore Road and Darcy ROAD	Other Industry	Contamination currently regulated under CLM Act	-34.47773583	150.9054545
PORT KEMBLA	Port Kembla, Auszinc Metals and Alloys	Lot 2 Shellharbour ROAD	Metal Industry	Regulation under CLM Act not required	-34.49335414	150.8961205
PORT KEMBLA	South Yard Rail Sidings	Lot 3 Old Port ROAD	Unclassified	Regulation under CLM Act not required	-34.47500551	150.8951759
PORT KEMBLA	Manildra Park	Flinders STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-34.46946878	150.8935731
PORT KEMBLA	Port Kembla Copper Smelter	Military ROAD	Metal Industry	Contamination currently regulated under POEO Act	-34.4810006	150.9063426
PORT KEMBLA	Caltex Service Station	16 Flinders STREET	Service Station	Regulation under CLM Act not required	-34.47058088	150.8945864
PORT KEMBLA	BHP Area 21	Springhill ROAD	Metal Industry	Contamination formerly regulated under the CLM Act	-34.45244614	150.8676517
PORT KEMBLA	Port Kembla Steelworks Recycling Area	Springhill ROAD	Unclassified	Regulation under CLM Act not required	-34.45271181	150.8677127
PORT KEMBLA	Commonwealth Rolling Mills (CRM)	Old Port ROAD	Metal Industry	Regulation under CLM Act not required	-34.47476117	150.8974746
PORT KEMBLA	Port Kembla, Former Electricity Commission Site	Old Port Road/Christie Drive ROAD	Other Industry	Regulation under CLM Act not required	-34.46899143	150.8982854

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
PORT KEMBLA	Port Kembla Steelworks - Steelhaven	Five Islands ROAD	Other Industry	Regulation under CLM Act not required	-34.47605247	150.891144
PORT KEMBLA	Port Kembla Steelworks - No.1 Works Site	Five Islands ROAD	Metal Industry	Regulation under CLM Act not required	-34.47386606	150.8794912
PORT KEMBLA	Port Kembla Springhill Works	Springhill ROAD	Metal Industry	Regulation under CLM Act not required	-34.45905808	150.8749558
PORT MACQUARIE	Former Mobil Depot	211 Lake ROAD	Other Petroleum	Regulation under CLM Act not required	-31.44688513	152.8864499
PORT MACQUARIE	Caltex Service Station	112-114 Gordon STREET	Service Station	Regulation under CLM Act not required	-31.43491709	152.9047618
PORT MACQUARIE	Caltex Port Macquarie Service Station	29 Lord STREET	Service Station	Regulation under CLM Act not required	-31.43326436	152.9169873
PORT MACQUARIE	Coles Myer	43 John Oxley DRIVE	Service Station	Regulation under CLM Act not required	-31.45741442	152.8739626
PORT MACQUARIE	Air BP Avgas Facility	Oliver DRIVE	Other Petroleum	Regulation under CLM Act not required	-31.43227222	152.8681083
PORT MACQUARIE	Former Mobil Service Station	Corner Oxley Highway and Major Innes DRIVE	Service Station	Regulation under CLM Act not required	-31.45738931	152.873956
PORT MACQUARIE	Port Macquarie Council Depot	Koala STREET	Unclassified	Regulation under CLM Act not required	-31.45341586	152.9032764
PORT MACQUARIE	Shell Coles Express Port Macquarie Service Station	121 Gordon STREET	Service Station	Regulation under CLM Act not required	-31.4343131	152.9046869
PORT MACQUARIE	Caltex Service Station	92 Hastings River DRIVE	Service Station	Regulation under CLM Act not required	-31.42934052	152.8830188
PORT MACQUARIE	Caltex Service Station	12-14 Bolwarra ROAD	Service Station	Regulation under CLM Act not required	-31.45015286	152.8854769
PORT MACQUARIE	Car park	28 Hayward STREET	Other Industry	Regulation under CLM Act not required	-31.43385131	152.9072399
PORTLAND	Ivanhoe Colliery	Pipers Flat ROAD	Other Industry	Regulation under CLM Act not required	-33.36595748	150.0099577
PORTLAND	Mt Piper Power Station	350 Boulder ROAD	Other Petroleum	Regulation under CLM Act not required	-33.35581541	150.0350801
PRAIRIEWOOD	7-Eleven (former Caltex) Service Station	485-487 Smithfield ROAD	Service Station	Regulation under CLM Act not required	-33.87102509	150.9031383

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
PROSPECT	7-Eleven (former Mobil) Service Station Prospect	354 Flushcombe ROAD	Service Station	Regulation under CLM Act not required	-33.79541624	150.9049417
PROSPECT	Pincott's Cottage, Gate C1	Off Reservoir ROAD	Unclassified	Regulation under CLM Act not required	-33.81589773	150.9144343
PROSPECT	Gatehouse, 544 Reservoir Road	544 Reservoir ROAD	Unclassified	Regulation under CLM Act not required	-33.81049244	150.9157439
PROSPECT	Cottage 3, William Lawson Drive	William Lawson DRIVE	Unclassified	Regulation under CLM Act not required	-33.81490331	150.9149885
PUNCHBOWL	Former BP Service Station	1375 Canterbury Road, corner Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.93170424	151.0537302
PUNCHBOWL	Punchbowl Laundry	42-44 Belmore ROAD	Chemical Industry	Contamination currently regulated under CLM Act	-33.93582701	151.0562638
PUNCHBOWL	Caltex Service Station Punchbowl	1285-1289 Canterbury ROAD	Service Station	Regulation under CLM Act not required	-33.93146308	151.0596348
PUTNEY	Putney Marina	20 Waterview STREET	Other Industry	Regulation being finalised	-33.82608091	151.1003966
PYMBLE	Caltex Service Station	1089 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.74102977	151.1385257
PYMBLE	Shell Coles Express Service Station	21 Ryde ROAD	Service Station	Regulation under CLM Act not required	-33.75198512	151.1438115
PYMBLE	Former 3M site	950 Pacific HIGHWAY	Gasworks	Regulation under CLM Act not required	-33.75050288	151.1460578
PYMBLE	Pymble West Dry Cleaners	6 Philip MALL	Other Industry	Under preliminary investigation order	-33.76109009	151.1284329
PYRMONT	Former Council Works Depot (Fig and Wattle Depot)	14-26 Wattle STREET	Other Industry	Regulation under CLM Act not required	-33.8752655	151.1942645
QUAKERS HILL	7-Eleven (former Mobil) Service Station	83 Lalor ROAD	Service Station	Regulation under CLM Act not required	-33.72759077	150.8966764
QUAKERS HILL	BP Branded Parkway (Former Caltex) Service Station Quakers Hill	450 Quakers Hill PARKWAY	Service Station	Regulation under CLM Act not required	-33.72998613	150.9023617
QUEANBEYAN	Former Mobil Service Station	153 Uriarra ROAD	Service Station	Regulation under CLM Act not required	-35.34425514	149.2148687
QUEANBEYAN	Bill Lilley Automotive	169 Crawford STREET	Service Station	Regulation under CLM Act not required	-35.35138121	149.232486

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
QUEANBEYAN	Woolworths Queanbeyan Service Station	196 Crawford (Cnr Morisset St) STREET	Service Station	Regulation under CLM Act not required	-35.35163055	149.2335759
QUEANBEYAN	Caltex Queanbeyan Service Station	88 Macquoid (also known as Bungendore Rd) STREET	Service Station	Regulation under CLM Act not required	-35.34930535	149.2438607
QUEANBEYAN	Former Mobil Emoleum Depot	109-111 High STREET	Other Petroleum	Regulation under CLM Act not required	-35.3396115	149.237556
QUEANBEYAN	Former Caltex Depot	20-30 Railway STREET	Other Petroleum	Regulation under CLM Act not required	-35.34523	149.22333
QUEANBEYAN EAST	BP-Branded Service Station Queanbeyan	50 Yass ROAD	Service Station	Regulation under CLM Act not required	-35.34126641	149.2445103
QUEANBEYAN WEST	Caltex Service Station	Lanyon Dr Cnr Mccrae St (1 Suraci Place) STREET	Service Station	Regulation under CLM Act not required	-35.36372923	149.2067531
QUIRINDI	Former Mobil Depot Quirindi	4-6 Cross STREET	Other Petroleum	Regulation under CLM Act not required	-31.49903355	150.681972
QUIRINDI	Tamarang ServiCentre Quirindi	113-117 Station (also known as 119-121 Nowland) STREET	Service Station	Under assessment	-31.50179204	150.6814611
QUIRINDI	Caltex Service Station, Quirindi	199-201 George STREET	Service Station	Regulation under CLM Act not required	-31.50654793	150.6803589
RAMSGATE	Shell Coles Express Service Station	Grand Parade cnr Ramsgate ROAD	Service Station	Regulation under CLM Act not required	-33.98537988	151.1471234
RANDWICK	7-Eleven Service Station	126-130 Barker STREET	Service Station	Contamination currently regulated under CLM Act	-33.92096152	151.2355927
RANDWICK	Caltex Service Station	2 Alison ROAD	Service Station	Regulation under CLM Act not required	-33.9065752	151.2320697
RANDWICK	Metro Petroleum	345 Avoca STREET	Service Station	Regulation under CLM Act not required	-33.92544832	151.2396799
RANDWICK	Service Station, Randwick	33-37 Carrington ROAD	Service Station	Contamination currently regulated under CLM Act	-33.90655015	151.2525065
RAVENSWORTH	Ravensworth Operations Narama Mine	Lemington ROAD	Other Industry	Regulation under CLM Act not required	-32.47115903	151.0359579
RAVENSWORTH	Cumnock Colliery	Pikes Gully ROAD	Other Industry	Regulation under CLM Act not required	-32.40218281	150.9960082
RAYMOND TERRACE	Shell Coles Express Raymond Terrace	107 Adelaide (formerly Pacific Highway) STREET	Service Station	Regulation under CLM Act not required	-32.76110922	151.7492847

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
RAYMOND TERRACE	Caltex Service Station Raymond Terrace	136 Adelaide Street, corner Glenelg STREET	Service Station	Regulation under CLM Act not required	-32.76503842	151.7425264
RAYMOND TERRACE	Former Motor Registry	53 William STREET	Other Petroleum	Regulation under CLM Act not required	-32.76286473	151.7445839
RAYMOND TERRACE	Raymond Terrace Wastewater Treatment Works	22 Elizabeth AVENUE	Other Industry	Regulation under CLM Act not required	-32.774658	151.749978
REDFERN	BP Service Station	116 Regent STREET	Service Station	Regulation under CLM Act not required	-33.89367876	151.1995256
REDFERN	Former Printing Works	101a Marriott STREET	Other Industry	Regulation under CLM Act not required	-33.89512556	151.2113422
REDFERN	BP-branded Jasbe Surry Hills	411 Cleveland STREET	Service Station	Regulation under CLM Act not required	-33.89183974	151.2132466
REDFERN	Surry Hills Shopping Village	397-399 Cleveland & 2-38 Baptist STREET	Other Industry	Under assessment	-33.89229521	151.2119397
REVESBY	Dorf Clark Industries	184-194 Milperra ROAD	Metal Industry	Regulation under CLM Act not required	-33.93387149	151.000553
REVESBY	Bituminous Products	33-35 Violet STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.93702092	151.0067896
REVESBY	Mirotone Pty Ltd	21 Marigold STREET	Chemical Industry	Contamination currently regulated under POEO Act	-33.93559608	151.0002207
REVESBY	Caltex Service Station Revesby	181 The River ROAD	Service Station	Regulation under CLM Act not required	-33.95573605	151.0171779
RHODES	Homebush Bay Sediments adjoining the former UCAL and Allied Feeds sites	Homebush BAY	Chemical Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.8263749	151.0839216
RHODES	Former Glad factory site	10-16 Marquet STREET	Chemical Industry	Regulation under CLM Act not required	-33.82884048	151.0848716
RHODES	Former Allied Feeds site	Walker STREET	Other Industry	Contamination was addressed via the planning process (EP&A Act)	-33.82465376	151.0870401
RHODES	Former UCAL site	Walker STREET	Chemical Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.82727505	151.0853195
RHODES	Homebush Bay sediments adjoining former Berger Paint factory	Oulton AVENUE	Chemical Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.83535308	151.083238
RICHMOND	Caltex Richmond Service Station	98 March (Cnr East Market St) STREET	Service Station	Regulation under CLM Act not required	-33.59937996	150.7514483

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
RIVERSTONE	Axalta Coating Systems	15-23 Melbourne ROAD	Other Industry	Regulation under CLM Act not required	-33.6636649	150.8557519
RIVERSTONE	7-Eleven Riverstone	55 Garfield ROAD	Service Station	Regulation under CLM Act not required	-33.67802232	150.8635246
RIVERSTONE	Woolworths Vineyard Service Station, Riverstone	1 Woodland Street, corner of Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.65607641	150.8724067
RIVERSTONE	Vacant Commercial Land	88-94 Junction ROAD	Unclassified	Regulation under CLM Act not required	-33.66226398	150.8789967
RIVERWOOD	7-Eleven Riverwood	30 Bonds ROAD	Service Station	Regulation under CLM Act not required	-33.9523701	151.0583887
ROCKDALE	7-Eleven (former Mobil) Service Station	293 West Botany STREET	Service Station	Regulation under CLM Act not required	-33.94995672	151.1484667
ROCKDALE	7-Eleven Service Station	99 Railway STREET	Service Station	Regulation under CLM Act not required	-33.95247322	151.1356785
ROOTY HILL	7-Eleven (former Mobil) Service Station	106 Rooty Hill Road South ROAD	Service Station	Regulation under CLM Act not required	-33.78036181	150.8501998
ROOTY HILL	7-Eleven (former Mobil) Service Station	1042 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.78214955	150.8287656
ROSE BAY	Caltex Rose Bay Service Station	488 Old South Head ROAD	Service Station	Regulation under CLM Act not required	-33.87475145	151.2723847
ROSE BAY	Rose Bay Budget Service station	638 -646 New South Head ROAD	Service Station	Contamination currently regulated under CLM Act	-33.87062149	151.2677617
ROSEBERY	Autofoil P/L	2 Mentmore AVENUE	Other Industry	Regulation under CLM Act not required	-33.91121318	151.2054882
ROSEBERY	Caltex Rosebery Service Station	321 Gardeners (Cnr Macquarie St) ROAD	Service Station	Contamination currently regulated under CLM Act	-33.92302898	151.2059541
ROSEBERY	Former Industrial Site (Former Electroplating Facility)	108 Dunning AVENUE	Other Industry	Regulation under CLM Act not required	-33.91630811	151.201557
ROSEBERY	Rosebery Service Station	395 Gardeners ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.92246784	151.2024589
ROSEHILL	James Hardie Australia and former James Hardie lands	Devon STREET	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.82539019	151.0339466
ROSEHILL	2 Ritchie Street, Rosehill	2 Ritchie STREET	Unclassified	Contamination formerly regulated under the CLM Act	-33.82691192	151.0154948



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
ROSEHILL	James Hardie Factory (former, western portion)	181 James Ruse DRIVE	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.81605834	151.0238145
ROSELANDS	Roselands Shopping Centre	24 Roseland AVENUE	Service Station	Regulation under CLM Act not required	-33.93499281	151.0691284
ROSELANDS	Woolworths Caltex Petrol Service Station Roselands	218 King Georges ROAD	Service Station	Regulation under CLM Act not required	-33.933243	151.073586
ROSELANDS	7-Eleven (former Mobil) Service Station	91 Canary's ROAD	Service Station	Regulation under CLM Act not required	-33.93356078	151.0736274
ROSEVILLE	Mobil Service Station	2 Boundary STREET	Service Station	Regulation under CLM Act not required	-33.78769177	151.1796011
ROSEVILLE CHASE	Coles Express Roseville Chase	388 Eastern Valley WAY	Service Station	Regulation under CLM Act not required	-33.78337722	151.1973901
ROZELLE	Caltex Service Station	121 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.86252996	151.168497
ROZELLE	7-Eleven (former Mobil) Service Station	178-180 (176-184) Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.8630268	151.1680857
ROZELLE	Kennards Rozelle	15-39 Wellington STREET	Other Petroleum	Regulation under CLM Act not required	-33.86176757	151.1686519
ROZELLE	White Bay Power Station	Robert STREET	Other Industry	Regulation under CLM Act not required	-33.86674636	151.1772204
ROZELLE	BP Service Station	Corner Darling Street and Thornton STREET	Service Station	Regulation under CLM Act not required	-33.8591647	151.1716591
RUFUS RIVER	SA Water Depot - Rufus River	Old Wentworth STREET	Other Petroleum	Regulation under CLM Act not required	-34.04191512	141.2679475
RUSHCUTTERS BAY	d'Albora Marinas	1b New Beach ROAD	Other Industry	Contamination currently regulated under POEO Act	-33.87351297	151.2345082
RUTHERFORD	Rutherford Transpacific	11 Kyle STREET	Other Industry	Regulation under CLM Act not required	-32.71105203	151.500311
RUTHERFORD	Shell Coles Express Service Station Rutherford	118 New England HIGHWAY	Service Station	Regulation under CLM Act not required	-32.7208703	151.5394595
RUTHERFORD	Caltex Service Station	134-138 New England HIGHWAY	Service Station	Regulation under CLM Act not required	-32.7202589	151.5381526
RUTHERFORD	Transpacific Industrial Services/Nationwide Oil Pty Ltd	99 Kyle STREET	Chemical Industry	Regulation under CLM Act not required	-32.71262159	151.5013865



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
RYDALMERE	Caltex Service Station	309 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.81196193	151.0371185
RYDALMERE	Mitsubishi Electric	348 Victoria ROAD	Other Industry	Contamination currently regulated under CLM Act	-33.81040138	151.0392812
RYDALMERE	Rheem Australia	1 Alan STREET	Other Industry	Contamination formerly regulated under the CLM Act	-33.81545013	151.0295476
RYDALMERE	BP Service Station	265 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.8109483	151.0328101
RYDALMERE	Hunter Douglas	Victoria ROAD	Chemical Industry	Regulation under CLM Act not required	-33.81009112	151.0384732
RYDALMERE	United Petroleum (former 7-Eleven) Service Station Rydalmere	262-272 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.81006724	151.032377
RYDE	Shell Coles Express Ryde	45 Lane Cove ROAD	Service Station	Regulation under CLM Act not required	-33.80726028	151.109981
RYDE	Caltex Service Station	110 Lane Cove ROAD	Service Station	Regulation under CLM Act not required	-33.80142973	151.1137925
RYDE	7-Eleven (former Mobil) Service Station	326-328 Blaxland ROAD	Service Station	Regulation under CLM Act not required	-33.80242183	151.1004278
RYDE	Ryde Bus Depot	51 - 75 Buffalo ROAD	Other Petroleum	Regulation under CLM Act not required	-33.81679771	151.1225255
SANCTUARY POINT	United Service Station, Sanctuary Point	147 Larmer AVENUE	Service Station	Regulation under CLM Act not required	-35.09918861	150.6329537
SANDGATE	Caltex Service Station Sandgate	162 Maitland ROAD	Service Station	Regulation under CLM Act not required	-32.86501596	151.706161
SANDGATE	North Limited Storage Handling facility	Maitland ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-32.86598453	151.7012866
SANS SOUCI	7-Eleven (Former Mobil) Service Station	474 Rocky Point ROAD	Service Station	Regulation under CLM Act not required	-33.99088939	151.1333779
SANS SOUCI	BP Sans Souci	520 Rocky Point ROAD	Service Station	Under assessment	-33.99246353	151.1323243
SANS SOUCI	Kendall Street Reserve	Lawson Street and Kendall STREET	Landfill	Under preliminary investigation order	-33.99966431	151.13005
SANS SOUCI	Former Service Station	542-544 Rocky Point ROAD	Service Station	Contamination was addressed via the planning process (EP&A Act)	-33.99376148	151.1316131

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
SANS SOUCI	Former 7-Eleven Ramsgate	368 Rocky Point ROAD	Service Station	Contamination currently regulated under CLM Act	-33.98631668	151.135849
SCONE	Shell Coles Express Service Station	91- 93 Kelly STREET	Service Station	Contamination currently regulated under CLM Act	-32.04715941	150.8676346
SCONE	Scone Works Depot	220 Susan STREET	Other Petroleum	Regulation under CLM Act not required	-32.04444892	150.879152
SCONE	Mobil Scone Airport Elt	8 Walter Pye AVENUE	Other Petroleum	Regulation under CLM Act not required	-32.03596733	150.8323698
SCONE	BP - Former Depot	Scone St, Guernsey St & Susan STREET	Service Station	Contamination formerly regulated under the CLM Act	-32.04599284	150.8662046
SEVEN HILLS	7-Eleven (Former Mobil) Service Station Seven Hills	151 Prospect HIGHWAY	Service Station	Regulation under CLM Act not required	-33.76894646	150.9427004
SEVEN HILLS	Australia Post	3 Powers ROAD	Unclassified	Regulation under CLM Act not required	-33.77434009	150.9395495
SEVEN HILLS	Car Park (Former Brickworks / Warehouse)	1 Powers ROAD	Other Industry	Regulation under CLM Act not required	-33.77387442	150.9379787
SEVEN HILLS	BP-branded Jasbe Petroleum Service Station	156 Prospect HIGHWAY	Service Station	Regulation under CLM Act not required	-33.76906502	150.9414821
SEVEN HILLS	Caltex Service Station	38 Abbott ROAD	Service Station	Regulation under CLM Act not required	-33.76692649	150.9548271
SEVEN HILLS	Caltex Service Station Seven Hills	105 Station ROAD	Service Station	Regulation under CLM Act not required	-33.77435881	150.9448733
SEVEN HILLS	Former Australian Waste Oil Refineries Site	27 Powers ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-33.77536127	150.9511122
SHELLY BEACH	Former Shelly Beach Landfill	Oaks AVENUE	Landfill	Regulation under CLM Act not required	-33.36700551	151.4913631
SHORTLAND	Former Astra St landfill	2 (part) & 28 (part) Astra STREET	Landfill	Contamination currently regulated under CLM Act	-32.86716222	151.6966948
SHORTLAND	Tuxford Park landfill	10 King STREET	Landfill	Regulation under CLM Act not required	-32.87721139	151.6936837
SHORTLAND	Former Lorna St landfill	8/475 Sandgate ROAD	Landfill	Regulation under CLM Act not required	-32.87888726	151.7023245
SHORTLAND	7-Eleven (Former BP) Service Station	298-302 Sandgate ROAD	Service Station	Regulation under CLM Act not required	-32.8861645	151.6953912

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
SILVERWATER	Former Silverwater Landfill	Carnarvon ROAD	Landfill	Contamination currently regulated under CLM Act	-33.83506394	151.033214
SILVERWATER	Vacant property	103-105 Silverwater ROAD	Other Industry	Regulation under CLM Act not required	-33.83831374	151.0472576
SILVERWATER	Storage Facility	54-58 Derby STREET	Unclassified	Under assessment	-33.83855869	151.0478649
SILVERWATER	Former Printing Facility	46-58 Derby STREET	Unclassified	Under assessment	-33.83855869	151.0478649
SILVERWATER	Silverwater Correctional Complex	Holker STREET	Landfill	Regulation being finalised	-33.82944797	151.0567486
SINGLETON	BP Service Station Singleton	53 George (Cnr Macquarie St) STREET	Other Petroleum	Regulation under CLM Act not required	-32.56182325	151.1748054
SINGLETON	Singleton Gasworks	55-57 John STREET	Gasworks	Contamination currently regulated under CLM Act	-32.56774715	151.1658188
SINGLETON	Shell Coles Express Service Station	69-73 George STREET	Service Station	Regulation under CLM Act not required	-32.56297156	151.1755215
SINGLETON	Mobil Singleton Airport Elt	74B Range ROAD	Other Petroleum	Regulation under CLM Act not required	-32.60270846	151.1944828
SINGLETON	Putty Saw Mill	(via Singleton) Putty ROAD	Other Industry	Contamination currently regulated under CLM Act	-32.99958725	150.7111684
SINGLETON	NSW Mines Rescue Services - Singleton	6 Lachlan AVENUE	Other Industry	Regulation under CLM Act not required	-32.54537821	151.156584
SMITHFIELD	Caltex Smithfield	16-18 Tait STREET	Service Station	Regulation under CLM Act not required	-33.84596441	150.9435497
SMITHFIELD	Freestones	1 Hume ROAD	Other Petroleum	Regulation under CLM Act not required	-33.83577694	150.9310112
SMITHFIELD	Liquip International	13 Hume ROAD	Other Industry	Regulation under CLM Act not required	-33.83802635	150.9319034
SMITHFIELD	Coles Express (former Mobil) Service Station	678 The Horsley Drive, corner Smithfield ROAD	Service Station	Regulation under CLM Act not required	-33.85376154	150.9400104
SMITHFIELD	Former Landfill	Little STREET	Landfill	Contamination being managed via the planning process (EP&A Act)	-33.85025253	150.9411561
SOUTH ALBURY	BP Border Service Station	Corner Ebden Street and Wodonga PLACE	Service Station	Contamination currently regulated under CLM Act	-36.08875942	146.9093882

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
SOUTH BOWENFELS	Shell Coles Express Service Station	Lot 1 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.50589001	150.1238487
SOUTH COOGEE	Caltex South Coogee Service Station	169-173 Malabar ROAD	Service Station	Regulation under CLM Act not required	-33.93233184	151.2574377
SOUTH GRAFTON	Shell Coles Express Service Station	91 Bent STREET	Service Station	Regulation under CLM Act not required	-29.70605829	152.9400329
SOUTH GRAFTON	Former United (former Mobil) Service Station	Corner Pacific Highway and Charles STREET	Service Station	Regulation under CLM Act not required	-29.70814828	152.9412928
SOUTH GRAFTON	Former Caltex Service Station	46-58 Schwinghammer STREET	Service Station	Regulation under CLM Act not required	-29.71128273	152.9458313
SOUTH GRAFTON	Former Caltex Depot South Grafton	72-82 Swallow ROAD	Other Petroleum	Regulation under CLM Act not required	-29.73168549	152.944024
SOUTH GRAFTON	Caltex Service Station	Pacific Hwy Cnr Gwyder HIGHWAY	Service Station	Regulation under CLM Act not required	-29.70739015	152.9425508
SOUTH GRANVILLE	Enhance Service Station south Granville	2 Rawson ROAD	Service Station	Regulation under CLM Act not required	-33.86366193	151.0088768
SOUTH KEMPSEY	Caltex Service Station	52 Lachlan STREET	Service Station	Regulation under CLM Act not required	-31.09361084	152.8370796
SOUTH LISMORE	North Coast Petroleum (Former Mobil) Depot Lismore	19-21 Elliot ROAD	Other Petroleum	Regulation under CLM Act not required	-28.81212046	153.2661935
SOUTH LISMORE	Former Mobil Service Station	126 - 128 Union STREET	Service Station	Regulation under CLM Act not required	-28.81242175	153.267541
SOUTH LISMORE	Caltex Service Station	237 Union STREET	Service Station	Regulation under CLM Act not required	-28.82052708	153.2648111
SOUTH LISMORE	Former Mobil Depot	26-32 Phyllis STREET	Other Petroleum	Regulation under CLM Act not required	-28.81005206	153.2660073
SOUTH MURWILLUMBAH	Former Caltex Depot	39 Lundberg DRIVE	Service Station	Regulation under CLM Act not required	-28.332622	153.4212884
SOUTH MURWILLUMBAH	Caltex Service Station	1-7 Buchanan (Cnr Tweed Valley Way) STREET	Service Station	Regulation under CLM Act not required	-28.32687988	153.4093274
SOUTH MURWILLUMBAH	Former Mobil Depot	45 Wardrop STREET	Other Petroleum	Regulation under CLM Act not required	-28.33421395	153.3993772
SOUTH NOWRA	Caltex South Nowra	100 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.90516081	150.6029621

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
SOUTH PENRITH	7-Eleven Service Station	45 Aspen STREET	Service Station	Regulation under CLM Act not required	-33.77727694	150.7107228
SOUTH TAMWORTH	Coles Express Tamworth	251 - 253 Goonoo Goonoo ROAD	Service Station	Contamination currently regulated under CLM Act	-31.11058167	150.9236721
SOUTH TAMWORTH	Caltex Service Station	2 Kathleen Street, corner Kent STREET	Service Station	Regulation under CLM Act not required	-31.10361712	150.9186343
SOUTH WENTWORTHVILLE	Aldi Stores Development	331-339 Great Western HIGHWAY	Metal Industry	Regulation under CLM Act not required	-33.81605854	150.9697429
SOUTH WENTWORTHVILLE	Caltex Service Station	313 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.81643692	150.9718802
SOUTH WEST ROCKS	Former Trial Bay Caltex Depot	Phillip DRIVE	Other Petroleum	Regulation under CLM Act not required	-30.89190078	153.0573056
SOUTH WEST ROCKS	Former Shell Trial Bay Depot	Phillip DRIVE	Other Petroleum	Regulation under CLM Act not required	-30.89273836	153.0612772
SOUTH WEST ROCKS	Residential area and Reserve opposite Former Caltex terminal	Phillip DRIVE	Other Petroleum	Regulation under CLM Act not required	-30.89172594	153.0573164
SOUTH WEST ROCKS	South West Rocks Public Pit Toilets	Off New Entrance ROAD	Other Industry	Under assessment	-30.88143126	153.0304672
SPRINGVALE	Springvale Colliery	Castlereagh HIGHWAY	Other Industry	Regulation under CLM Act not required	-33.40334736	150.1070462
ST CLAIR	7-Eleven (former Mobil) Service Station	4 Endeavour AVENUE	Service Station	Regulation under CLM Act not required	-33.79430926	150.7885793
ST IVES	7-Eleven (former Mobil) St Ives Service Station	157-159 Mona Vale Road, corner Putarri AVENUE	Service Station	Regulation under CLM Act not required	-33.73265301	151.1563899
ST IVES	Caltex Service Station	452 Mona Vale ROAD	Service Station	Regulation under CLM Act not required	-33.70752272	151.187545
ST IVES	Caltex Service Station	164 Mona Vale ROAD	Service Station	Regulation under CLM Act not required	-33.7307595	151.1570462
ST IVES	Caltex Service Station St Ives	363 Mona Vale ROAD	Service Station	Regulation under CLM Act not required	-33.7168971	151.1735263
ST IVES	Shell Service Station	179-181 Mona Vale ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.73124859	151.1575827
ST LEONARDS	Telstra Data Centre	4A Herbert STREET	Other Petroleum	Regulation under CLM Act not required	-33.81873741	151.1914222

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
ST MARYS	Former Woolworths Service Station	120-128 Forrester ROAD	Service Station	Regulation under CLM Act not required	-33.75525115	150.7752897
ST MARYS	7-Eleven (former Mobil) Service Station	2 Christie STREET	Service Station	Regulation under CLM Act not required	-33.74790843	150.7767667
ST MARYS	7-Eleven (former Mobil) Service Station	2 Wilson STREET	Service Station	Regulation under CLM Act not required	-33.77790415	150.771689
ST MARYS	Solveco	38 LINKS ROAD	Other Industry	Contamination currently regulated under CLM Act	-33.738673	150.771554
ST MARYS	Integral Energy Mt Druitt Transmission Substation	69 Kurrajong North ROAD	Other Industry	Regulation under CLM Act not required	-33.76376093	150.7921691
ST MARYS	Caltex St Marys Service Station	Wordoo St Cnr Forrester ROAD	Service Station	Regulation under CLM Act not required	-33.75334263	150.7755489
ST MARYS	Chemcolour Industries	19-25 Anne STREET	Chemical Industry	Under assessment	-33.75027071	150.7725397
ST MARYS	Old Drycleaning location	1-7 Queen STREET	Other Industry	Under assessment	-33.73873	150.771747
ST PETERS	Cooks River Rail Terminal	20 Canal ROAD	Unclassified	Regulation under CLM Act not required	-33.91943986	151.1726689
ST PETERS	Camdenville Park	May STREET	Other Industry	Regulation under CLM Act not required	-33.90911815	151.176951
ST PETERS	Former Tidyburn Facility	53 Barwon Park ROAD	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.9130091	151.1809912
ST PETERS	BP Express Service Station	2 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-33.90982281	151.1809936
ST PETERS	Former Industrial Manufacturing Facility (Taubman's Paints)	75 Mary STREET	Other Industry	Regulation under CLM Act not required	-33.91307297	151.1731383
STANMORE	125 Corunna Road	125 Corunna ROAD	Unclassified	Regulation under CLM Act not required	-33.88937382	151.1644589
STOCKTON	Former Coroba Landfill	310 Fullerton STREET	Landfill	Under assessment	-32.89807537	151.7896891
STRATHFIELD	7-Eleven (former Mobil) Service Station	577 Liverpool ROAD	Service Station	Regulation under CLM Act not required	-33.88736091	151.0743474
STRATHFIELD SOUTH	Former Landfill Site	7-9 Dunlop STREET	Landfill	Regulation under CLM Act not required	-33.89509698	151.0796751



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
STROUD	Stroud Fuel Supplies (Former Caltex) Service Station	1 Cowper STREET	Service Station	Regulation under CLM Act not required	-32.39092749	151.9563089
SUFFOLK PARK	BP Service Station	207-209 Broken Head ROAD	Service Station	Regulation under CLM Act not required	-28.68800088	153.6083821
SUFFOLK PARK	Suffolk Park dip site	Cnr Broken Head Road & Beech DRIVE	Cattle Dip	Regulation under CLM Act not required	-28.6874242	153.6072824
SURRY HILLS	Woolworths Petrol Surry Hills	475 Cleveland STREET	Service Station	Regulation under CLM Act not required	-33.89203644	151.216217
SURRY HILLS	Former Legion Cabs (Trading) Cooperative	81 & 81A (Formerly 69 - 81) Foveaux STREET	Service Station	Regulation under CLM Act not required	-33.88470082	151.2107944
SURRY HILLS	Ausgrid Road Reserve	Mary STREET	Other Industry	Regulation under CLM Act not required	-33.88292195	151.2095176
SUTHERLAND	United Service Station and Sutherland Reservoir	1 to 3 Oxford STREET	Service Station	Contamination currently regulated under CLM Act	-34.029532	151.0579906
SUTHERLAND	7-Eleven Service Station	693 Old Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.02976735	151.0588789
SUTTON FOREST	Coles Express Sutton Forest West	Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.60808989	150.2250592
SWANSEA	Caltex Service Station	126 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.08811841	151.6381764
SWANSEA	Swansea 1 - Wastewater Pumping Station	137 and 137a Northcote AVENUE	Other Industry	Under assessment	-33.09745672	151.6473257
SYDENHAM	SRA Land	117 Railway PARADE	Other Industry	Regulation under CLM Act not required	-33.91560723	151.1656846
SYDENHAM	Sydenham XPT Maintenance Facility	Way STREET	Other Industry	Regulation under CLM Act not required	-33.91698468	151.1614089
SYDNEY	Interpro House (OSP 46581)	447 Kent STREET	Other Petroleum	Regulation under CLM Act not required	-33.87225413	151.204761
SYDNEY	Eurostar Dry Cleaners	100 Oxford STREET	Chemical Industry	Under assessment	-33.879333	151.215668
SYDNEY OLYMPIC PARK	RMS Western Precinct	14A-14E and 16 Hill ROAD	Other Petroleum	Regulation under CLM Act not required	-33.82239777	151.0758664
SYDNEY OLYMPIC PARK	Haslams Creek South Area 3	At Kronos Hill, Kevin Coombes AVENUE	Landfill	Contamination formerly regulated under the CLM Act	-33.84113059	151.0602966



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
SYDNEY OLYMPIC PARK	Bicentennial Park	Bicentennial DRIVE	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.84456248	151.0788116
SYDNEY OLYMPIC PARK	Former Golf Driving Range Landfill	Sarah Durack AVENUE	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.85358517	151.0713987
SYDNEY OLYMPIC PARK	Kronos Hill Landfill	Kevin Coombes AVENUE	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.84014442	151.0649521
SYDNEY OLYMPIC PARK	Wilson Park (Former oil gas plant site)	Newington ROAD	Gasworks	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.82633586	151.0534322
SYDNEY OLYMPIC PARK	Woo-la-ra Landfill	Hill ROAD	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.82695807	151.07282
SYDNEY OLYMPIC PARK	Aquatic Centre Carpark Landfill	Shane Gould AVENUE	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.85093439	151.0656713
SYDNEY OLYMPIC PARK	Blaxland Common Landfill	Jamieson STREET	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.82638382	151.05972
SYLVANIA	Caltex Service Station - Sylvania Heights	414-416 Princes HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-34.02361051	151.0895394
SYLVANIA	Caltex Service Station	61 Port Hacking ROAD	Service Station	Regulation under CLM Act not required	-34.0140089	151.104212
TALBINGO	Old Town Landfill	Bridle STREET	Landfill	Regulation under CLM Act not required	-35.59018237	148.3041771
TALBINGO	T3 Spoil dump and adjoining river sediments	Off Snowy Mountains HIGHWAY	Landfill	Contamination formerly regulated under the CLM Act	-35.6177268	148.2926158
TALBINGO	Former grit blasting site	Old Damsite ROAD	Other Industry	Regulation under CLM Act not required	-35.60894551	148.3030165
TAMINDA	Mobil Depot	9 Hinkler ROAD	Other Petroleum	Regulation under CLM Act not required	-31.09584286	150.9040493
TAMWORTH	Caltex Tamworth Service Station	109 Gunnedah ROAD	Service Station	Regulation under CLM Act not required	-31.09723226	150.8955299
TAMWORTH	Curlew Crescent	19-29 Curlew CRESCENT	Metal Industry	Regulation under CLM Act not required	-31.06963607	150.9069306
TAMWORTH	Former Service Station, Fitzpatrick Super Fund, Tamworth	210 Goonoo Goonoo ROAD	Service Station	Regulation under CLM Act not required	-31.10613594	150.9234143
TAMWORTH	Gunnedah Road Site	49 GUNNEDAH ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-31.09574904	150.9021583

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
TAMWORTH	Elovera Former Sheep Dip	730 Ascot Calala ROAD	Cattle Dip	Regulation under CLM Act not required	-31.1801846	150.962897
TAMWORTH	Housing NSW	29 -33 White STREET	Other Petroleum	Regulation under CLM Act not required	-31.0915651	150.9357811
TAMWORTH	BP Tamworth Service Station and Depot	27-29 Gunnedah ROAD	Other Petroleum	Under assessment	-31.09642128	150.9058193
TAMWORTH	Former Mobil Service Station	373-375 Armidale ROAD	Service Station	Regulation under CLM Act not required	-31.10122679	150.9441341
TAMWORTH	Kensell's Mitsubishi	11-14 Kable AVENUE	Other Petroleum	Regulation under CLM Act not required	-31.08921565	150.9273063
TAMWORTH	Caltex Star Tamworth	21 White STREET	Service Station	Regulation under CLM Act not required	-31.09255137	150.9341709
TAMWORTH	Former Service Station Tamworth	(Cnr Scott Rd) 254-256 Goonoo Goonoo ROAD	Service Station	Regulation under CLM Act not required	-31.1118945	150.9228523
TAMWORTH	Cleanaway Operations Pty Ltd	31 Gunnedah ROAD	Other Industry	Under assessment	-31.09621029	150.9051567
TAMWORTH	Elgas Depot (former gasworks)	115 Marius STREET	Gasworks	Under assessment	-31.085682	150.926088
TAMWORTH	Proposed ALDI Store Tamworth	194-196 Peel STREET	Other Industry	Under assessment	-31.08522053	150.9260054
TARCUTTA	Mobil Service Station	(Hume Highway) 32 Sydney STREET	Service Station	Contamination formerly regulated under the CLM Act	-35.2772942	147.73574
TAREE	Caltex Taree	12 Pitt STREET	Service Station	Regulation under CLM Act not required	-31.90551738	152.4783334
TAREE	Former Caltex Depot	44 Stevenson STREET	Other Petroleum	Regulation under CLM Act not required	-31.90563595	152.4640848
TAREE	Former BP Service Station (Reliance Petroleum)	150 Manning River DRIVE	Service Station	Regulation under CLM Act not required	-31.93842026	152.4682056
TAREE	Former Shell Depot	53-55 Stevenson STREET	Other Petroleum	Regulation under CLM Act not required	-31.90514622	152.4649706
TAREE	United Service Station and Former Mobil Depot	85 Muldoon Street, corner Grey Gum ROAD	Service Station	Regulation under CLM Act not required	-31.89744109	152.4508569
TAREE	Caltex Service Station	104-106 Commerce STREET	Service Station	Regulation under CLM Act not required	-31.90720519	152.4500926

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
TAREE	Footpath in front of the former BP service station	53-55 Victoria STREET	Service Station	Regulation under CLM Act not required	-31.91015653	152.4659073
TAREN POINT	Former Oyster Farm	Part 2R Alexander Avenue and part 98 Woodlands ROAD	Other Industry	Contamination was addressed via the planning process (EP&A Act)	-34.01714802	151.1252694
TAREN POINT	Former Oyster Farmer	1A Atkinson ROAD	Other Industry	Regulation under CLM Act not required	-34.02081803	151.1283282
TAREN POINT	Former manufacturing site	46-50 Bay ROAD	Other Industry	Regulation under CLM Act not required	-34.0236184	151.1231649
TAREN POINT	Mangrove Lane Cycle pathway	Mangrove LANE	Unclassified	Regulation under CLM Act not required	-34.02404025	151.1324783
TAREN POINT	Caltex Service Station	114 Taren Point ROAD	Service Station	Regulation under CLM Act not required	-34.02065958	151.1218938
TAREN POINT	Shell Coles Express Service Station	99-103 Parraweena ROAD	Service Station	Regulation under CLM Act not required	-34.02630233	151.1200897
TAREN POINT	Redevelopment Site	25 Bay ROAD	Landfill	Under assessment	-34.02119564	151.1274793
TELARAH	Former Ausgrid Depot	Green STREET	Other Industry	Regulation under CLM Act not required	-32.7276446	151.5269745
TELARAH	ACIRL	5 Junction STREET	Other Industry	Regulation under CLM Act not required	-32.73457183	151.5400128
TEMORA	Woolworths Caltex Temora	98-100 Hoskins STREET	Service Station	Under preliminary investigation order	-34.44324584	147.5318667
TEMPE	Tempe Depot	1a Gannon STREET	Other Petroleum	Regulation under CLM Act not required	-33.92408255	151.1596469
TEMPE	Caltex Service Station	775 Princes HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.9253681	151.1596532
TEMPE	Former Tempe Tip	South STREET	Landfill	Contamination currently regulated under CLM Act	-33.9255792	151.1668117
TEMPE	Railcorp Site Renwick Street	Renwick STREET	Other Industry	Regulation under CLM Act not required	-33.91997709	151.1576058
TERALBA	Lake Macquarie Teralba Sanitary Depot	Griffen ROAD	Landfill	Regulation under CLM Act not required	-32.9372059	151.6214528
TERALBA	Lucky's Scrap Metal Yard	21 Racecourse ROAD	Metal Industry	Contamination currently regulated under CLM Act	-32.946805	151.61698

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
TERANIA CREEK	Former Izzards Cattle Tick Dip	Wallace ROAD	Cattle Dip	Contamination formerly regulated under the CLM Act	-28.65425776	153.2767438
THIRLMERE	Thirlmere Rail Heritage Museum	10 Barbour ROAD	Other Industry	Regulation under CLM Act not required	-34.20689245	150.5693902
THORNLEIGH	Caltex Thornleigh Service Station	192-198 Pennant Hills (Cnr Duffy Ave) ROAD	Service Station	Regulation under CLM Act not required	-33.72660793	151.08364
THORNLEIGH	Coles Express Service Station Thornleigh	188 - 190 Pennant Hills ROAD	Service Station	Regulation under CLM Act not required	-33.72502184	151.0850569
THORNTON	Energy Australia Thornton Pole Yard	55 Weakleys DRIVE	Other Industry	Regulation under CLM Act not required	-32.79973875	151.6374998
TIGHES HILL	Holcim Australia Cement Batching Plant	340 Industrial DRIVE	Other Industry	Regulation under CLM Act not required	-32.90532418	151.7574857
TIGHES HILL	SRA Land	73 Elizabeth STREET	Unclassified	Regulation under CLM Act not required	-32.90795794	151.754631
TIGHES HILL	Former Ampol Depot	94 Elizabeth STREET	Other Petroleum	Regulation under CLM Act not required	-32.90658137	151.757239
TIGHES HILL	Former Mobil Terminal	110 Elizabeth STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-32.90600406	151.7586907
TOCUMWAL	Former Mobil Depot	250 Murray STREET	Other Petroleum	Regulation under CLM Act not required	-35.79180653	145.5648214
TOCUMWAL	Former Mobil Depot	79-83 Deniliquin ROAD	Other Petroleum	Regulation under CLM Act not required	-35.80914914	145.5585528
TOMAGO	Balcombe Sweat Furnace	26 Laverick AVENUE	Metal Industry	Regulation under CLM Act not required	-32.82557395	151.7056416
TOMAGO	Former Hydromet Site	25 School DRIVE	Metal Industry	Under assessment	-32.8301553	151.7300603
TOMAGO	RZM Site - Tomago	1877 Pacific HIGHWAY	Other Industry	Under assessment	-32.81419433	151.6985159
TOMERONG	Log Cabin Service Station (United Petroleum)	D1300 Princes HIGHWAY	Service Station	Under assessment	-35.01820959	150.5779687
TOONGABBIE	7-Eleven (Former Mobil) Service Station Toongabbie	3 Metella ROAD	Service Station	Regulation under CLM Act not required	-33.78692357	150.9462837
TOORMINA	Caltex Service Station	2 Minorca PLACE	Service Station	Regulation under CLM Act not required	-30.35229568	153.0906606

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
TORONTO	Coles XP (Former Mobil) Toronto Service Station	133 - 137 Cary (Cnr Thorne St) STREET	Service Station	Regulation under CLM Act not required	-33.01187681	151.5930879
TORONTO	BP Toronto Service Station	132 Cary (Cnr Donnelly Ave) STREET	Service Station	Regulation under CLM Act not required	-33.01144673	151.5937863
TORONTO	Toronto Hotel	74 Victory PARADE	Unclassified	Regulation under CLM Act not required	-33.01214835	151.5958127
TORONTO	Caltex Service Station	147 Cary STREET	Service Station	Regulation under CLM Act not required	-33.01288007	151.5928388
TOUKLEY	Former Shell Toukley Autoport	211 Main ROAD	Service Station	Regulation under CLM Act not required	-33.26383791	151.5386268
TOUKLEY	7-Eleven Australia	287 Main ROAD	Service Station	Regulation under CLM Act not required	-33.26469166	151.5462414
TRANGIE	Caltex Service Station	(Mitchell Hwy) 76 Narromine STREET	Service Station	Regulation under CLM Act not required	-32.03234676	147.985164
TUGGERAH	BP Tuggerah	100 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.30578167	151.4198083
TUMBARUMBA	Former Caltex Depot	150 Albury STREET	Other Petroleum	Regulation under CLM Act not required	-35.77024081	147.9927182
TUMBI UMBI	Former Tumbi Landfill	140 Bellevue ROAD	Landfill	Regulation under CLM Act not required	-33.3993472	151.456471
TUMUT	CSR Blue Dam	Jepsen AVENUE	Other Industry	Regulation being finalised	-35.30098337	148.1958308
TUMUT	CSR Railway cutting	Jepsen AVENUE	Unclassified	Regulation being finalised	-35.30422002	148.1942579
TUMUT	Former Telstra Depot	22-26 Carey STREET	Other Industry	Regulation under CLM Act not required	-35.29873079	148.2191122
TUROSS HEAD	Tern Inn Restaurant (abandoned UPSS)	2 Trafalgar ROAD	Service Station	Regulation under CLM Act not required	-36.05871059	150.1308443
TURRAMURRA	7-Eleven (former Mobil) Service Station Turramurra	1408 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.73326389	151.1264194
TURRAMURRA	Woolworths Service Station	1233 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.73317594	151.1313195
TURRELLA	Tulloch Australia Pty Limited	61 Turrella STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.92857213	151.1475387

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
TURRELLA	Rail Corridor and adjacent industrial land	75 Henderson STREET	Other Industry	Under assessment	-33.928402	151.148355
TWEED HEADS	Former Mobil Quix Service Station	60 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-28.20143775	153.5445381
TWEED HEADS	Francis Street Road Reserve adjacent to 79-81 Wharf Street, Tweed Heads	79-81 Wharf STREET	Other Petroleum	Regulation under CLM Act not required	-28.17351959	153.542262
TWEED HEADS SOUTH	Former BP Depot	142 Minjungbal DRIVE	Other Petroleum	Regulation under CLM Act not required	-28.20860702	153.5455932
TWEED HEADS SOUTH	Coles Express Service Station	Corner Minjungbal Drive and Heffron STREET	Service Station	Regulation under CLM Act not required	-28.19459987	153.5419978
TWEED HEADS SOUTH	Woolworths Plus Petrol	98-102 Pacific (100 Minjungbal Drive) HIGHWAY	Service Station	Regulation under CLM Act not required	-28.20488521	153.5448675
TWEED HEADS WEST	Caltex Service Station	96 to 98 Kennedy DRIVE	Service Station	Regulation being finalised	-28.1871486	153.5229866
TYAGARAH	Tyagarah Airstrip	25 Staceys WAY	Other Petroleum	Regulation under CLM Act not required	-28.59553079	153.5469165
ULAN	Ulan Coal Mine	4505 Ulan ROAD	Other Industry	Regulation under CLM Act not required	-32.25620603	149.7558075
ULLADULLA	Coles Express Ulladulla	153 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-35.36288274	150.47272
ULLADULLA	Woolworths Petrol Station	155-157 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-35.36316263	150.4725668
ULLADULLA	Caltex Service Station	62A Deering Street, corner Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-35.36276828	150.473578
ULTIMO	Shell Coles Express Service Station	387-429 Wattle STREET	Service Station	Regulation under CLM Act not required	-33.88138825	151.1966791
UNANDERRA	Endeavour Energy Springhill Field Service Centre	195 Five Island ROAD	Other Industry	Regulation under CLM Act not required	-34.45837706	150.8598825
UNANDERRA	BlueScope Stainless Steel	13 Marley PLACE	Metal Industry	Contamination currently regulated under CLM Act	-34.44959798	150.8571632
UNANDERRA	Unanderra Weekend Detention Centre	34-40 Lady Penryhn DRIVE	Landfill	Regulation under CLM Act not required	-34.4620226	150.8473821
UNANDERRA	Veolia Environmental Services	9 Waynote PLACE	Other Industry	Regulation under CLM Act not required	-34.46042393	150.863232



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
UNANDERRA	Caltex Service Station	86-98 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.45414951	150.845165
UNANDERRA	Former Prime Service Station and adjoining lands	41-49 Princes HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-34.45056105	150.8490833
URALLA	Caltex Service Station	103 Bridge STREET	Service Station	Regulation under CLM Act not required	-30.64524911	151.4934484
URALLA	Phoenix Foundry	44 Duke STREET	Metal Industry	Regulation under CLM Act not required	-30.65093272	151.5004479
URANQUINTY	Former Caltex Depot Kapooka (Wagga Wagga)	6876 Olympic (Uranquinty Rd) HIGHWAY	Service Station	Regulation under CLM Act not required	-35.15319793	147.3085469
URUNGA	Former Antimony Process plant	Hillside DRIVE	Chemical Industry	Contamination currently regulated under CLM Act	-30.50422942	153.0132011
VALENTINE	BP Express Service Station	855 Macquarie DRIVE	Service Station	Regulation under CLM Act not required	-33.00801109	151.6425806
VALENTINE	Valentine Public School	Tallawalla ROAD	Unclassified	Regulation under CLM Act not required	-33.0091613	151.6423231
VILLAWOOD	Nepotian (Former Toll) Site	110A Christina ROAD	Other Industry	Under preliminary investigation order	-33.87919117	150.9812193
VILLAWOOD	Former Defence Site	29 Biloela STREET	Landfill	Regulation under CLM Act not required	-33.88782978	150.9886275
VILLAWOOD	Former Siemens/Westinghouse	49 Miowera ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-33.87641909	150.9836746
VILLAWOOD	Former Orica Crop Care	2 Christina ROAD	Chemical Industry	Contamination currently regulated under CLM Act	-33.880329	150.9896329
VILLAWOOD	PPG Industries	9 Birmingham AVENUE	Chemical Industry	Regulation under CLM Act not required	-33.87800757	150.9887929
VILLAWOOD	Former Electrical Component Manufacturer	66 Christina ROAD	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.88018315	150.9838773
VILLAWOOD	Ettason Villawood Site	2A Birmingham AVENUE	Chemical Industry	Under preliminary investigation order	-33.878734	150.98259
VINEYARD	Shell Coles Express Service Station	731 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.65780463	150.8753245
WAGGA WAGGA	Caltex Service Station	170 Fitzmaurice STREET	Service Station	Regulation under CLM Act not required	-35.10289587	147.3679002



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
WAGGA WAGGA	Former BP Service Station	31 Bourke STREET	Service Station	Regulation under CLM Act not required	-35.12626628	147.3547199
WAGGA WAGGA	Caltex (former Mobil) Service Station	106 Edward STREET	Service Station	Regulation under CLM Act not required	-35.11910909	147.3682364
WAGGA WAGGA	Former Caltex Depot	60 Lake Albert DRIVE	Service Station	Regulation under CLM Act not required	-35.12316794	147.37724
WAGGA WAGGA	Former Mobil Depot Wagga Wagga	97-99 Coleman STREET	Other Petroleum	Regulation under CLM Act not required	-35.12173871	147.3576651
WAGGA WAGGA	Ashmont Autoport	Cnr Tobruk Street and Bardia STREET	Service Station	Regulation under CLM Act not required	-35.12517373	147.329919
WAGGA WAGGA	Former Caltex Service Station	343 Hammond AVENUE	Service Station	Regulation under CLM Act not required	-35.12420793	147.4157959
WAGGA WAGGA	Caltex Service Station	56 - 60 Docker St STREET	Service Station	Regulation under CLM Act not required	-35.11737947	147.3558145
WAGGA WAGGA	Former Iron Foundry	212-230 Hammond STREET	Metal Industry	Regulation under CLM Act not required	-35.12605478	147.4045461
WAGGA WAGGA	Coles Express Wagga Wagga	353-355 Edward STREET	Service Station	Regulation under CLM Act not required	-35.11606625	147.3509339
WAGGA WAGGA	Former Wiradjuri landfill	Narrung STREET	Landfill	Under assessment	-35.09628532	147.3619535
WAGGA WAGGA	Former Gasworks	54 Chaston STREET	Gasworks	Contamination currently regulated under CLM Act	-35.12262069	147.3482778
WAGGA WAGGA	Former Gasworks	Cnr Tarcutta Street and Cross STREET	Gasworks	Contamination currently regulated under CLM Act	-35.10871183	147.3737933
WAGGA WAGGA	BP Wagga Wagga	180 Edward STREET	Service Station	Regulation under CLM Act not required	-35.11850802	147.3639619
WAGGA WAGGA	Former Dry Cleaning Facility	183 Fitzmaurice STREET	Other Industry	Contamination currently regulated under CLM Act	-35.10209987	147.3683852
WAHROONGA	Coles Express Wahroonga	1601 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.71945571	151.1163002
WAHROONGA	7-Eleven Service Station	1579 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.71974617	151.1168106
WAITARA	Caltex Service Station	59-61 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.71064349	151.1024644

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
WALGETT	Former Shell Depot	Castlereagh HIGHWAY	Other Petroleum	Regulation under CLM Act not required	-30.00861179	148.1239938
WALLERAWANG	Wallerawang Power Station	1 Main STREET	Other Petroleum	Regulation under CLM Act not required	-33.40339296	150.0855101
WALLERAWANG	Lidsdale Coal Loading Facility	Main STREET	Other Industry	Regulation under CLM Act not required	-33.39996523	150.0737717
WALLSEND	Caltex Maryland Service Station Wallsend	41 Minmi ROAD	Service Station	Regulation under CLM Act not required	-32.88967866	151.6619253
WALLSEND	Coles Express Wallsend East	15 Thomas STREET	Service Station	Regulation under CLM Act not required	-32.90719444	151.6693426
WALLSEND	OneSteel Recycling	64-80 Sandgate ROAD	Metal Industry	Regulation under CLM Act not required	-32.89425477	151.6799648
WALLSEND	Ausgrid Wallsend Depot	Abbott STREET	Other Industry	Regulation under CLM Act not required	-32.90162796	151.6857267
WALLSEND	Cnr of Douglas Street and 111 Newcastle Road Wallsend	111 Newcastle ROAD	Metal Industry	Regulation under CLM Act not required	-32.90414175	151.6830784
WAMBERAL	Caltex Service Station	654 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.42338668	151.4375685
WANGI WANGI	Myuna Colliery	Wangi Point ROAD	Other Industry	Regulation under CLM Act not required	-33.06139532	151.5697186
WARATAH	Waratah Area Health	Turton ROAD	Unclassified	Regulation under CLM Act not required	-32.90961233	151.7260867
WARATAH	Waratah former Gasworks	Turton and Georgetown ROADS	Gasworks	Regulation being finalised	-32.9057763	151.7270033
WARDELL	Nancy's Cattle Dip, Thurgates Lane, Wardell	Thurgates LANE	Cattle Dip	Under assessment	-28.954176	153.427349
WARILLA	Woolworths Petrol Warilla	43 -57 Shellharbour ROAD	Service Station	Regulation under CLM Act not required	-34.5470966	150.863748
WARKWORTH	Emulsion Plant, Dyno Nobel Asia Pacific Pty Ltd	186 Long Point ROAD	Chemical Industry	Regulation under CLM Act not required	-32.5781708	151.0834387
WARKWORTH	United Colliery	Jerrys Plains ROAD	Other Industry	Regulation under CLM Act not required	-32.5654356	150.9916698
WARNERS BAY	Caltex Service Station	55 King STREET	Service Station	Regulation under CLM Act not required	-32.97418806	151.6476184

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
WARNERS BAY	7-Eleven (former Mobil) Service Station	393 Hillsborough ROAD	Service Station	Regulation under CLM Act not required	-32.9659363	151.6543264
WARNERS BAY	Historically Filled Land	41-43 Charles STREET	Unclassified	Regulation under CLM Act not required	-32.97340461	151.6464383
WARNERVALE	Former Timber Treatment Plant	Aldenham and Railway ROADS	Other Industry	Contamination formerly regulated under the CLM Act	-33.24732018	151.4469037
WARRAGAMBA	Warragamba Dam Viewing Platform	Eighteenth STREET	Unclassified	Regulation under CLM Act not required	-33.88546354	150.6024501
WARRAGAMBA	Megarrity's Creek Site	Weir ROAD	Unclassified	Regulation under CLM Act not required	-33.885049	150.597628
WARRAWONG	Caltex Service Station	75-77 King STREET	Service Station	Regulation under CLM Act not required	-34.49037817	150.888802
WARREN	Former Shell Depot	8 Dubbo STREET	Other Petroleum	Regulation under CLM Act not required	-31.69379262	147.8308088
WARREN	Caltex Warren Service Station	1 Coonamble ROAD	Service Station	Regulation under CLM Act not required	-31.69508383	147.8405578
WARREN	Former Mobil Warren Depot	16 Dubbo STREET	Other Petroleum	Contamination currently regulated under CLM Act	-31.6943058	147.8314606
WARWICK FARM	Warwick Farm Public School	95 Lawrence Hargrave ROAD	Landfill	Regulation under CLM Act not required	-33.91050532	150.9302197
WATERLOO	Proposed Construction Site	2 John STREET	Other Industry	Regulation under CLM Act not required	-33.89989686	151.2010324
WATERLOO	Waverley Woollahra Process Plant	355 Botany ROAD	Other Industry	Regulation under CLM Act not required	-33.9063092	151.2042672
WATERLOO	Shell Coles Express Service Station	867-877 South Dowling STREET	Service Station	Regulation under CLM Act not required	-33.90179774	151.2143789
WATERLOO	Lawrence Dry Cleaners	887-893 Bourke STREET	Unclassified	Contamination currently regulated under CLM Act	-33.89897433	151.2101436
WATERLOO	Diversity Waterloo	1-13 Archibald AVENUE	Other Industry	Under assessment	-33.90204305	151.2097328
WATERLOO	Iconic (Former Chubb Factory) Waterloo	830-838 Elizabeth STREET	Other Industry	Regulation under CLM Act not required	-33.90227718	151.2060305
WATERLOO	22-24 Archibald Avenue	22-24 Archibald AVENUE	Other Petroleum	Regulation under CLM Act not required	-33.90263766	151.2132105

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
WAUCHOPE	Expressway Spares UST	3 Sancrox ROAD	Other Petroleum	Regulation under CLM Act not required	-31.44421922	152.8218723
WAUCHOPE	Former Shell Depot	56-64 High STREET	Other Petroleum	Regulation under CLM Act not required	-31.45804845	152.7314151
WAUCHOPE	Wauchope Service Station	57 High STREET	Service Station	Regulation under CLM Act not required	-31.45737022	152.7305018
WAUCHOPE	Former Timber Treatment Site	Blackbutt DRIVE	Other Industry	Regulation under CLM Act not required	-31.46575645	152.7228555
WAUCHOPE	Shell Coles Express Service Station	64 High STREET	Service Station	Regulation under CLM Act not required	-31.45764495	152.7315975
WAUCHOPE	Wauchope Public Primary School	2 Waugh STREET	Unclassified	Regulation under CLM Act not required	-31.4556387	152.7295455
WAVERTON	SRA Land	95 Bay ROAD	Unclassified	Contamination formerly regulated under the CLM Act	-33.83716728	151.1969497
WAVERTON	Berry's Bay Woodley's Marina	1 Balls Head DRIVE	Other Industry	Contamination formerly regulated under the POEO Act	-33.84441851	151.1947433
WAVERTON	Oyster Cove AGL	2 King STREET	Gasworks	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.83637995	151.193541
WEE JASPER	Wee Jasper Tavern	6499 Wee Jasper ROAD	Other Industry	Regulation under CLM Act not required	-35.110374	148.679405
WELLINGTON	Former Caltex Service Station	124-128 Lee STREET	Service Station	Regulation under CLM Act not required	-32.55082729	148.9411537
WELLINGTON	BP Wellington Service Station	35A Maxwell STREET	Service Station	Under assessment	-32.55835121	148.9447284
WELLINGTON	Woolworths Petrol Wellington	79 Lee STREET	Service Station	Regulation under CLM Act not required	-32.54874227	148.9408531
WENTWORTH	Caltex - Wentworth	110 Adams STREET	Service Station	Regulation under CLM Act not required	-34.1024927	141.9160539
WENTWORTH FALLS	Bodington Hospital	Bodington DRIVE	Unclassified	Contamination formerly regulated under the CLM Act	-33.73201608	150.3874102
WENTWORTH POINT	RMS Eastern Precinct	3-7 Burroway ROAD	Other Petroleum	Regulation under CLM Act not required	-33.8233882	151.0815668
WENTWORTH POINT	Former TNT Express	23 Bennelong PARKWAY	Other Petroleum	Regulation under CLM Act not required	-33.83115118	151.0726636

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
WENTWORTHVILLE	Former Workshop	2 Rawson Rd and 8 Barfil CRESCENT	Unclassified	Regulation under CLM Act not required	-33.81568808	150.9671853
WERRINGTON	Caltex Service Station	Cnr Dunheved Rd and Henry Lawson DRIVE	Service Station	Regulation under CLM Act not required	-33.74577725	150.7409877
WERRINGTON	Claremont Meadows Former landfill	Gipps STREET	Landfill	Regulation under CLM Act not required	-33.77341076	150.7557628
WERRINGTON COUNTY	7-Eleven Werrington	Lot 122 Dunheved ROAD	Service Station	Regulation under CLM Act not required	-33.74699408	150.7428609
WEST BALLINA	Caltex Big Prawn Service Station	Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-28.86374913	153.5321482
WEST GOSFORD	Caltex Service Station	283 Manns ROAD	Service Station	Regulation under CLM Act not required	-33.41659727	151.325219
WEST GOSFORD	Caltex Service Station	69-71 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.42729985	151.3214621
WEST GOSFORD	Caltex Service Station	30a Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.42778813	151.3190581
WEST GOSFORD	Adcock Memorial Park	Central Coast HIGHWAY	Landfill	Under assessment	-33.42963075	151.3273331
WEST NOWRA	Endeavour Energy Nowra Field Service Centre	20 Depot ROAD	Other Industry	Regulation under CLM Act not required	-34.88993085	150.5878854
WEST PENNANT HILLS	7-Eleven (former Mobil) Service Station	552 Pennant Hills ROAD	Service Station	Regulation under CLM Act not required	-33.74686545	151.0508067
WEST RYDE	7-Eleven (former Mobil) Service Station	917 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.80921103	151.0932917
WEST RYDE	Pfizer Australia Pty Ltd	38-42 Wharf ROAD	Chemical Industry	Regulation under CLM Act not required	-33.81021085	151.0693631
WEST RYDE	Reckitt Benckiser	44 Wharf ROAD	Chemical Industry	Regulation under CLM Act not required	-33.81172205	151.0692752
WEST RYDE	JHM Property Development	2A Mellor STREET	Other Industry	Regulation under CLM Act not required	-33.81207534	151.094598
WEST TAMWORTH	Woolworths Petrol	119 Bridge STREET	Service Station	Regulation under CLM Act not required	-31.09358262	150.9167693
WEST WYALONG	Lowes Petroleum (Former BP) Depot West Wyalong	Compton (formerly known as Town Bypass/Railway Road) ROAD	Other Petroleum	Regulation under CLM Act not required	-33.93440247	147.2154596

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
WEST WYALONG	Caltex Depot	(Wyalong By-pass Rd) Lot 1-3 Showground ROAD	Service Station	Regulation under CLM Act not required	-33.92556	147.1981659
WEST WYALONG	Former Mobil Depot	104 Compton ROAD	Other Petroleum	Regulation under CLM Act not required	-33.93449194	147.2147948
WESTON	Illegal Dumping Site	Corner Kline Street & First STREET	Unclassified	Regulation under CLM Act not required	-32.81367986	151.4551507
WETHERILL PARK	Former Fuel Storage Depot	200-212 Cowpasture ROAD	Other Petroleum	Regulation under CLM Act not required	-33.84568871	150.8764012
WETHERILL PARK	Sims Wetherill Park	35-37 Frank STREET	Metal Industry	Regulation under CLM Act not required	-33.84056122	150.9086265
WETHERILL PARK	Shell Coles Express Service Station	565 Polding STREET	Service Station	Regulation under CLM Act not required	-33.8569731	150.8992804
WETHERILL PARK	Cleanaway (Formerly Nationwide Oil) Wetherill Park	6 Davis ROAD	Other Industry	Regulation under CLM Act not required	-33.83770038	150.9045197
WETHERILL PARK	BOC Sydney Operations Centre	428-440 Victoria STREET	Chemical Industry	Under assessment	-33.84400237	150.8967556
WETHERILL PARK	Camide Former Landfill	Newton ROAD	Landfill	Regulation under CLM Act not required	-33.83898879	150.8963813
WICKHAM	Caltex Terminal and "Building 33" on offsite adjacent land	156 Hannell Street and 33 Annie STREET	Other Petroleum	Contamination currently regulated under CLM Act	-32.9153413	151.7560062
WICKHAM	Former Warehouse	10 Dangar STREET	Unclassified	Regulation under CLM Act not required	-32.92383206	151.759761
WICKHAM	Former Factory	57 Annie STREET	Other Industry	Regulation under CLM Act not required	-32.91524827	151.7539893
WICKHAM	Railcorp Wickham	50 Railway STREET	Other Industry	Regulation under CLM Act not required	-32.9210433	151.7544687
WICKHAM	Fuchs Lubricants (Australasia) Pty Ltd Wickham	2 Holland STREET	Other Industry	Under assessment	-32.9214709	151.7556928
WILBERFORCE	Former Drum Reconditioners	12-14 Box AVENUE	Other Industry	Contamination formerly regulated under the CLM Act	-33.5453884	150.8587934
WILBERFORCE	Former Solvent Recycling Site	13 Box AVENUE	Chemical Industry	Regulation under CLM Act not required	-33.54557427	150.8577006
WILEY PARK	Sydney Water Property	1B Hillcrest STREET	Other Industry	Regulation under CLM Act not required	-33.92391634	151.0676256



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
WILLIAMTOWN	Hunter Land Effluent Pond	38 Cabbage Tree ROAD	Other Industry	Regulation under CLM Act not required	-32.80750069	151.8310107
WILLOUGHBY	Shell Coles Express Service Station	616-626 Willoughby ROAD	Service Station	Regulation under CLM Act not required	-33.80593769	151.1988559
WILLOUGHBY	Caltex Service Station	157 Penhur STREET	Service Station	Regulation under CLM Act not required	-33.79793513	151.1981926
WILLOUGHBY	BP Express Tower	498 Willoughby STREET	Service Station	Contamination currently regulated under POEO Act	-33.81022918	151.199315
WILLOUGHBY EAST	Willoughby Bus Depot	Corner Ann Street and Stan STREET	Other Industry	Regulation under CLM Act not required	-33.7982569	151.2038993
WILTON	Condell Park Homestead	(Part Lot 17 DP 270536) Condell Park ROAD	Unclassified	Regulation under CLM Act not required	-34.21910141	150.6837962
WINDANG	Caltex Service Station	244-248 Windang ROAD	Service Station	Regulation under CLM Act not required	-34.5274434	150.8691161
WINDSOR	Former Caltex Service Station	46-52 Macquarie STREET	Service Station	Regulation under CLM Act not required	-33.60783315	150.8213428
WINDSOR	Former Caltex Windsor Depot and Service Station	48-50 Mileham STREET	Service Station	Regulation under CLM Act not required	-33.61538627	150.8157517
WINDSOR	Woolworths (former Caltex) Service Station	Cnr Macquarie Street & Baker STREET	Service Station	Regulation under CLM Act not required	-33.60569346	150.8232803
WINDSOR	Former Fire Station Windsor	19 Fitzgerald STREET	Other Industry	Under assessment	-33.606474	150.819908
WINGHAM	Former Caltex Service Station	1036-1038 Wingham ROAD	Service Station	Regulation under CLM Act not required	-31.86236594	152.3805752
WINGHAM	Bogas Service Station	Cnr Primrose Street and Isabella STREET	Service Station	Regulation under CLM Act not required	-31.86833656	152.3716346
WINMALEE	Prime Winmalee Service Station	281 Hawkesbury ROAD	Service Station	Regulation under CLM Act not required	-33.68223276	150.5997203
WIRLINGA	Former Liquid Waste Disposal Facility	704 Riverina ROAD	Unclassified	Regulation under CLM Act not required	-36.07103958	147.0193522
WOLLI CREEK	Former Ausgrid Substation 10061	13 Gertrude STREET	Other Industry	Regulation under CLM Act not required	-33.93364031	151.1543818
WOLLONGONG	Redevelopment site	33 - 39 Beatson STREET	Other Petroleum	Regulation under CLM Act not required	-34.43196083	150.8976661



Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
WOLLONGONG	Caltex Service Station	9 Flinders STREET	Service Station	Regulation under CLM Act not required	-34.41505616	150.8932515
WOLLONGONG	Greenhouse Park	Springhill ROAD	Landfill	Contamination currently regulated under CLM Act	-34.44119949	150.8931764
WOLLONGONG	Former Wollongong Gasworks	120 and 122 Smith STREET	Gasworks	Regulation under CLM Act not required	-34.42030173	150.8906745
WOLLONGONG	Woolworths Service Station	425 Crown STREET	Service Station	Contamination currently regulated under CLM Act	-34.42637378	150.8799288
WOLLONGONG	Wollongong Harbour Central Spur	Off Endeavour DRIVE	Other Petroleum	Regulation under CLM Act not required	-34.42066879	150.906821
WOODBURN	Caltex Service Station	129 River STREET	Service Station	Regulation under CLM Act not required	-29.07206887	153.3409769
WOODBURN	Crown Reserve 88037 Woodburn	Pacific HIGHWAY	Landfill	Regulation under CLM Act not required	-29.06580577	153.3541886
WOOLGOOLGA	Caltex Woolgoolga Service Station	16 Bosworth ROAD	Service Station	Regulation under CLM Act not required	-30.12569561	153.1946006
WOOLGOOLGA	United Petroleum Service Station	56 Clarence STREET	Service Station	Regulation under CLM Act not required	-30.11045544	153.1904609
WOOLLAHRA	Former Service Station	20 Wallis STREET	Service Station	Regulation under CLM Act not required	-33.8901965	151.2372752
WOOLLAHRA	Proposed Jewish Care Centre	7 -21 Saber STREET	Unclassified	Regulation under CLM Act not required	-33.8904055	151.2480062
WOOLLAHRA	Caltex Woollahra Service Station	116 Old South Head ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.88959697	151.2553736
WOOLLOOMOOLOO	Former BP Service Station	2 Dowley STREET	Service Station	Contamination being managed via the planning process (EP&A Act)	-33.86940191	151.2218741
WOLOMIN	Woolomin Gold Rush Store	65 Nundle ROAD	Other Petroleum	Contamination currently regulated under CLM Act	-31.30415134	151.149729
WOOLOOWARE	Caltex Service Station	100 Woollooware ROAD	Service Station	Regulation under CLM Act not required	-34.05274635	151.1408413
WOOLOOWARE	Oyster Farm	Captain Cook DRIVE	Other Industry	Under assessment	-34.03807914	151.1476055
WOONGARRAH	Former Warnervale Landfill	236-264 Hakone ROAD	Landfill	Regulation under CLM Act not required	-33.2376313	151.464362

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
WOOTTON	Former Chemical Spill Site	11859 Pacific HIGHWAY	Chemical Industry	Regulation under CLM Act not required	-32.28168548	152.3117819
WOY WOY	Mobil Former Woy Woy Service Station and adjacent land	177-181 Blackwall ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.49254403	151.3270829
WOY WOY	Barry Robertson Holden	231 Blackwall ROAD	Service Station	Regulation under CLM Act not required	-33.49621068	151.3285128
WOY WOY	Bogas Service Station	66 Memorial AVENUE	Service Station	Contamination currently regulated under CLM Act	-33.5069738	151.3315579
WOY WOY	Rogers Park	Dunban ROAD	Landfill	Regulation under CLM Act not required	-33.50009693	151.3181347
WOY WOY	Austin Butler Memorial Oval	Blackwall ROAD	Landfill	Regulation under CLM Act not required	-33.48626871	151.3276042
WOY WOY	James Browne Oval	Welcome STREET	Landfill	Regulation under CLM Act not required	-33.49756053	151.3234871
WYALONG	Caltex Service Station	50 Neeld (Newell Highway) STREET	Service Station	Regulation under CLM Act not required	-33.92665025	147.2446546
WYOMING	Caltex Service Station Wyoming	465 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.40945391	151.3499812
WYONG	Wyong Bayer/Kemcon	16 Lucca ROAD	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.26192339	151.4429446
WYONG	Caltex Service Station	M1 Pacific (Northbound) MOTORWAY	Service Station	Regulation under CLM Act not required	-33.25641477	151.4024821
WYONG	Caltex Service Station	M1 Pacific (Southbound) MOTORWAY	Service Station	Regulation under CLM Act not required	-33.25330747	151.4053862
WYONG	IXOM Facility	8 Pavitt CRESCENT	Other Industry	Regulation under CLM Act not required	-33.26379108	151.4485113
YAGOONA	Galserv Galvanising Services	117-153 Rookwood ROAD	Metal Industry	Contamination currently regulated under POEO Act	-33.89493085	151.0388013
YAGOONA	BP Service Station Potts Hill (Yagoona)	155 Rookwood ROAD	Service Station	Regulation under CLM Act not required	-33.89330525	151.0390969
YAGOONA	7-Eleven (former Mobil) Service Station	519 Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-33.90760623	151.0207783
YAGOONA	Shell Coles Express Service Station	112 Rookwood ROAD	Service Station	Regulation under CLM Act not required	-33.89856213	151.0370458

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
YAGOONA	Sydney Water Corporation Potts Hill Complex	91 Bruncker ROAD	Other Industry	Regulation under CLM Act not required	-33.89887589	151.0289165
YALLAH	Tallawarra Power Station site	Princes HIGHWAY	Unclassified	Ongoing maintenance required to manage residual contamination (CLM Act)	-34.52412143	150.8062159
YAMBA	Caltex Service Station	22 Treelands DRIVE	Service Station	Regulation under CLM Act not required	-29.42701701	153.3279204
YANCO	Former Service Station	14 Main AVENUE	Service Station	Contamination formerly regulated under the CLM Act	-34.60356494	146.4105016
YASS	Caltex Service Station	228 Comur STREET	Service Station	Regulation under CLM Act not required	-34.84440036	148.9140179
YASS	Caltex Service Station	1715 Yass Valley WAY	Service Station	Regulation under CLM Act not required	-34.80708856	148.8824228
YASS	Former Mobil Depot Yass and adjacent land	54-58 Laidlaw STREET	Service Station	Contamination currently regulated under CLM Act	-34.83252976	148.9068888
YASS	Former Gasworks	Dutton STREET	Gasworks	Contamination currently regulated under CLM Act	-34.83982614	148.9060029
YASS	Transgrid Depot Yass	Perry STREET	Unclassified	Under assessment	-34.86238341	148.9052809
YENNORA	Former Alcoa Australia Rolled Products Facility - Area 3	1 Kiora CRESCENT	Metal Industry	Regulation under CLM Act not required	-33.86568158	150.9649297
YENNORA	Spicer Axle Australia Manufacturing Facility	205-231 Fairfield ROAD	Other Industry	Regulation under CLM Act not required	-33.85655114	150.9579167
YENNORA	Former Caltex Service Station	137-141 Fairfield STREET	Service Station	Regulation under CLM Act not required	-33.86824768	150.9706137
YENNORA	Former Metal Plant	44 Larra STREET	Metal Industry	Contamination formerly regulated under the CLM Act	-33.86340576	150.9764349
YENNORA	TetraPak Site	6 Foray STREET	Other Industry	Contamination formerly regulated under the CLM Act	-33.8557183	150.9561605
YENNORA	19 Pine Road, Yennora	Pine ROAD	Metal Industry	Contamination currently regulated under CLM Act	-33.86713232	150.9621172
YETHOLME	Yetholme CCA Timber Treatment Plant	351 Eusdale ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-33.45386256	149.8537787
YOUNG	Former Mobil Depot and Service Station Young	149 Lovell STREET	Service Station	Regulation under CLM Act not required	-34.31024587	148.290424

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
YOUNG	Former Shell Depot	166 Nasmyth STREET	Other Petroleum	Regulation under CLM Act not required	-34.31025192	148.2931008
YOUNG	Former battery recycler	45 Nasmyth STREET	Metal Industry	Contamination currently regulated under CLM Act	-34.31201571	148.306772
YOUNG	Adjacent to former battery recycler	47 Nasmyth STREET	Metal Industry	Contamination formerly regulated under the CLM Act	-34.31176273	148.3064765
YOUNG	Mobil Depot	186 Nasmyth STREET	Other Petroleum	Contamination currently regulated under CLM Act	-34.30954389	148.2908476
YOUNG	Former Caltex Depot	95 Lovell STREET	Service Station	Regulation under CLM Act not required	-34.31127119	148.2955092
ZETLAND	Energy Australia/ Ausgrid Zetland Depot	122 - 138 Joynton AVENUE	Other Industry	Regulation under CLM Act not required	-33.90883116	151.2101184
ZETLAND	Former Goodrich Control Systems, Zetland	84 - 92 Epsom ROAD	Other Industry	Regulation under CLM Act not required	-33.91025707	151.2078048

## **APPENDIX D**

---

**TABLE 1A - TEST PIT LOGS FOR NORTH EASTERN CORNER OF THE SITE  
&  
TABLE 1B - TEST PIT LOGS FOR REMAINDER OF THE SITE**

<b>Project</b>	<b>Newpark Proposed School Site</b>	<b>Job No</b>	<b>14513/2</b>
<b>Location</b>	<b>North eastern portion of Lot 30 in DP1237735</b>	<b>Refer to Drawing No</b>	<b>14513/2-AA1</b>
	<b>Corner Elara Boulevard and Kaluta Avenue, Marsden Park</b>	<b>Logged &amp; Sampled by</b>	<b>IC</b>

**TABLE 1A**

Page 1 of 2

Test Pit	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
TP1	0-0.3	0-0.15	7/08/19	FILL: Silty Clay, low plasticity, brown, with sandstone gravel, traces of root fibres and sand	
	0.3-0.6	0.3-0.6	7/08/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, red and yellow, traces of gravel and sand	
	0.6-1.1	0.65-0.75	7/08/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange	
TP2	0-0.3	0-0.15	7/08/19	FILL: Silty Clay, low plasticity, brown, with sandstone gravel, traces of root fibres and sand	
	0.3-0.6	0.3-0.6	7/08/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, red and yellow, traces of gravel and sand	
	0.6-1.1	0.65-0.75	7/08/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled red	
TP3	0-0.45	0-0.15	7/08/19	FILL: Silty Clay, low plasticity, brown, with sandstone gravel, traces of root fibres and sand	
	0.45-0.95	0.5-0.6	7/08/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled red	
TP4	0-0.3	0-0.15	7/08/19	FILL: Silty Clay, low plasticity, brown, with sandstone gravel, traces of root fibres and sand	
	0.3-0.7	0.3-0.6	7/08/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, red and yellow, traces of gravel and sand	
	0.7-1.2	0.75-0.85	7/08/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange	
TP5	0-0.3	0-0.15	7/08/19	FILL: Silty Clay, low plasticity, brown, with sandstone gravel, traces of root fibres and sand	
	0.3-0.7	0.3-0.6	7/08/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, red and yellow, traces of gravel and sand	
	0.7-1.2	0.75-0.85	7/08/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange	

NS = No Sample

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.

<b>Project</b>	<b>Newpark Proposed School Site</b>	<b>Job No</b>	<b>14513/2</b>
<b>Location</b>	<b>North eastern portion of Lot 30 in DP1237735</b>	<b>Refer to Drawing No</b>	<b>14513/2-AA1</b>
	<b>Corner Elara Boulevard and Kaluta Avenue, Marsden Park</b>	<b>Logged &amp; Sampled by</b>	<b>IC</b>

**TABLE 1A**

Page 2 of 2

<b>Test Pit</b>	<b>Depth (m)</b>	<b>Sample Depth (m)</b>	<b>Date</b>	<b>Material Description</b>	<b>Remarks*</b>
TP6	0-0.3	0-0.15	7/08/19	FILL: Silty Clay, low plasticity, brown, with sandstone gravel, traces of root fibres and sand	
	0.3-0.5	0.3-0.5	7/08/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, red and yellow, traces of gravel and sand	
	0.5-1.0	0.55-0.65	7/08/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled red	
TP7	0-0.3	0-0.15	7/08/19	FILL: Silty Clay, low plasticity, brown, with sandstone gravel, traces of root fibres and sand	
	0.3-0.5	0.3-0.5	7/08/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, red and yellow, traces of gravel and sand	
	0.5-1.0	0.55-0.65	7/08/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled red	
TP8	0-0.2	0-0.15	7/08/19	FILL: Silty Clay, low plasticity, brown, with sandstone gravel, traces of root fibres and sand	
	0.2-0.5	0.2-0.5	7/08/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, red and yellow, traces of gravel and sand	
	0.5-1.0	0.55-0.65	7/08/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled red	

**NS = No Sample**

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.



<b>Project</b>	<b>NewPark Proposed School Site</b>	<b>Job No</b>	<b>14513/2</b>
<b>Location</b>	<b>Remainder of Lot 30 in DP1237735</b>	<b>Refer to Drawing No</b>	<b>14513/2-AA1</b>
	<b>Corner Elara Boulevard and Kaluta Avenue, Marsden Park</b>	<b>Logged &amp; Sampled by</b>	<b>IC &amp; JH</b>

**TABLE 1B**

Page 1 of 15

Test Pit	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
TP1	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-2.4	0.2-0.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		1.2-1.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		2.2-2.4	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
	2.4-2.9	2.45-2.55	23/09/19	(CH) Silty CLAY, high plasticity, red mottled grey	
TP2	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-2.9	0.2-0.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		1.2-1.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		2.2-2.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red, traces of gravel	Termination due to extent of excavator reach
TP3	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-2.8	0.2-0.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		1.2-1.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		2.2-2.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
	2.8-3.0	2.85-2.95	23/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange	

NS = No Sample

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.

<b>Project</b>	<b>NewPark Proposed School Site</b>	<b>Job No</b>	<b>14513/2</b>
<b>Location</b>	<b>Remainder of Lot 30 in DP1237735</b>	<b>Refer to Drawing No</b>	<b>14513/2-AA1</b>
	<b>Corner Elara Boulevard and Kaluta Avenue, Marsden Park</b>	<b>Logged &amp; Sampled by</b>	<b>IC &amp; JH</b>

**TABLE 1B**

Page 2 of 15

Test Pit	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
TP4	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-2.9	0.2-0.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		1.2-1.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		2.2-2.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
TP5	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	Termination due to extent of excavator reach
	0.2-2.6	0.2-0.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		1.2-1.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		2.2-2.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
TP6	2.6-2.9	2.65-2.75	23/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange	
	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-1.5	0.2-0.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		1.2-1.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
TP7	1.5-2.0	1.55-1.65	23/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange	
	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-2.0	0.2-0.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	

NS = No Sample

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.

<b>Project</b>	<b>NewPark Proposed School Site</b>	<b>Job No</b>	<b>14513/2</b>
<b>Location</b>	<b>Remainder of Lot 30 in DP1237735</b>	<b>Refer to Drawing No</b>	<b>14513/2-AA1</b>
	<b>Corner Elara Boulevard and Kaluta Avenue, Marsden Park</b>	<b>Logged &amp; Sampled by</b>	<b>IC &amp; JH</b>

**TABLE 1B**

Page 3 of 15

Test Pit	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
TP7		1.2-1.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
	2.0-2.5	2.05-2.15	23/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange	
TP8	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-2.6	0.2-0.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		1.2-1.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		2.2-2.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
	2.6-2.9	2.65-2.75	23/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange	
TP9	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-2.2	0.2-0.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		1.2-1.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
	2.2-2.6	2.25-2.35	23/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange	
TP10	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-2.2	0.2-0.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		1.2-1.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
	2.2-2.6	2.25-2.35	23/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange	

NS = No Sample

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.

<b>Project</b>	<b>NewPark Proposed School Site</b>	<b>Job No</b>	<b>14513/2</b>
<b>Location</b>	<b>Remainder of Lot 30 in DP1237735</b>	<b>Refer to Drawing No</b>	<b>14513/2-AA1</b>
	<b>Corner Elara Boulevard and Kaluta Avenue, Marsden Park</b>	<b>Logged &amp; Sampled by</b>	<b>IC &amp; JH</b>

**TABLE 1B**

Page 4 of 15

Test Pit	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
TP11	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-1.7	0.2-0.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		1.2-1.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
	1.7-1.8	1.7-1.8	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red, traces of gravel	
	1.8-2.3	1.85-1.95	23/09/19	(CI-CH) Silty CLAY, medium to high plasticity, brown-orange	
TP12	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	Possible fill
	0.2-1.7	0.2-0.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		1.2-1.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
	1.8-1.9	1.8-1.9	23/09/19	(GM) Gravelly Sandy SILT, low plasticity, brown, with pebbles and cobbles	
	1.9-2.4	1.95-2.05	23/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange	
TP13	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	Possible fill
	0.2-1.9	0.2-0.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		1.2-1.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
	1.9-2.0	1.9-2.0	23/09/19	(GM) Gravelly Sandy SILT, low plasticity, brown, with pebbles and cobbles	
	2.0-2.5	2.05-2.15	23/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange, traces of gravel	

NS = No Sample

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.

<b>Project</b>	<b>NewPark Proposed School Site</b>	<b>Job No</b>	<b>14513/2</b>
<b>Location</b>	<b>Remainder of Lot 30 in DP1237735</b>	<b>Refer to Drawing No</b>	<b>14513/2-AA1</b>
	<b>Corner Elara Boulevard and Kaluta Avenue, Marsden Park</b>	<b>Logged &amp; Sampled by</b>	<b>IC &amp; JH</b>

**TABLE 1B**

Page 5 of 15

Test Pit	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
TP14	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	Possible fill
	0.2-1.8	0.2-0.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		1.2-1.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
	1.8-2.0	1.8-2.0	23/09/19	(GM) Gravelly Sandy SILT, low plasticity, brown, with pebbles and cobbles	
	2.0-2.5	2.05-2.15	23/09/19	(CI-CH) Silty CLAY, medium to high plasticity, brown-orange	
TP15	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-2.0	0.2-0.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		1.2-1.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
	2.0-2.5	2.05-2.15	23/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange	
TP16	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-2.0	0.2-0.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		1.2-1.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
	2.0-2.5	2.05-2.15	23/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange	
TP17	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-1.5	0.2-0.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	

NS = No Sample

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.

<b>Project</b>	<b>NewPark Proposed School Site</b>	<b>Job No</b>	<b>14513/2</b>
<b>Location</b>	<b>Remainder of Lot 30 in DP1237735</b>	<b>Refer to Drawing No</b>	<b>14513/2-AA1</b>
	<b>Corner Elara Boulevard and Kaluta Avenue, Marsden Park</b>	<b>Logged &amp; Sampled by</b>	<b>IC &amp; JH</b>

**TABLE 1B**

Page 6 of 15

Test Pit	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
TP17		1-1.3	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
	1.5-2.0	1.55-1.65	23/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange	
TP18	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-1.0	0.2-0.5	23/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
TP19	1.0-1.5	1.05-1.15	23/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange	
	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
TP20	0.2-0.5	0.25-0.35	23/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange, traces of ironstone gravel	
	0-0.2	0-0.15	23/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
TP21	0.2-0.5	0.25-0.35	23/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange, traces of ironstone gravel	
	0-0.5	0-0.15	24/9/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
TP22	0.5-1.0	0.55-0.65	24/9/19	(CI-CH) Silty CLAY, medium to high plasticity, brown-orange	
	0-0.5	0-0.15	24/9/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
TP23	0.5-1.0	0.55-0.65	24/9/19	(CI-CH) Silty CLAY, medium to high plasticity, brown-orange	
	0-0.5	0-0.15	24/9/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	

NS = No Sample

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.

<b>Project</b>	<b>NewPark Proposed School Site</b>	<b>Job No</b>	<b>14513/2</b>
<b>Location</b>	<b>Remainder of Lot 30 in DP1237735</b>	<b>Refer to Drawing No</b>	<b>14513/2-AA1</b>
	<b>Corner Elara Boulevard and Kaluta Avenue, Marsden Park</b>	<b>Logged &amp; Sampled by</b>	<b>IC &amp; JH</b>

**TABLE 1B**

Page 7 of 15

Test Pit	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
TP24	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	NS	24/9/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange	
TP25	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.8	0.2-0.5	24/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
	0.8-1.3	0.85-0.95	24/09/19	(GM) Gravelly Sandy SILT, low plasticity, brown, with pebbles and cobbles	
TP26	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-2.0	0.2-0.5	24/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		1.2-1.5	24/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
	1.8-2.3	1.85-1.95	24/09/19	(GM) Gravelly Sandy SILT, low plasticity, brown, with pebbles and cobbles	
TP27	0-1.0	0-0.15	24/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
		0.5-0.8	24/09/19	FILL: Silty Clay, medium to high plasticity, brown mottled grey, yellow & red	
	1-1.5	1.05-1.15	24/09/19	(CH) Silty CLAY, high plasticity, red mottled grey	
TP28	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange, traces of ironstone	

NS = No Sample

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.



<b>Project</b>	<b>NewPark Proposed School Site</b>	<b>Job No</b>	<b>14513/2</b>
<b>Location</b>	<b>Remainder of Lot 30 in DP1237735</b>	<b>Refer to Drawing No</b>	<b>14513/2-AA1</b>
	<b>Corner Elara Boulevard and Kaluta Avenue, Marsden Park</b>	<b>Logged &amp; Sampled by</b>	<b>IC &amp; JH</b>

**TABLE 1B**

Page 8 of 15

Test Pit	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
TP29	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CH) Silty CLAY, high plasticity, red mottled grey	
TP30	0-0.15	0-0.1	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.15-0.5	0.25-0.35	24/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange, traces of ironstone gravel	
TP31	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CI-CH) Silty CLAY, medium to high plasticity, brown-orange, traces of ironstone gravel	
TP32	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange, traces of ironstone gravel	
TP33	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange, traces of ironstone gravel and sand	
TP34	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange	
TP35	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange	

NS = No Sample

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.

<b>Project</b>	<b>NewPark Proposed School Site</b>	<b>Job No</b>	<b>14513/2</b>
<b>Location</b>	<b>Remainder of Lot 30 in DP1237735</b>	<b>Refer to Drawing No</b>	<b>14513/2-AA1</b>
	<b>Corner Elara Boulevard and Kaluta Avenue, Marsden Park</b>	<b>Logged &amp; Sampled by</b>	<b>IC &amp; JH</b>

**TABLE 1B**

Page 9 of 15

Test Pit	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
TP36	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange, traces of cobbles	
TP37	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled red, traces of cobbles	
TP38	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange, traces of cobbles	
TP39	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange, traces of ironstone and sand	
TP40	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CI-CH) Silty CLAY, medium to high plasticity, brown-orange	
TP41	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange, traces of sand and cobbles	

NS = No Sample

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.

<b>Project</b>	<b>NewPark Proposed School Site</b>	<b>Job No</b>	<b>14513/2</b>
<b>Location</b>	<b>Remainder of Lot 30 in DP1237735</b>	<b>Refer to Drawing No</b>	<b>14513/2-AA1</b>
	<b>Corner Elara Boulevard and Kaluta Avenue, Marsden Park</b>	<b>Logged &amp; Sampled by</b>	<b>IC &amp; JH</b>

**TABLE 1B**

Page 10 of 15

Test Pit	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
TP42	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange, traces of ironstone gravel	
TP43	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange, with ironstone gravel	
TP44	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange, with sand	
TP45	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled red	
TP46	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange, traces of sand	
TP47	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.4	0.2-0.4	24/09/19	FILL: Silty Clay, medium to high plasticity, grey-brown mottled green	Possible natural
	0.4-0.9	0.45-0.55	24/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange	

NS = No Sample

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.

<b>Project</b>	<b>NewPark Proposed School Site</b>	<b>Job No</b>	<b>14513/2</b>
<b>Location</b>	<b>Remainder of Lot 30 in DP1237735</b>	<b>Refer to Drawing No</b>	<b>14513/2-AA1</b>
	<b>Corner Elara Boulevard and Kaluta Avenue, Marsden Park</b>	<b>Logged &amp; Sampled by</b>	<b>IC &amp; JH</b>

**TABLE 1B**

Page 11 of 15

Test Pit	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
TP48	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CI-CH) Silty CLAY, medium to high plasticity, brown-orange	
TP49	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CI-CH) Silty CLAY, medium to high plasticity, brown-orange, traces of sand and cobbles	
TP50	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange, traces of and cobbles	
TP51	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled red	
TP52	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CL-CI) Silty CLAY, low to medium plasticity, brown-orange, traces of sand and gravel	
TP53	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled red, with ironstone gravel and cobbles	

NS = No Sample

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.

<b>Project</b>	<b>NewPark Proposed School Site</b>	<b>Job No</b>	<b>14513/2</b>
<b>Location</b>	<b>Remainder of Lot 30 in DP1237735</b>	<b>Refer to Drawing No</b>	<b>14513/2-AA1</b>
	<b>Corner Elara Boulevard and Kaluta Avenue, Marsden Park</b>	<b>Logged &amp; Sampled by</b>	<b>IC &amp; JH</b>

**TABLE 1B**

Page 12 of 15

Test Pit	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
TP54	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled red, with ironstone gravel and cobbles, traces of sand	
TP55	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange, with ironstone gravel and cobbles, traces of sand	
TP56	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled red, with sand	
TP57	0-0.2	0-0.15	24/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	24/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled red	
TP58	0-0.2	0-0.15	25/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	25/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange	
TP59	0-0.3	0-0.15	25/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.3-0.5	0.35-0.45	25/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange, traces of ironstone gravel and cobbles	

NS = No Sample

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.

<b>Project</b>	<b>NewPark Proposed School Site</b>	<b>Job No</b>	<b>14513/2</b>
<b>Location</b>	<b>Remainder of Lot 30 in DP1237735</b>	<b>Refer to Drawing No</b>	<b>14513/2-AA1</b>
	<b>Corner Elara Boulevard and Kaluta Avenue, Marsden Park</b>	<b>Logged &amp; Sampled by</b>	<b>IC &amp; JH</b>

**TABLE 1B**

Page 13 of 15

Test Pit	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
TP60	0-0.2	0-0.15	25/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	25/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled red, traces of ironstone gravel	
TP61	0-0.2	0-0.15	25/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	25/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange, with ironstone gravel and cobbles	
TP62	0-0.3	0-0.15	25/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.3-0.5	0.35-0.45	25/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled red, traces of ironstone gravel and cobbles	
TP63	0-0.2	0-0.15	25/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.4	0.2-0.4	25/09/19	FILL: Silty Clay, medium to high plasticity, grey-brown mottled green	Possible natural
	0.4-0.9	0.45-0.55	25/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange, traces of ironstone gravel	
TP64	0-0.2	0-0.15	25/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	Possible natural
	0.2-0.4	0.2-0.4	25/09/19	FILL: Silty Clay, medium to high plasticity, grey-brown mottled red	
	0.4-0.9	0.45-0.55	25/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange, traces of ironstone gravel	
TP65	0-0.2	0-0.15	25/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	25/09/19	(CH) Silty CLAY, high plasticity, red mottled grey	

NS = No Sample

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.

<b>Project</b>	<b>NewPark Proposed School Site</b>	<b>Job No</b>	<b>14513/2</b>
<b>Location</b>	<b>Remainder of Lot 30 in DP1237735</b>	<b>Refer to Drawing No</b>	<b>14513/2-AA1</b>
	<b>Corner Elara Boulevard and Kaluta Avenue, Marsden Park</b>	<b>Logged &amp; Sampled by</b>	<b>IC &amp; JH</b>

**TABLE 1B**

Page 14 of 15

Test Pit	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
TP66	0-0.2	0-0.15	25/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	25/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled red	
TP67	0-0.2	0-0.15	25/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	25/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange	
TP68	0-0.2	0-0.15	25/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	25/09/19	(CH) Silty CLAY, high plasticity, red mottled grey, traces of cobbles	
TP69	0-0.2	0-0.15	25/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	25/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange, with cobbles	
TP70	0-0.2	0-0.15	25/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	25/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange	
TP71	0-0.2	0-0.15	25/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	
	0.2-0.5	0.25-0.35	25/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange	

NS = No Sample

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.



<b>Project</b>	<b>NewPark Proposed School Site</b>	<b>Job No</b>	<b>14513/2</b>
<b>Location</b>	<b>Remainder of Lot 30 in DP1237735</b>	<b>Refer to Drawing No</b>	<b>14513/2-AA1</b>
	<b>Corner Elara Boulevard and Kaluta Avenue, Marsden Park</b>	<b>Logged &amp; Sampled by</b>	<b>IC &amp; JH</b>

**TABLE 1B**

Page 15 of 15

Test Pit	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
TP72	0-0.2	0-0.15	25/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	Possible natural
	0.2-0.6	0.2-0.5	25/09/19	FILL: Silty Clay, medium to high plasticity, grey-brown mottled yellow	
	0.6-1.1	0.65-0.75	25/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange	
TP73	0-0.2	0-0.15	25/09/19	TOPSOIL: Silty Clay, low to medium plasticity, brown, traces of root fibres and gravel	Possible natural
	0.2-0.7	0.2-0.5	25/09/19	FILL: Silty Clay, medium to high plasticity, grey-brown mottled red	
	0.7-1.2	0.75-0.85	25/09/19	(CI-CH) Silty CLAY, medium to high plasticity, grey mottled yellow and orange	

**NS = No Sample**

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.

## **APPENDIX E**

---

### **GROUNDWATER MAP**



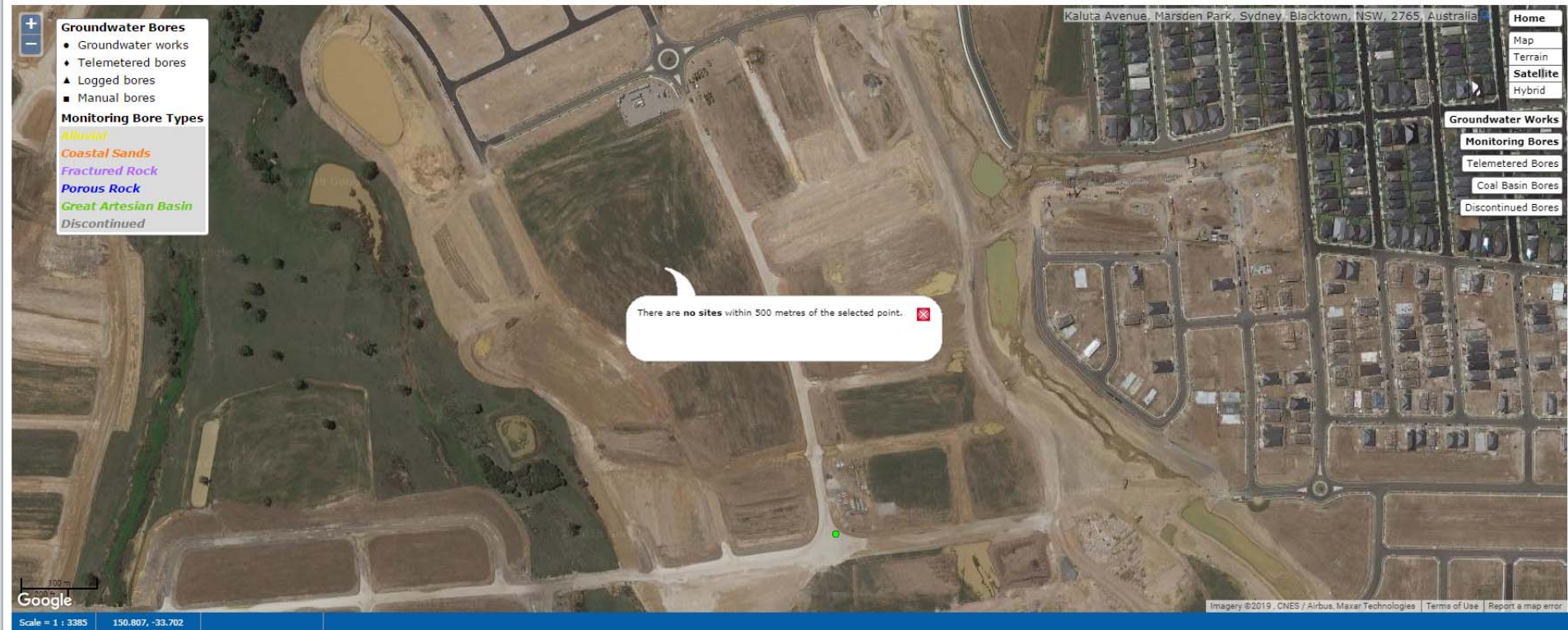
All Groundwater Site Details » All Groundwater Map

## Greater Sydney Region

[bookmark this page](#)

All data times are Eastern Standard Time

Map



[contact WaterNSW](#)



## **APPENDIX F**

---

### **LABORATORY TEST RESULTS REPORTS/CERTIFICATES**

## CLIENT DETAILS

Contact **Saurabh Sapkota**  
 Client **Geotechnique**  
 Address **P.O. Box 880  
 NSW 2751**

Telephone **02 4722 2700**  
 Facsimile **02 4722 6161**  
 Email **Saurabh@geotech.com.au**

Project **14513-1 Marsden Park**  
 Order Number **(Not specified)**  
 Samples **22**

## 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 **SE196259 R0**  
 Date Received **8/8/2019**  
 Date Reported **15/8/2019**

## 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.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

## SIGNATORIES



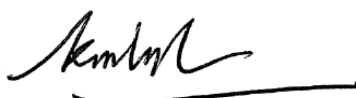
**Akheequear Beniamene**  
 Chemist



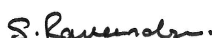
**Bennet Lo**  
 Senior Organic Chemist/Metals Chemist



**Dong Liang**  
 Metals/Inorganics Team Leader



**Ly Kim Ha**  
 Organic Section Head



**Ravee Sivasubramaniam**  
 Hygiene Team Leader

VOC's in Soil [AN433] Tested: 9/8/2019

PARAMETER	UOM	LOR	TP1	TP1	TP2	TP3	TP3
			CLAY 0.0-0.15 7/8/2019 SE196259.001	CLAY 0.3-0.6 7/8/2019 SE196259.002	CLAY 0.0-0.15 7/8/2019 SE196259.004	CLAY 0.0-0.15 7/8/2019 SE196259.006	CLAY 0.5-0.6 7/8/2019 SE196259.007
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	TP4	TP5	TP5	TP6	TP7
			CLAY 0.0-0.15 7/8/2019 SE196259.008	CLAY 0.0-0.15 7/8/2019 SE196259.010	CLAY 0.3-0.6 7/8/2019 SE196259.011	CLAY 0.0-0.15 7/8/2019 SE196259.012	CLAY 0.0-0.15 7/8/2019 SE196259.015
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	TP7	TP8	DDS1	TS1
			CLAY 0.3-0.5 7/8/2019 SE196259.016	CLAY 0.0-0.15 7/8/2019 SE196259.017	CLAY - 7/8/2019 SE196259.020	SAND - 7/8/2019 SE196259.022
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	[105%]
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	[97%]
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	[90%]
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	[90%]
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	[89%]
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	-
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	-
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	-

## Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 9/8/2019

PARAMETER	UOM	LOR	TP1	TP1	TP2	TP3	TP3
			CLAY 0.0-0.15 7/8/2019 SE196259.001	CLAY 0.3-0.6 7/8/2019 SE196259.002	CLAY 0.0-0.15 7/8/2019 SE196259.004	CLAY 0.0-0.15 7/8/2019 SE196259.006	CLAY 0.5-0.6 7/8/2019 SE196259.007
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	TP4	TP5	TP5	TP6	TP7
			CLAY 0.0-0.15 7/8/2019 SE196259.008	CLAY 0.0-0.15 7/8/2019 SE196259.010	CLAY 0.3-0.6 7/8/2019 SE196259.011	CLAY 0.0-0.15 7/8/2019 SE196259.012	CLAY 0.0-0.15 7/8/2019 SE196259.015
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	TP7	TP8	DDS1
			CLAY 0.3-0.5 7/8/2019 SE196259.016	CLAY 0.0-0.15 7/8/2019 SE196259.017	CLAY - 7/8/2019 SE196259.020
TRH C6-C9	mg/kg	20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25



## TRH (Total Recoverable Hydrocarbons) in Soil [AN403]    Tested: 9/8/2019

PARAMETER	UOM	LOR	TP1	TP1	TP2	TP3	TP3
			CLAY 0.0-0.15 7/8/2019 SE196259.001	CLAY 0.3-0.6 7/8/2019 SE196259.002	CLAY 0.0-0.15 7/8/2019 SE196259.004	CLAY 0.0-0.15 7/8/2019 SE196259.006	CLAY 0.5-0.6 7/8/2019 SE196259.007
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	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	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 (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	TP4	TP5	TP5	TP6	TP7
			CLAY 0.0-0.15 7/8/2019 SE196259.008	CLAY 0.0-0.15 7/8/2019 SE196259.010	CLAY 0.3-0.6 7/8/2019 SE196259.011	CLAY 0.0-0.15 7/8/2019 SE196259.012	CLAY 0.0-0.15 7/8/2019 SE196259.015
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	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	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 (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	TP7	TP8	DDS1
			CLAY 0.3-0.5 7/8/2019 SE196259.016	CLAY 0.0-0.15 7/8/2019 SE196259.017	CLAY - 7/8/2019 SE196259.020
TRH C10-C14	mg/kg	20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110
TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420]    Tested: 9/8/2019

PARAMETER	UOM	LOR	TP1	TP1	TP2	TP3	TP3
			CLAY 0.0-0.15 7/8/2019 SE196259.001	CLAY 0.3-0.6 7/8/2019 SE196259.002	CLAY 0.0-0.15 7/8/2019 SE196259.004	CLAY 0.0-0.15 7/8/2019 SE196259.006	CLAY 0.5-0.6 7/8/2019 SE196259.007
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 (mg/kg)	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	TP4	TP5	TP5	TP6	TP7
			CLAY 0.0-0.15 7/8/2019 SE196259.008	CLAY 0.0-0.15 7/8/2019 SE196259.010	CLAY 0.3-0.6 7/8/2019 SE196259.011	CLAY 0.0-0.15 7/8/2019 SE196259.012	CLAY 0.0-0.15 7/8/2019 SE196259.015
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 (mg/kg)	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: 9/8/2019 (continued)

PARAMETER	UOM	LOR	TP7	TP8	DDS1
			CLAY 0.3-0.5 7/8/2019 SE196259.016	CLAY 0.0-0.15 7/8/2019 SE196259.017	CLAY - 7/8/2019 SE196259.020
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	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
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8

OC Pesticides in Soil [AN420]    Tested: 9/8/2019

PARAMETER	UOM	LOR	TP1	TP1	TP2	TP3	TP3
			CLAY 0.0-0.15 7/8/2019 SE196259.001	CLAY 0.3-0.6 7/8/2019 SE196259.002	CLAY 0.0-0.15 7/8/2019 SE196259.004	CLAY 0.0-0.15 7/8/2019 SE196259.006	CLAY 0.5-0.6 7/8/2019 SE196259.007
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 9/8/2019    (continued)

PARAMETER	UOM	LOR	TP4	TP5	TP5	TP6	TP7
			CLAY 0.0-0.15 7/8/2019 SE196259.008	CLAY 0.0-0.15 7/8/2019 SE196259.010	CLAY 0.3-0.6 7/8/2019 SE196259.011	CLAY 0.0-0.15 7/8/2019 SE196259.012	CLAY 0.0-0.15 7/8/2019 SE196259.015
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 9/8/2019    (continued)

PARAMETER	UOM	LOR	TP7	TP8	DDS1
			CLAY 0.3-0.5 7/8/2019 SE196259.016	CLAY 0.0-0.15 7/8/2019 SE196259.017	CLAY - 7/8/2019 SE196259.020
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	0.05	<0.05	<0.05	<0.05
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: 9/8/2019

PARAMETER	UOM	LOR	TP1	TP1	TP2	TP3	TP3
			CLAY 0.0-0.15 7/8/2019 SE196259.001	CLAY 0.3-0.6 7/8/2019 SE196259.002	CLAY 0.0-0.15 7/8/2019 SE196259.004	CLAY 0.0-0.15 7/8/2019 SE196259.006	CLAY 0.5-0.6 7/8/2019 SE196259.007
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	TP4	TP5	TP5	TP6	TP7
			CLAY 0.0-0.15 7/8/2019 SE196259.008	CLAY 0.0-0.15 7/8/2019 SE196259.010	CLAY 0.3-0.6 7/8/2019 SE196259.011	CLAY 0.0-0.15 7/8/2019 SE196259.012	CLAY 0.0-0.15 7/8/2019 SE196259.015
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	TP7	TP8	DDS1
			CLAY 0.3-0.5 7/8/2019 SE196259.016	CLAY 0.0-0.15 7/8/2019 SE196259.017	CLAY - 7/8/2019 SE196259.020
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1



Total Phenolics in Soil [AN289]    Tested: 14/8/2019

			TP1	TP2	TP3	TP4	TP5
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15	0.0-0.15
			7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
PARAMETER	UOM	LOR	SE196259.001	SE196259.004	SE196259.006	SE196259.008	SE196259.010
Total Phenols	mg/kg	5	<5	<5	<5	<5	<5

			TP6	TP7	TP8	DDS1
			CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.0-0.15	0.0-0.15	-
			7/8/2019	7/8/2019	7/8/2019	7/8/2019
PARAMETER	UOM	LOR	SE196259.012	SE196259.015	SE196259.017	SE196259.020
Total Phenols	mg/kg	5	<5	<5	<5	<5

pH in soil (1:5) [AN101]    Tested: 13/8/2019

			TP1	TP1	TP2	TP3	TP4
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.3-0.6	0.65-0.75	0.0-0.15	0.5-0.6	0.0-0.15
			7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
PARAMETER	UOM	LOR	SE196259.002	SE196259.003	SE196259.004	SE196259.007	SE196259.008
pH	pH Units	0.1	<b>5.2</b>	<b>4.8</b>	<b>6.2</b>	<b>5.3</b>	<b>5.8</b>

			TP5	TP6	TP6	TP7	TP8
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.3-0.6	0.0-0.15	0.55-0.65	0.3-0.5	0.0-0.15
			7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
PARAMETER	UOM	LOR	SE196259.011	SE196259.012	SE196259.014	SE196259.016	SE196259.017
pH	pH Units	0.1	<b>5.2</b>	<b>6.2</b>	<b>5.3</b>	<b>5.2</b>	<b>6.2</b>

			TP8
			CLAY
			0.55-0.65
			7/8/2019
PARAMETER	UOM	LOR	SE196259.019
pH	pH Units	0.1	<b>5.0</b>

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122] Tested: 12/8/2019

PARAMETER	UOM	LOR	TP1	TP1	TP2	TP3	TP4
			CLAY 0.3-0.6 7/8/2019 SE196259.002	CLAY 0.65-0.75 7/8/2019 SE196259.003	CLAY 0.0-0.15 7/8/2019 SE196259.004	CLAY 0.5-0.6 7/8/2019 SE196259.007	CLAY 0.0-0.15 7/8/2019 SE196259.008
Exchangeable Sodium, Na	mg/kg	2	1500	1500	230	1800	88
Exchangeable Sodium, Na	meq/100g	0.01	6.4	6.7	1.0	8.0	0.38
Exchangeable Sodium Percentage*	%	0.1	34.0	36.7	16.1	39.5	7.7
Exchangeable Potassium, K	mg/kg	2	130	140	60	140	84
Exchangeable Potassium, K	meq/100g	0.01	0.34	0.37	0.15	0.37	0.21
Exchangeable Potassium Percentage*	%	0.1	1.8	2.0	2.5	1.8	4.3
Exchangeable Calcium, Ca	mg/kg	2	350	210	710	10	590
Exchangeable Calcium, Ca	meq/100g	0.01	1.7	1.0	3.5	0.05	2.9
Exchangeable Calcium Percentage*	%	0.1	9.2	5.6	56.8	0.3	59.0
Exchangeable Magnesium, Mg	mg/kg	2	1300	1200	190	1400	180
Exchangeable Magnesium, Mg	meq/100g	0.02	10	10	1.5	12	1.4
Exchangeable Magnesium Percentage*	%	0.1	55.0	55.7	24.5	58.4	29.0
Cation Exchange Capacity	meq/100g	0.02	19	18	6.2	20	5.0

PARAMETER	UOM	LOR	TP5	TP6	TP6	TP7	TP8
			CLAY 0.3-0.6 7/8/2019 SE196259.011	CLAY 0.0-0.15 7/8/2019 SE196259.012	CLAY 0.55-0.65 7/8/2019 SE196259.014	CLAY 0.3-0.5 7/8/2019 SE196259.016	CLAY 0.0-0.15 7/8/2019 SE196259.017
Exchangeable Sodium, Na	mg/kg	2	1400	180	1500	1000	300
Exchangeable Sodium, Na	meq/100g	0.01	6.0	0.78	6.7	4.5	1.3
Exchangeable Sodium Percentage*	%	0.1	36.6	10.9	34.4	36.9	13.7
Exchangeable Potassium, K	mg/kg	2	90	89	150	95	130
Exchangeable Potassium, K	meq/100g	0.01	0.23	0.23	0.39	0.24	0.34
Exchangeable Potassium Percentage*	%	0.1	1.4	3.2	2.0	2.0	3.6
Exchangeable Calcium, Ca	mg/kg	2	180	890	86	44	1000
Exchangeable Calcium, Ca	meq/100g	0.01	0.92	4.4	0.43	0.22	5.1
Exchangeable Calcium Percentage*	%	0.1	5.6	61.9	2.2	1.8	53.1
Exchangeable Magnesium, Mg	mg/kg	2	1100	210	1500	870	340
Exchangeable Magnesium, Mg	meq/100g	0.02	9.3	1.7	12	7.2	2.8
Exchangeable Magnesium Percentage*	%	0.1	56.4	24.0	61.4	59.3	29.6
Cation Exchange Capacity	meq/100g	0.02	16	7.2	19	12	9.5

PARAMETER	UOM	LOR	TP8
			CLAY 0.55-0.65 7/8/2019 SE196259.019
Exchangeable Sodium, Na	mg/kg	2	1700
Exchangeable Sodium, Na	meq/100g	0.01	7.5
Exchangeable Sodium Percentage*	%	0.1	32.6
Exchangeable Potassium, K	mg/kg	2	170
Exchangeable Potassium, K	meq/100g	0.01	0.44
Exchangeable Potassium Percentage*	%	0.1	1.9
Exchangeable Calcium, Ca	mg/kg	2	80
Exchangeable Calcium, Ca	meq/100g	0.01	0.40
Exchangeable Calcium Percentage*	%	0.1	1.7
Exchangeable Magnesium, Mg	mg/kg	2	1800
Exchangeable Magnesium, Mg	meq/100g	0.02	15
Exchangeable Magnesium Percentage*	%	0.1	63.7
Cation Exchange Capacity	meq/100g	0.02	23

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 9/8/2019

PARAMETER	UOM	LOR	TP1	TP1	TP1	TP2	TP2
			CLAY 0.0-0.15 7/8/2019 SE196259.001	CLAY 0.3-0.6 7/8/2019 SE196259.002	CLAY 0.65-0.75 7/8/2019 SE196259.003	CLAY 0.0-0.15 7/8/2019 SE196259.004	CLAY 0.3-0.6 7/8/2019 SE196259.005
Arsenic, As	mg/kg	1	4	7	4	4	5
Cadmium, Cd	mg/kg	0.3	1.3	1.5	1.4	1.3	1.3
Chromium, Cr	mg/kg	0.5	8.5	15	7.7	10	9.8
Copper, Cu	mg/kg	0.5	3.9	14	12	4.2	10
Lead, Pb	mg/kg	1	9	15	10	11	13
Nickel, Ni	mg/kg	0.5	1.8	5.6	2.1	2.0	4.3
Zinc, Zn	mg/kg	2	37	28	13	23	19

PARAMETER	UOM	LOR	TP3	TP3	TP4	TP4	TP5
			CLAY 0.0-0.15 7/8/2019 SE196259.006	CLAY 0.5-0.6 7/8/2019 SE196259.007	CLAY 0.0-0.15 7/8/2019 SE196259.008	CLAY 0.3-0.6 7/8/2019 SE196259.009	CLAY 0.0-0.15 7/8/2019 SE196259.010
Arsenic, As	mg/kg	1	2	<1	4	5	3
Cadmium, Cd	mg/kg	0.3	1.3	1.4	1.2	1.4	1.4
Chromium, Cr	mg/kg	0.5	8.7	5.3	10	11	9.5
Copper, Cu	mg/kg	0.5	4.4	9.6	2.6	12	4.4
Lead, Pb	mg/kg	1	9	8	8	17	11
Nickel, Ni	mg/kg	0.5	2.1	3.3	1.6	5.1	1.9
Zinc, Zn	mg/kg	2	18	13	10	24	30

PARAMETER	UOM	LOR	TP5	TP6	TP6	TP6	TP7
			CLAY 0.3-0.6 7/8/2019 SE196259.011	CLAY 0.0-0.15 7/8/2019 SE196259.012	CLAY 0.3-0.5 7/8/2019 SE196259.013	CLAY 0.55-0.65 7/8/2019 SE196259.014	CLAY 0.0-0.15 7/8/2019 SE196259.015
Arsenic, As	mg/kg	1	6	3	3	5	5
Cadmium, Cd	mg/kg	0.3	1.5	1.6	1.5	1.5	1.3
Chromium, Cr	mg/kg	0.5	15	7.5	5.1	9.4	11
Copper, Cu	mg/kg	0.5	16	5.1	5.4	11	4.6
Lead, Pb	mg/kg	1	15	11	6	10	9
Nickel, Ni	mg/kg	0.5	3.6	2.6	1.4	2.3	2.0
Zinc, Zn	mg/kg	2	22	41	7	13	32

PARAMETER	UOM	LOR	TP7	TP8	TP8	TP8	DDS1
			CLAY 0.3-0.5 7/8/2019 SE196259.016	CLAY 0.0-0.15 7/8/2019 SE196259.017	CLAY 0.2-0.5 7/8/2019 SE196259.018	CLAY 0.55-0.65 7/8/2019 SE196259.019	CLAY - 7/8/2019 SE196259.020
Arsenic, As	mg/kg	1	4	4	4	5	3
Cadmium, Cd	mg/kg	0.3	1.3	1.4	1.3	1.4	1.3
Chromium, Cr	mg/kg	0.5	7.0	13	7.9	10	11
Copper, Cu	mg/kg	0.5	9.9	5.4	6.8	14	5.3
Lead, Pb	mg/kg	1	9	11	8	13	11
Nickel, Ni	mg/kg	0.5	2.3	2.4	3.5	2.7	2.4
Zinc, Zn	mg/kg	2	12	44	17	17	20

Mercury in Soil [AN312] Tested: 9/8/2019

PARAMETER	UOM	LOR	TP1	TP1	TP1	TP2	TP2
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.3-0.6	0.65-0.75	0.0-0.15	0.3-0.6
			7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
			SE196259.001	SE196259.002	SE196259.003	SE196259.004	SE196259.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP3	TP3	TP4	TP4	TP5
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.5-0.6	0.0-0.15	0.3-0.6	0.0-0.15
			7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
			SE196259.006	SE196259.007	SE196259.008	SE196259.009	SE196259.010
Mercury	mg/kg	0.05	<0.05	0.15	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP5	TP6	TP6	TP6	TP7
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.3-0.6	0.0-0.15	0.3-0.5	0.55-0.65	0.0-0.15
			7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
			SE196259.011	SE196259.012	SE196259.013	SE196259.014	SE196259.015
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP7	TP8	TP8	TP8	DDS1
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.3-0.5	0.0-0.15	0.2-0.5	0.55-0.65	-
			7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
			SE196259.016	SE196259.017	SE196259.018	SE196259.019	SE196259.020
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 9/8/2019

PARAMETER	UOM	LOR	TP1	TP1	TP1	TP2	TP2
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.3-0.6	0.65-0.75	0.0-0.15	0.3-0.6
			7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
			SE196259.001	SE196259.002	SE196259.003	SE196259.004	SE196259.005
% Moisture	%w/w	0.5	<b>7.9</b>	<b>17</b>	<b>18</b>	<b>6.1</b>	<b>14</b>

PARAMETER	UOM	LOR	TP3	TP3	TP4	TP4	TP5
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.5-0.6	0.0-0.15	0.3-0.6	0.0-0.15
			7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
			SE196259.006	SE196259.007	SE196259.008	SE196259.009	SE196259.010
% Moisture	%w/w	0.5	<b>4.6</b>	<b>19</b>	<b>6.4</b>	<b>17</b>	<b>7.4</b>

PARAMETER	UOM	LOR	TP5	TP6	TP6	TP6	TP7
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.3-0.6	0.0-0.15	0.3-0.5	0.55-0.65	0.0-0.15
			7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
			SE196259.011	SE196259.012	SE196259.013	SE196259.014	SE196259.015
% Moisture	%w/w	0.5	<b>20</b>	<b>8.6</b>	<b>17</b>	<b>18</b>	<b>6.9</b>

PARAMETER	UOM	LOR	TP7	TP8	TP8	TP8	DDS1
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.3-0.5	0.0-0.15	0.2-0.5	0.55-0.65	-
			7/8/2019	7/8/2019	7/8/2019	7/8/2019	7/8/2019
			SE196259.016	SE196259.017	SE196259.018	SE196259.019	SE196259.020
% Moisture	%w/w	0.5	<b>15</b>	<b>7.4</b>	<b>14</b>	<b>21</b>	<b>5.4</b>

## Fibre Identification in soil [AN602] Tested: 14/8/2019

PARAMETER	UOM	LOR	TP1	TP2	TP2	TP3	TP4
			CLAY 0.0-0.15 7/8/2019 SE196259.001	CLAY 0.0-0.15 7/8/2019 SE196259.004	CLAY 0.3-0.6 7/8/2019 SE196259.005	CLAY 0.0-0.15 7/8/2019 SE196259.006	CLAY 0.0-0.15 7/8/2019 SE196259.008
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	TP4	TP5	TP6	TP6	TP7
			CLAY 0.3-0.6 7/8/2019 SE196259.009	CLAY 0.0-0.15 7/8/2019 SE196259.010	CLAY 0.0-0.15 7/8/2019 SE196259.012	CLAY 0.3-0.5 7/8/2019 SE196259.013	CLAY 0.0-0.15 7/8/2019 SE196259.015
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	TP8	TP8
			CLAY 0.0-0.15 7/8/2019 SE196259.017	CLAY 0.2-0.5 7/8/2019 SE196259.018
Asbestos Detected	No unit	-	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01



## Gravimetric Determination of Asbestos in Soil [AN605] Tested: 14/8/2019

PARAMETER	UOM	LOR	TP1	TP2	TP2	TP3	TP4
			CLAY 0.0-0.15 7/8/2019 SE196259.001	CLAY 0.0-0.15 7/8/2019 SE196259.004	CLAY 0.3-0.6 7/8/2019 SE196259.005	CLAY 0.0-0.15 7/8/2019 SE196259.006	CLAY 0.0-0.15 7/8/2019 SE196259.008
Total Sample Weight*	g	1	<b>745</b>	<b>692</b>	<b>470</b>	<b>723</b>	<b>745</b>
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP4	TP5	TP6	TP6	TP7
			CLAY 0.3-0.6 7/8/2019 SE196259.009	CLAY 0.0-0.15 7/8/2019 SE196259.010	CLAY 0.0-0.15 7/8/2019 SE196259.012	CLAY 0.3-0.5 7/8/2019 SE196259.013	CLAY 0.0-0.15 7/8/2019 SE196259.015
Total Sample Weight*	g	1	<b>439</b>	<b>651</b>	<b>690</b>	<b>348</b>	<b>730</b>
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP8	TP8
			CLAY 0.0-0.15 7/8/2019 SE196259.017	CLAY 0.2-0.5 7/8/2019 SE196259.018
Total Sample Weight*	g	1	<b>645</b>	<b>342</b>
ACM in >7mm Sample*	g	0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-

OC Pesticides in Water [AN420]    Tested: 12/8/2019

			RS1
			WATER
			-
			7/8/2019
			SE196259.021
PARAMETER	UOM	LOR	
Hexachlorobenzene (HCB)	µg/L	0.1	<0.1
Alpha BHC	µg/L	0.1	<0.1
Lindane (gamma BHC)	µg/L	0.1	<0.1
Heptachlor	µg/L	0.1	<0.1
Aldrin	µg/L	0.1	<0.1
Beta BHC	µg/L	0.1	<0.1
Delta BHC	µg/L	0.1	<0.1
Heptachlor epoxide	µg/L	0.1	<0.1
o,p'-DDE	µg/L	0.1	<0.1
Alpha Endosulfan	µg/L	0.1	<0.1
Gamma Chlordane	µg/L	0.1	<0.1
Alpha Chlordane	µg/L	0.1	<0.1
trans-Nonachlor	µg/L	0.1	<0.1
p,p'-DDE	µg/L	0.1	<0.1
Dieldrin	µg/L	0.1	<0.1
Endrin	µg/L	0.1	<0.1
o,p'-DDD	µg/L	0.1	<0.1
o,p'-DDT	µg/L	0.1	<0.1
Beta Endosulfan	µg/L	0.1	<0.1
p,p'-DDD	µg/L	0.1	<0.1
p,p'-DDT	µg/L	0.1	<0.1
Endosulfan sulphate	µg/L	0.1	<0.1
Endrin aldehyde	µg/L	0.1	<0.1
Methoxychlor	µg/L	0.1	<0.1
Endrin ketone	µg/L	0.1	<0.1
Isodrin	µg/L	0.1	<0.1
Mirex	µg/L	0.1	<0.1



## ANALYTICAL RESULTS

SE196259 R0

Metals in Water (Dissolved) by ICPOES [AN320] Tested: 12/8/2019

			RS1
			WATER
			-
			7/8/2019
PARAMETER	UOM	LOR	SE196259.021
Arsenic, As	mg/L	0.02	<0.02
Cadmium, Cd	mg/L	0.001	<0.001
Chromium, Cr	mg/L	0.005	<0.005
Copper, Cu	mg/L	0.005	<0.005
Lead, Pb	mg/L	0.02	<0.02
Nickel, Ni	mg/L	0.005	<0.005
Zinc, Zn	mg/L	0.01	<0.01



## ANALYTICAL RESULTS

SE196259 R0

Mercury (dissolved) in Water [AN311(Perth)/AN312]    Tested: 13/8/2019

			RS1
			WATER
			-
			7/8/2019
PARAMETER	UOM	LOR	SE196259.021
Mercury	mg/L	0.0001	<0.0001

## 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.
- AN020** Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
- 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.
- 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 CaCl<sub>2</sub>) is made at a ratio of 1:5 and the pH determined and reported on the extract. Reference APHA 4500-H+.
- AN122** Exchangeable Cations, CEC and ESP: Soil sample is extracted in 1M Ammonium Acetate at pH=7 (or 1M Ammonium Chloride at pH=7) with cations (Na, K, Ca & Mg) then determined by ICP OES/ICP MS and reported as Exchangeable Cations. For saline soils, these results can be corrected for water soluble cations and reported as Exchangeable cations in meq/100g or soil can be pre-treated (aqueous ethanol/aqueous glycerol) prior to extraction. Cation Exchange Capacity (CEC) is the sum of the exchangeable cations in meq/100g.
- AN122** The Exchangeable Sodium Percentage (ESP) is calculated as the exchangeable sodium divided by the CEC (all in meq/100g) times 100.  
ESP can be used to categorise the sodicity of the soil as below:
- |           |                |
|-----------|----------------|
| ESP < 6%  | non-sodic      |
| ESP 6-15% | sodic          |
| ESP > 15% | strongly sodic |
- Method is referenced to Rayment and Lyons, 2011, sections 15D3 and 15N1.-
- 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.
- AN311(Perth)/AN312** Mercury by Cold Vapour AAS in Waters: 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.
- 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
- AN320** Metals by ICP-OES: Samples are preserved with 10% nitric acid for a wide range of metals and some non-metals. This solution is measured by Inductively Coupled Plasma. Solutions are aspirated into an argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components.
- AN320** Photomultipliers or CCDs are used to measure the light intensity at specific wavelengths. This intensity is directly proportional to concentration. Corrections are required to compensate for spectral overlap between elements. Reference APHA 3120 B.
- 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 Recoverable Hydrocarbons - Silica (TRH-Si) 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 unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
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- <ul style="list-style-type: none"> <li>(a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres):</li> <li>(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</li> <li>(c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.</li> </ul>
AN605	This technique gravimetrically determines the mass of Asbestos Containing Material retained on a 7mm Sieve and assumes that 15% of this ACM is asbestos. This calculated asbestos weight is then calculated as a percentage of the total sample weight.
AN605	This technique also gravimetrically determines the mass of Fibrous Asbestos (FA) and Asbestos Fines (AF) Containing Material retained on and passing a 2mm sieve post 7mm sieving. Assumes that FA and AF are 100% asbestos containing. This calculated asbestos weight is then calculated as a percentage of the total sample weight. This does not include free fibres which are only observed by standard trace analysis as per AN 602.
AN605	Insofar as is technically feasible, this report is consistent with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment Remediation and Management of Asbestos - Contaminated Sites in Western Australia - May 2009.

FOOTNOTES

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

Unless it is reported that sampling has been performed by SGS, the samples have been 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:

- 1 Bq is equivalent to 27 pCi
- 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 and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: [www.sgs.com.au/pv.sgsvr/en-gb/environment](http://www.sgs.com.au/pv.sgsvr/en-gb/environment).

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

This report must not be reproduced, except in full.





## STATEMENT OF QA/QC PERFORMANCE

SE196259 R0

### CLIENT DETAILS

Contact Saurabh Sapkota  
Client Geotechnique  
Address P.O. Box 880  
NSW 2751

Telephone 02 4722 2700  
Facsimile 02 4722 6161  
Email Saurabh@geotech.com.au

Project **14513-1 Marsden Park**  
Order Number (Not specified)  
Samples 22

### 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 **SE196259 R0**  
Date Received 08 Aug 2019  
Date Reported 15 Aug 2019

### COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.  
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.  
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Duplicate	Total Phenolics in Soil	1 item
Matrix Spike	Total Phenolics in Soil	1 item
	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item

### SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	20 Clay, 1 Sand, 1 V
Date documentation received	8/8/2019@6:39pm	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	11.3°C	Sufficient sample for analysis	Yes
Turnaround time requested	3 Day/Standard		

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE196259.002	LB180718	07 Aug 2019	08 Aug 2019	04 Sep 2019	12 Aug 2019	04 Sep 2019	15 Aug 2019
TP1	SE196259.003	LB180718	07 Aug 2019	08 Aug 2019	04 Sep 2019	12 Aug 2019	04 Sep 2019	15 Aug 2019
TP2	SE196259.004	LB180718	07 Aug 2019	08 Aug 2019	04 Sep 2019	12 Aug 2019	04 Sep 2019	15 Aug 2019
TP3	SE196259.007	LB180718	07 Aug 2019	08 Aug 2019	04 Sep 2019	12 Aug 2019	04 Sep 2019	15 Aug 2019
TP4	SE196259.008	LB180718	07 Aug 2019	08 Aug 2019	04 Sep 2019	12 Aug 2019	04 Sep 2019	15 Aug 2019
TP5	SE196259.011	LB180718	07 Aug 2019	08 Aug 2019	04 Sep 2019	12 Aug 2019	04 Sep 2019	15 Aug 2019
TP6	SE196259.012	LB180718	07 Aug 2019	08 Aug 2019	04 Sep 2019	12 Aug 2019	04 Sep 2019	15 Aug 2019
TP6	SE196259.014	LB180718	07 Aug 2019	08 Aug 2019	04 Sep 2019	12 Aug 2019	04 Sep 2019	15 Aug 2019
TP7	SE196259.016	LB180718	07 Aug 2019	08 Aug 2019	04 Sep 2019	12 Aug 2019	04 Sep 2019	15 Aug 2019
TP8	SE196259.017	LB180718	07 Aug 2019	08 Aug 2019	04 Sep 2019	12 Aug 2019	04 Sep 2019	15 Aug 2019
TP8	SE196259.019	LB180718	07 Aug 2019	08 Aug 2019	04 Sep 2019	12 Aug 2019	04 Sep 2019	15 Aug 2019

## Fibre Identification in soil

Method: ME-(AU)-[ENV]AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE196259.001	LB180907	07 Aug 2019	08 Aug 2019	06 Aug 2020	14 Aug 2019	06 Aug 2020	15 Aug 2019
TP2	SE196259.004	LB180907	07 Aug 2019	08 Aug 2019	06 Aug 2020	14 Aug 2019	06 Aug 2020	15 Aug 2019
TP2	SE196259.005	LB180907	07 Aug 2019	08 Aug 2019	06 Aug 2020	14 Aug 2019	06 Aug 2020	15 Aug 2019
TP3	SE196259.006	LB180907	07 Aug 2019	08 Aug 2019	06 Aug 2020	14 Aug 2019	06 Aug 2020	15 Aug 2019
TP4	SE196259.008	LB180907	07 Aug 2019	08 Aug 2019	06 Aug 2020	14 Aug 2019	06 Aug 2020	15 Aug 2019
TP4	SE196259.009	LB180907	07 Aug 2019	08 Aug 2019	06 Aug 2020	14 Aug 2019	06 Aug 2020	15 Aug 2019
TP5	SE196259.010	LB180907	07 Aug 2019	08 Aug 2019	06 Aug 2020	14 Aug 2019	06 Aug 2020	15 Aug 2019
TP6	SE196259.012	LB180907	07 Aug 2019	08 Aug 2019	06 Aug 2020	14 Aug 2019	06 Aug 2020	15 Aug 2019
TP6	SE196259.013	LB180907	07 Aug 2019	08 Aug 2019	06 Aug 2020	14 Aug 2019	06 Aug 2020	15 Aug 2019
TP7	SE196259.015	LB180907	07 Aug 2019	08 Aug 2019	06 Aug 2020	14 Aug 2019	06 Aug 2020	15 Aug 2019
TP8	SE196259.017	LB180907	07 Aug 2019	08 Aug 2019	06 Aug 2020	14 Aug 2019	06 Aug 2020	15 Aug 2019
TP8	SE196259.018	LB180907	07 Aug 2019	08 Aug 2019	06 Aug 2020	14 Aug 2019	06 Aug 2020	15 Aug 2019

## Gravimetric Determination of Asbestos in Soil

Method: ME-(AU)-[ENV]AN605

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE196259.001	LB180907	07 Aug 2019	08 Aug 2019	03 Feb 2020	14 Aug 2019	03 Feb 2020	15 Aug 2019
TP2	SE196259.004	LB180907	07 Aug 2019	08 Aug 2019	03 Feb 2020	14 Aug 2019	03 Feb 2020	15 Aug 2019
TP2	SE196259.005	LB180907	07 Aug 2019	08 Aug 2019	03 Feb 2020	14 Aug 2019	03 Feb 2020	15 Aug 2019
TP3	SE196259.006	LB180907	07 Aug 2019	08 Aug 2019	03 Feb 2020	14 Aug 2019	03 Feb 2020	15 Aug 2019
TP4	SE196259.008	LB180907	07 Aug 2019	08 Aug 2019	03 Feb 2020	14 Aug 2019	03 Feb 2020	15 Aug 2019
TP4	SE196259.009	LB180907	07 Aug 2019	08 Aug 2019	03 Feb 2020	14 Aug 2019	03 Feb 2020	15 Aug 2019
TP5	SE196259.010	LB180907	07 Aug 2019	08 Aug 2019	03 Feb 2020	14 Aug 2019	03 Feb 2020	15 Aug 2019
TP6	SE196259.012	LB180907	07 Aug 2019	08 Aug 2019	03 Feb 2020	14 Aug 2019	03 Feb 2020	15 Aug 2019
TP6	SE196259.013	LB180907	07 Aug 2019	08 Aug 2019	03 Feb 2020	14 Aug 2019	03 Feb 2020	15 Aug 2019
TP7	SE196259.015	LB180907	07 Aug 2019	08 Aug 2019	03 Feb 2020	14 Aug 2019	03 Feb 2020	15 Aug 2019
TP8	SE196259.017	LB180907	07 Aug 2019	08 Aug 2019	03 Feb 2020	14 Aug 2019	03 Feb 2020	15 Aug 2019
TP8	SE196259.018	LB180907	07 Aug 2019	08 Aug 2019	03 Feb 2020	14 Aug 2019	03 Feb 2020	15 Aug 2019

## Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS1	SE196259.021	LB180738	07 Aug 2019	08 Aug 2019	04 Sep 2019	13 Aug 2019	04 Sep 2019	13 Aug 2019

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE196259.001	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019
TP1	SE196259.002	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019
TP1	SE196259.003	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019
TP2	SE196259.004	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019
TP2	SE196259.005	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019
TP3	SE196259.006	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019
TP3	SE196259.007	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019
TP4	SE196259.008	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019
TP4	SE196259.009	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019
TP5	SE196259.010	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019
TP5	SE196259.011	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019
TP6	SE196259.012	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019
TP6	SE196259.013	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Mercury in Soil (continued)

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP6	SE196259.014	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019
TP7	SE196259.015	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019
TP7	SE196259.016	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019
TP8	SE196259.017	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019
TP8	SE196259.018	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019
TP8	SE196259.019	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019
DDS1	SE196259.020	LB180622	07 Aug 2019	08 Aug 2019	04 Sep 2019	09 Aug 2019	04 Sep 2019	13 Aug 2019

## Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS1	SE196259.021	LB180645	07 Aug 2019	08 Aug 2019	03 Feb 2020	12 Aug 2019	03 Feb 2020	12 Aug 2019

## Moisture Content

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE196259.001	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019
TP1	SE196259.002	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019
TP1	SE196259.003	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019
TP2	SE196259.004	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019
TP2	SE196259.005	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019
TP3	SE196259.006	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019
TP3	SE196259.007	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019
TP4	SE196259.008	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019
TP4	SE196259.009	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019
TP5	SE196259.010	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019
TP5	SE196259.011	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019
TP6	SE196259.012	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019
TP6	SE196259.013	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019
TP6	SE196259.014	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019
TP7	SE196259.015	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019
TP7	SE196259.016	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019
TP8	SE196259.017	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019
TP8	SE196259.018	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019
TP8	SE196259.019	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019
DDS1	SE196259.020	LB180606	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	14 Aug 2019	13 Aug 2019

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE196259.001	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP1	SE196259.002	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP2	SE196259.004	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP3	SE196259.006	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP3	SE196259.007	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP4	SE196259.008	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP5	SE196259.010	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP5	SE196259.011	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP6	SE196259.012	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP7	SE196259.015	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP7	SE196259.016	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP8	SE196259.017	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
DDS1	SE196259.020	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019

## OC Pesticides in Water

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS1	SE196259.021	LB180659	07 Aug 2019	08 Aug 2019	14 Aug 2019	12 Aug 2019	21 Sep 2019	15 Aug 2019

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE196259.001	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP1	SE196259.002	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP2	SE196259.004	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]JAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP3	SE196259.006	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP3	SE196259.007	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP4	SE196259.008	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP5	SE196259.010	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP5	SE196259.011	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP6	SE196259.012	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP7	SE196259.015	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP7	SE196259.016	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP8	SE196259.017	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
DDS1	SE196259.020	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019

## PCBs in Soil

Method: ME-(AU)-[ENV]JAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE196259.001	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP1	SE196259.002	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP2	SE196259.004	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP3	SE196259.006	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP3	SE196259.007	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP4	SE196259.008	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP5	SE196259.010	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP5	SE196259.011	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP6	SE196259.012	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP7	SE196259.015	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP7	SE196259.016	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP8	SE196259.017	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
DDS1	SE196259.020	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019

## pH in soil (1:5)

Method: ME-(AU)-[ENV]JAN101

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE196259.002	LB180758	07 Aug 2019	08 Aug 2019	14 Aug 2019	13 Aug 2019	14 Aug 2019	13 Aug 2019
TP1	SE196259.003	LB180758	07 Aug 2019	08 Aug 2019	14 Aug 2019	13 Aug 2019	14 Aug 2019	13 Aug 2019
TP2	SE196259.004	LB180758	07 Aug 2019	08 Aug 2019	14 Aug 2019	13 Aug 2019	14 Aug 2019	13 Aug 2019
TP3	SE196259.007	LB180758	07 Aug 2019	08 Aug 2019	14 Aug 2019	13 Aug 2019	14 Aug 2019	13 Aug 2019
TP4	SE196259.008	LB180758	07 Aug 2019	08 Aug 2019	14 Aug 2019	13 Aug 2019	14 Aug 2019	13 Aug 2019
TP5	SE196259.011	LB180758	07 Aug 2019	08 Aug 2019	14 Aug 2019	13 Aug 2019	14 Aug 2019	13 Aug 2019
TP6	SE196259.012	LB180758	07 Aug 2019	08 Aug 2019	14 Aug 2019	13 Aug 2019	14 Aug 2019	13 Aug 2019
TP6	SE196259.014	LB180758	07 Aug 2019	08 Aug 2019	14 Aug 2019	13 Aug 2019	14 Aug 2019	13 Aug 2019
TP7	SE196259.016	LB180758	07 Aug 2019	08 Aug 2019	14 Aug 2019	13 Aug 2019	14 Aug 2019	13 Aug 2019
TP8	SE196259.017	LB180758	07 Aug 2019	08 Aug 2019	14 Aug 2019	13 Aug 2019	14 Aug 2019	13 Aug 2019
TP8	SE196259.019	LB180758	07 Aug 2019	08 Aug 2019	14 Aug 2019	13 Aug 2019	14 Aug 2019	13 Aug 2019

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]JAN289

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE196259.001	LB180867	07 Aug 2019	08 Aug 2019	21 Aug 2019	14 Aug 2019	21 Aug 2019	14 Aug 2019
TP2	SE196259.004	LB180867	07 Aug 2019	08 Aug 2019	21 Aug 2019	14 Aug 2019	21 Aug 2019	14 Aug 2019
TP3	SE196259.006	LB180867	07 Aug 2019	08 Aug 2019	21 Aug 2019	14 Aug 2019	21 Aug 2019	14 Aug 2019
TP4	SE196259.008	LB180867	07 Aug 2019	08 Aug 2019	21 Aug 2019	14 Aug 2019	21 Aug 2019	14 Aug 2019
TP5	SE196259.010	LB180867	07 Aug 2019	08 Aug 2019	21 Aug 2019	14 Aug 2019	21 Aug 2019	14 Aug 2019
TP6	SE196259.012	LB180867	07 Aug 2019	08 Aug 2019	21 Aug 2019	14 Aug 2019	21 Aug 2019	14 Aug 2019
TP7	SE196259.015	LB180867	07 Aug 2019	08 Aug 2019	21 Aug 2019	14 Aug 2019	21 Aug 2019	14 Aug 2019
TP8	SE196259.017	LB180867	07 Aug 2019	08 Aug 2019	21 Aug 2019	14 Aug 2019	21 Aug 2019	14 Aug 2019
DDS1	SE196259.020	LB180867	07 Aug 2019	08 Aug 2019	21 Aug 2019	14 Aug 2019	21 Aug 2019	14 Aug 2019

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]JAN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE196259.001	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019
TP1	SE196259.002	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019
TP1	SE196259.003	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019
TP2	SE196259.004	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019
TP2	SE196259.005	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019
TP3	SE196259.006	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019
TP3	SE196259.007	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP4	SE196259.008	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019
TP4	SE196259.009	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019
TP5	SE196259.010	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019
TP5	SE196259.011	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019
TP6	SE196259.012	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019
TP6	SE196259.013	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019
TP6	SE196259.014	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019
TP7	SE196259.015	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019
TP7	SE196259.016	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019
TP8	SE196259.017	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019
TP8	SE196259.018	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019
TP8	SE196259.019	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019
DDS1	SE196259.020	LB180621	07 Aug 2019	08 Aug 2019	03 Feb 2020	09 Aug 2019	03 Feb 2020	13 Aug 2019

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE196259.001	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP1	SE196259.002	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP2	SE196259.004	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP3	SE196259.006	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP3	SE196259.007	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP4	SE196259.008	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP5	SE196259.010	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP5	SE196259.011	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP6	SE196259.012	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP7	SE196259.015	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP7	SE196259.016	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
TP8	SE196259.017	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019
DDS1	SE196259.020	LB180605	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	14 Aug 2019

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE196259.001	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP1	SE196259.002	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP2	SE196259.004	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP3	SE196259.006	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP3	SE196259.007	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP4	SE196259.008	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP5	SE196259.010	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP5	SE196259.011	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP6	SE196259.012	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP7	SE196259.015	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP7	SE196259.016	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP8	SE196259.017	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
DDS1	SE196259.020	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TS1	SE196259.022	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE196259.001	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP1	SE196259.002	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP2	SE196259.004	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP3	SE196259.006	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP3	SE196259.007	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP4	SE196259.008	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP5	SE196259.010	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP5	SE196259.011	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP6	SE196259.012	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP7	SE196259.015	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP7	SE196259.016	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TP8	SE196259.017	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

### Volatile Petroleum Hydrocarbons in Soil (continued)

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
DDS1	SE196259.020	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019
TS1	SE196259.022	LB180601	07 Aug 2019	08 Aug 2019	21 Aug 2019	09 Aug 2019	18 Sep 2019	13 Aug 2019

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	TP1	SE196259.001	%	60 - 130%	112
	TP1	SE196259.002	%	60 - 130%	100
	TP2	SE196259.004	%	60 - 130%	102
	TP3	SE196259.006	%	60 - 130%	108
	TP3	SE196259.007	%	60 - 130%	111
	TP4	SE196259.008	%	60 - 130%	108
	TP5	SE196259.010	%	60 - 130%	109
	TP5	SE196259.011	%	60 - 130%	112
	TP6	SE196259.012	%	60 - 130%	106
	TP7	SE196259.015	%	60 - 130%	109
	TP7	SE196259.016	%	60 - 130%	109
	TP8	SE196259.017	%	60 - 130%	111
	DDS1	SE196259.020	%	60 - 130%	104

## OC Pesticides in Water

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	RS1	SE196259.021	%	40 - 130%	51

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	TP1	SE196259.001	%	70 - 130%	82
	TP1	SE196259.002	%	70 - 130%	82
	TP2	SE196259.004	%	70 - 130%	76
	TP3	SE196259.006	%	70 - 130%	94
	TP3	SE196259.007	%	70 - 130%	88
	TP4	SE196259.008	%	70 - 130%	88
	TP5	SE196259.010	%	70 - 130%	86
	TP5	SE196259.011	%	70 - 130%	88
	TP6	SE196259.012	%	70 - 130%	86
	TP7	SE196259.015	%	70 - 130%	84
	TP7	SE196259.016	%	70 - 130%	86
	TP8	SE196259.017	%	70 - 130%	86
	DDS1	SE196259.020	%	70 - 130%	86
d14-p-terphenyl (Surrogate)	TP1	SE196259.001	%	70 - 130%	84
	TP1	SE196259.002	%	70 - 130%	84
	TP2	SE196259.004	%	70 - 130%	74
	TP3	SE196259.006	%	70 - 130%	92
	TP3	SE196259.007	%	70 - 130%	86
	TP4	SE196259.008	%	70 - 130%	86
	TP5	SE196259.010	%	70 - 130%	84
	TP5	SE196259.011	%	70 - 130%	86
	TP6	SE196259.012	%	70 - 130%	84
	TP7	SE196259.015	%	70 - 130%	82
	TP7	SE196259.016	%	70 - 130%	84
	TP8	SE196259.017	%	70 - 130%	82
	DDS1	SE196259.020	%	70 - 130%	86
d5-nitrobenzene (Surrogate)	TP1	SE196259.001	%	70 - 130%	78
	TP1	SE196259.002	%	70 - 130%	78
	TP2	SE196259.004	%	70 - 130%	74
	TP3	SE196259.006	%	70 - 130%	98
	TP3	SE196259.007	%	70 - 130%	92
	TP4	SE196259.008	%	70 - 130%	90
	TP5	SE196259.010	%	70 - 130%	90
	TP5	SE196259.011	%	70 - 130%	90
	TP6	SE196259.012	%	70 - 130%	88
	TP7	SE196259.015	%	70 - 130%	88
	TP7	SE196259.016	%	70 - 130%	90
	TP8	SE196259.017	%	70 - 130%	88
	DDS1	SE196259.020	%	70 - 130%	90



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## PCBs in Soil Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	TP1	SE196259.001	%	60 - 130%	112
	TP1	SE196259.002	%	60 - 130%	100
	TP2	SE196259.004	%	60 - 130%	102
	TP3	SE196259.006	%	60 - 130%	108
	TP3	SE196259.007	%	60 - 130%	111
	TP4	SE196259.008	%	60 - 130%	108
	TP5	SE196259.010	%	60 - 130%	109
	TP5	SE196259.011	%	60 - 130%	112
	TP6	SE196259.012	%	60 - 130%	106
	TP7	SE196259.015	%	60 - 130%	109
	TP7	SE196259.016	%	60 - 130%	109
	TP8	SE196259.017	%	60 - 130%	111
	DDS1	SE196259.020	%	60 - 130%	104

## VOC's in Soil Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	TP1	SE196259.001	%	60 - 130%	95
	TP1	SE196259.002	%	60 - 130%	82
	TP2	SE196259.004	%	60 - 130%	90
	TP3	SE196259.006	%	60 - 130%	80
	TP3	SE196259.007	%	60 - 130%	87
	TP4	SE196259.008	%	60 - 130%	87
	TP5	SE196259.010	%	60 - 130%	91
	TP5	SE196259.011	%	60 - 130%	86
	TP6	SE196259.012	%	60 - 130%	94
	TP7	SE196259.015	%	60 - 130%	93
	TP7	SE196259.016	%	60 - 130%	89
	TP8	SE196259.017	%	60 - 130%	88
	DDS1	SE196259.020	%	60 - 130%	94
	TS1	SE196259.022	%	60 - 130%	86
d4-1,2-dichloroethane (Surrogate)	TP1	SE196259.001	%	60 - 130%	92
	TP1	SE196259.002	%	60 - 130%	77
	TP2	SE196259.004	%	60 - 130%	85
	TP3	SE196259.006	%	60 - 130%	77
	TP3	SE196259.007	%	60 - 130%	83
	TP4	SE196259.008	%	60 - 130%	83
	TP5	SE196259.010	%	60 - 130%	85
	TP5	SE196259.011	%	60 - 130%	80
	TP6	SE196259.012	%	60 - 130%	91
	TP7	SE196259.015	%	60 - 130%	89
	TP7	SE196259.016	%	60 - 130%	84
	TP8	SE196259.017	%	60 - 130%	85
	DDS1	SE196259.020	%	60 - 130%	93
	TS1	SE196259.022	%	60 - 130%	87
d8-toluene (Surrogate)	TP1	SE196259.001	%	60 - 130%	81
	TP1	SE196259.002	%	60 - 130%	70
	TP2	SE196259.004	%	60 - 130%	78
	TP3	SE196259.006	%	60 - 130%	71
	TP3	SE196259.007	%	60 - 130%	76
	TP4	SE196259.008	%	60 - 130%	77
	TP5	SE196259.010	%	60 - 130%	81
	TP5	SE196259.011	%	60 - 130%	76
	TP6	SE196259.012	%	60 - 130%	83
	TP7	SE196259.015	%	60 - 130%	81
	TP7	SE196259.016	%	60 - 130%	81
	TP8	SE196259.017	%	60 - 130%	80
	DDS1	SE196259.020	%	60 - 130%	83
	TS1	SE196259.022	%	60 - 130%	79

## Volatile Petroleum Hydrocarbons in Soil Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units
-----------	-------------	---------------	-------

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Volatile Petroleum Hydrocarbons In Soil (continued)

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	TP1	SE196259.001	%	60 - 130%	95
	TP1	SE196259.002	%	60 - 130%	82
	TP2	SE196259.004	%	60 - 130%	90
	TP3	SE196259.006	%	60 - 130%	80
	TP3	SE196259.007	%	60 - 130%	87
	TP4	SE196259.008	%	60 - 130%	87
	TP5	SE196259.010	%	60 - 130%	91
	TP5	SE196259.011	%	60 - 130%	86
	TP6	SE196259.012	%	60 - 130%	94
	TP7	SE196259.015	%	60 - 130%	93
	TP7	SE196259.016	%	60 - 130%	89
	TP8	SE196259.017	%	60 - 130%	88
	DDS1	SE196259.020	%	60 - 130%	94
d4-1,2-dichloroethane (Surrogate)	TP1	SE196259.001	%	60 - 130%	92
	TP1	SE196259.002	%	60 - 130%	77
	TP2	SE196259.004	%	60 - 130%	85
	TP3	SE196259.006	%	60 - 130%	77
	TP3	SE196259.007	%	60 - 130%	83
	TP4	SE196259.008	%	60 - 130%	83
	TP5	SE196259.010	%	60 - 130%	85
	TP5	SE196259.011	%	60 - 130%	80
	TP6	SE196259.012	%	60 - 130%	91
	TP7	SE196259.015	%	60 - 130%	89
	TP7	SE196259.016	%	60 - 130%	84
	TP8	SE196259.017	%	60 - 130%	85
	DDS1	SE196259.020	%	60 - 130%	93
d8-toluene (Surrogate)	TP1	SE196259.001	%	60 - 130%	81
	TP1	SE196259.002	%	60 - 130%	70
	TP2	SE196259.004	%	60 - 130%	78
	TP3	SE196259.006	%	60 - 130%	71
	TP3	SE196259.007	%	60 - 130%	76
	TP4	SE196259.008	%	60 - 130%	77
	TP5	SE196259.010	%	60 - 130%	81
	TP5	SE196259.011	%	60 - 130%	76
	TP6	SE196259.012	%	60 - 130%	83
	TP7	SE196259.015	%	60 - 130%	81
	TP7	SE196259.016	%	60 - 130%	81
	TP8	SE196259.017	%	60 - 130%	80
	DDS1	SE196259.020	%	60 - 130%	83

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-(ENV)AN122

Sample Number	Parameter	Units	LOR	Result
LB180718.001	Exchangeable Sodium, Na	mg/kg	2	0
	Exchangeable Potassium, K	mg/kg	2	0
	Exchangeable Calcium, Ca	mg/kg	2	0
	Exchangeable Magnesium, Mg	mg/kg	2	0

## Mercury (dissolved) in Water

Method: ME-(AU)-(ENV)AN311(Perth)/AN312

Sample Number	Parameter	Units	LOR	Result
LB180738.001	Mercury	mg/L	0.0001	<0.0001

## Mercury in Soil

Method: ME-(AU)-(ENV)AN312

Sample Number	Parameter	Units	LOR	Result
LB180622.001	Mercury	mg/kg	0.05	<0.05

## Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-(ENV)AN320

Sample Number	Parameter	Units	LOR	Result
LB180645.001	Arsenic, As	mg/L	0.02	<0.02
	Cadmium, Cd	mg/L	0.001	<0.001
	Chromium, Cr	mg/L	0.005	<0.005
	Copper, Cu	mg/L	0.005	<0.005
	Lead, Pb	mg/L	0.02	<0.02
	Nickel, Ni	mg/L	0.005	<0.005
	Zinc, Zn	mg/L	0.01	<0.01

## OC Pesticides in Soil

Method: ME-(AU)-(ENV)AN420

Sample Number	Parameter	Units	LOR	Result
LB180605.001	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Alpha BHC	mg/kg	0.1	<0.1
	Lindane	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	<0.2
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.05	<0.05
	Endrin	mg/kg	0.2	<0.2
	Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	Endrin Aldehyde	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Endrin Ketone	mg/kg	0.1	<0.1
	Isodrin	mg/kg	0.1	<0.1
	Mirex	mg/kg	0.1	<0.1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	104

## OC Pesticides in Water

Method: ME-(AU)-(ENV)AN420

Sample Number	Parameter	Units	LOR	Result
LB180659.001	Hexachlorobenzene (HCB)	µg/L	0.1	<0.1
	Alpha BHC	µg/L	0.1	<0.1
	Lindane (gamma BHC)	µg/L	0.1	<0.1
	Heptachlor	µg/L	0.1	<0.1
	Aldrin	µg/L	0.1	<0.1
	Beta BHC	µg/L	0.1	<0.1
	Delta BHC	µg/L	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## OC Pesticides in Water (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB180659.001	Heptachlor epoxide	µg/L	0.1	<0.1
	Alpha Endosulfan	µg/L	0.1	<0.1
	Gamma Chlordane	µg/L	0.1	<0.1
	Alpha Chlordane	µg/L	0.1	<0.1
	p,p'-DDE	µg/L	0.1	<0.1
	Dieldrin	µg/L	0.1	<0.1
	Endrin	µg/L	0.1	<0.1
	Beta Endosulfan	µg/L	0.1	<0.1
	p,p'-DDD	µg/L	0.1	<0.1
	p,p'-DDT	µg/L	0.1	<0.1
	Endosulfan sulphate	µg/L	0.1	<0.1
	Endrin aldehyde	µg/L	0.1	<0.1
	Methoxychlor	µg/L	0.1	<0.1
	Endrin ketone	µg/L	0.1	<0.1
	Isodrin	µg/L	0.1	<0.1
Surrogates	Mirex	µg/L	0.1	<0.1
	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	64

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB180605.001	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(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
	Total PAH (18)	mg/kg	0.8	<0.8
Surrogates	d5-nitrobenzene (Surrogate)	%	-	96
	2-fluorobiphenyl (Surrogate)	%	-	102
	d14-p-terphenyl (Surrogate)	%	-	94

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB180605.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2
	Arochlor 1254	mg/kg	0.2	<0.2
	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1	<1
	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	104
	Surrogates			

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR	Result
LB180867.001	Total Phenols	mg/kg	5	<5

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR
---------------	-----------	-------	-----

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB180621.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB180605.001	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-C36 Total	mg/kg	110	<110

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB180601.001	Monocyclic Aromatic Hydrocarbons	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
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	76
		d8-toluene (Surrogate)	%	-	72
		Bromofluorobenzene (Surrogate)	%	-	83
	Totals	Total BTEX	mg/kg	0.6	<0.6

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result
LB180601.001	TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Porth)/AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE196199.024	LB180738.014	Mercury	µg/L	0.0001	<0.0001	0.0000	200	39
SE196280.001	LB180738.024	Mercury	µg/L	0.0001	0.0102	0.0122	200	18

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE196259.010	LB180622.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

## Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE196259.004	LB180606.011	% Moisture	%w/w	0.5	6.1	5.9	47	5
SE196259.014	LB180606.022	% Moisture	%w/w	0.5	18	18	35	1
SE196259.020	LB180606.029	% Moisture	%w/w	0.5	5.4	5.3	49	2

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE196259.006	LB180605.014	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
		Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates						
		d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	9
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	9
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	9
SE196259.020	LB180605.024	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

#### PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE196259.020	LB180605.024	Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
		Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates						
		d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	0
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	0
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	2

#### pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE196259.008	LB180758.023	pH	pH Units	0.1	5.8	5.913	32	1
SE196259.019	LB180758.022	pH	pH Units	0.1	5.0	5.0	32	0

#### Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE196259.001	LB180867.004	Total Phenols	mg/kg	5	<5	<5	49	55 @

#### Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE196259.010	LB180621.014	Arsenic, As	mg/kg	1	3	4	60	30
		Cadmium, Cd	mg/kg	0.3	1.4	1.4	52	4
		Chromium, Cr	mg/kg	0.5	9.5	10	35	6
		Copper, Cu	mg/kg	0.5	4.4	5.1	41	14
		Nickel, Ni	mg/kg	0.5	1.9	2.0	55	4
		Lead, Pb	mg/kg	1	11	11	39	1
		Zinc, Zn	mg/kg	2	30	32	37	7

#### TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE196259.006	LB180605.014	TRH C10-C14	mg/kg	20	<20	<20	200	0
		TRH C15-C28	mg/kg	45	<45	<45	200	0
		TRH C29-C36	mg/kg	45	<45	<45	200	0
		TRH C37-C40	mg/kg	100	<100	<100	200	0
		TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
		TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands						
		TRH >C10-C16	mg/kg	25	<25	<25	200	0
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
		TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
SE196259.020	LB180605.024	TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
		TRH C10-C14	mg/kg	20	NVL	NVL	NVL	NVL
		TRH C15-C28	mg/kg	45	NVL	NVL	NVL	NVL
		TRH C29-C36	mg/kg	45	NVL	NVL	NVL	NVL
		TRH C37-C40	mg/kg	100	NVL	NVL	NVL	NVL
		TRH C10-C36 Total	mg/kg	110	NVL	NVL	NVL	NVL
		TRH F Bands						
		TRH >C16-C34 (F3)	mg/kg	90	NVL	NVL	NVL	NVL
		TRH >C34-C40 (F4)	mg/kg	120	NVL	NVL	NVL	NVL

#### VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE196259.006	LB180601.014	Monocyclic						
		Aromatic						
		Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Toluene	mg/kg	0.1	<0.1	<0.1	200	0
		Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
		m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
		o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic						
		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates						
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.7	7.9	50	3
		d8-toluene (Surrogate)	mg/kg	-	7.1	7.4	50	5
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.0	8.3	50	4
		Totals						
		Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0



Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## VOC's in Soil (continued)

Method: ME-(AU)-ENVJAN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE196259.006	LB180601.014	Totals	Total BTEX	mg/kg	0.6	<0.6	200	0
SE196259.020	LB180601.027	Monocyclic	Benzene	mg/kg	0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	147	0
			Ethylbenzene	mg/kg	0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.3	50	8
			d8-toluene (Surrogate)	mg/kg	-	8.3	50	0
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.4	50	5
		Totals	Total Xylenes	mg/kg	0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	200	0

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE196259.006	LB180601.014	TRH C6-C10	mg/kg	25	<25	<25	200	0
		TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.7	30	3
			d8-toluene (Surrogate)	mg/kg	-	7.1	30	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.0	30	4
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	200	0
SE196259.020	LB180601.027	TRH C6-C10	mg/kg	25	<25	0	200	0
		TRH C6-C9	mg/kg	20	<20	0	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.3	30	8
			d8-toluene (Surrogate)	mg/kg	-	8.3	30	0
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.4	30	5
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]JAN122

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB180718.002	Exchangeable Sodium, Na	mg/kg	2	NA	72.68	80 - 120	105
	Exchangeable Potassium, K	mg/kg	2	NA	238.12	80 - 120	108
	Exchangeable Calcium, Ca	mg/kg	2	NA	692	80 - 120	93
	Exchangeable Magnesium, Mg	mg/kg	2	NA	134.2	80 - 120	93

## Mercury in Soil

Method: ME-(AU)-[ENV]JAN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB180622.002	Mercury	mg/kg	0.05	0.20	0.2	70 - 130	102

## Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]JAN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB180645.002	Arsenic, As	mg/L	0.02	1.9	2	80 - 120	95
	Cadmium, Cd	mg/L	0.001	1.9	2	80 - 120	95
	Chromium, Cr	mg/L	0.005	1.9	2	80 - 120	95
	Copper, Cu	mg/L	0.005	1.9	2	80 - 120	96
	Lead, Pb	mg/L	0.02	1.9	2	80 - 120	94
	Nickel, Ni	mg/L	0.005	1.9	2	80 - 120	95
	Zinc, Zn	mg/L	0.01	1.9	2	80 - 120	93

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]JAN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB180605.002	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	114
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	109
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	105
	Dieldrin	mg/kg	0.05	0.19	0.2	60 - 140	94
	Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	99
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	95
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	40 - 130	98

## OC Pesticides in Water

Method: ME-(AU)-[ENV]JAN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB180659.002	Heptachlor	µg/L	0.1	0.2	0.2	60 - 140	94
	Aldrin	µg/L	0.1	0.2	0.2	60 - 140	78
	Delta BHC	µg/L	0.1	0.2	0.2	60 - 140	101
	Dieldrin	µg/L	0.1	0.2	0.2	60 - 140	107
	Endrin	µg/L	0.1	0.2	0.2	60 - 140	105
	p,p'-DDT	µg/L	0.1	0.2	0.2	60 - 140	107
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	µg/L	-	0.11	0.15	40 - 130	71

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]JAN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB180605.002	Naphthalene	mg/kg	0.1	4.1	4	60 - 140	103
	Acenaphthylene	mg/kg	0.1	4.0	4	60 - 140	99
	Acenaphthene	mg/kg	0.1	4.1	4	60 - 140	103
	Phenanthrene	mg/kg	0.1	4.1	4	60 - 140	103
	Anthracene	mg/kg	0.1	3.8	4	60 - 140	96
	Fluoranthene	mg/kg	0.1	3.9	4	60 - 140	97
	Pyrene	mg/kg	0.1	4.1	4	60 - 140	101
	Benzo(a)pyrene	mg/kg	0.1	4.0	4	60 - 140	101
	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	98
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	102
Surrogates	d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	88

## PCBs in Soil

Method: ME-(AU)-[ENV]JAN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB180605.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	106

## pH in soil (1:5)

Method: ME-(AU)-[ENV]JAN101

Sample Number	Parameter	Units	LOR
---------------	-----------	-------	-----

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## pH in soil (1:5) (continued)

Method: ME-(AU)-[ENV]AN101

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB180758.003	pH	pH Units	0.1	7.5	7.415	98 - 102	100

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB180867.002	Total Phenols	mg/kg	5	<5	2.5	70 - 130	89

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB180621.002	Arsenic, As	mg/kg	1	320	336.32	79 - 120	95
	Cadmium, Cd	mg/kg	0.3	420	416.6	69 - 131	101
	Chromium, Cr	mg/kg	0.5	34	35.2	80 - 120	97
	Copper, Cu	mg/kg	0.5	320	370.46	80 - 120	88
	Nickel, Ni	mg/kg	0.5	180	210.88	79 - 120	85
	Lead, Pb	mg/kg	1	92	107.87	79 - 120	85
	Zinc, Zn	mg/kg	2	280	301.27	80 - 121	92

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB180605.002	TRH C10-C14	mg/kg	20	39	40	60 - 140	98
	TRH C15-C28	mg/kg	45	<45	40	60 - 140	88
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	78
	TRH F Bands	mg/kg	25	38	40	60 - 140	95
	TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	78
	TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	90

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB180601.002	Monocyclic	Benzene	mg/kg	0.1	2.4	2.9	60 - 140	81
	Aromatic	Toluene	mg/kg	0.1	2.9	2.9	60 - 140	100
		Ethylbenzene	mg/kg	0.1	2.8	2.9	60 - 140	95
		m/p-xylene	mg/kg	0.2	5.7	5.8	60 - 140	98
		o-xylene	mg/kg	0.1	2.7	2.9	60 - 140	94
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.1	10	60 - 140	81
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.0	10	60 - 140	80
LB180601.026	Monocyclic	Benzene	mg/kg	0.1	NA	2.9	60 - 140	63
	Aromatic	Toluene	mg/kg	0.1	NA	2.9	60 - 140	68
		Ethylbenzene	mg/kg	0.1	NA	2.9	60 - 140	76
		m/p-xylene	mg/kg	0.2	NA	5.8	60 - 140	69
		o-xylene	mg/kg	0.1	NA	2.9	60 - 140	71
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	NA	10	60 - 140	72
		Bromofluorobenzene (Surrogate)	mg/kg	-	NA	10	60 - 140	91

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB180601.026	TRH C6-C10	mg/kg	25	NA	24.65	60 - 140	86	
	TRH C6-C9	mg/kg	20	NA	23.2	60 - 140	89	
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	NA	10	60 - 140	72
		Bromofluorobenzene (Surrogate)	mg/kg	-	NA	10	60 - 140	91
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	NA	7.25	60 - 140	124

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Porth)/AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE196129.001	LB180738.004	Mercury	mg/L	0.0001	0.0064	<0.0001	0.008	80

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE196259.001	LB180622.004	Mercury	mg/kg	0.05	0.19	<0.05	0.2	88

## Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE196251.019	LB180645.004	Arsenic, As	mg/L	0.02	1.8	<0.02	2	92
		Cadmium, Cd	mg/L	0.001	1.8	<0.001	2	91
		Chromium, Cr	mg/L	0.005	1.8	<0.005	2	88
		Copper, Cu	mg/L	0.005	1.8	<0.005	2	90
		Lead, Pb	mg/L	0.02	1.8	<0.02	2	90
		Nickel, Ni	mg/L	0.005	1.8	<0.005	2	89
		Zinc, Zn	mg/L	0.01	1.8	<0.01	2	88

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE196259.001	LB180605.026	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	-	-
		Alpha BHC	mg/kg	0.1	<0.1	-	-
		Lindane	mg/kg	0.1	<0.1	-	-
		Heptachlor	mg/kg	0.1	<0.1	0.2	121
		Aldrin	mg/kg	0.1	<0.1	0.2	116
		Beta BHC	mg/kg	0.1	<0.1	-	-
		Delta BHC	mg/kg	0.1	<0.1	0.2	112
		Heptachlor epoxide	mg/kg	0.1	<0.1	-	-
		o,p'-DDE	mg/kg	0.1	<0.1	-	-
		Alpha Endosulfan	mg/kg	0.2	<0.2	-	-
		Gamma Chlordane	mg/kg	0.1	<0.1	-	-
		Alpha Chlordane	mg/kg	0.1	<0.1	-	-
		trans-Nonachlor	mg/kg	0.1	<0.1	-	-
		p,p'-DDE	mg/kg	0.1	<0.1	-	-
		Dieldrin	mg/kg	0.05	<0.05	0.2	107
		Endrin	mg/kg	0.2	<0.2	0.2	104
		o,p'-DDD	mg/kg	0.1	<0.1	-	-
		o,p'-DDT	mg/kg	0.1	<0.1	-	-
		Beta Endosulfan	mg/kg	0.2	<0.2	-	-
		p,p'-DDD	mg/kg	0.1	<0.1	-	-
		p,p'-DDT	mg/kg	0.1	<0.1	0.2	110
		Endosulfan sulphate	mg/kg	0.1	<0.1	-	-
		Endrin Aldehyde	mg/kg	0.1	<0.1	-	-
		Methoxychlor	mg/kg	0.1	<0.1	-	-
		Endrin Ketone	mg/kg	0.1	<0.1	-	-
		Isodrin	mg/kg	0.1	<0.1	-	-
		Mirex	mg/kg	0.1	<0.1	-	-
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.17	-	103

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE196270.001	LB180605.004	Naphthalene	mg/kg	0.1	4.2	0	4	105
		2-methylnaphthalene	mg/kg	0.1	<0.1	0	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	0	-	-
		Acenaphthylene	mg/kg	0.1	4.3	0	4	107
		Acenaphthene	mg/kg	0.1	4.5	0	4	111
		Fluorene	mg/kg	0.1	<0.1	0	-	-
		Phenanthrene	mg/kg	0.1	4.5	0.05	4	110
		Anthracene	mg/kg	0.1	4.2	0.04	4	104
		Fluoranthene	mg/kg	0.1	4.1	0	4	103

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE196270.001	LB180605.004	Pyrene	mg/kg	0.1	4.5	0	4	112
		Benzo(a)anthracene	mg/kg	0.1	<0.1	0	-	-
		Chrysene	mg/kg	0.1	<0.1	0	-	-
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	0	-	-
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	0	-	-
		Benzo(a)pyrene	mg/kg	0.1	4.4	0	4	110
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	0	-	-
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	0	-	-
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	0	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	4.4	0	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	4.5	0.242	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	4.5	0.121	-	-
		Total PAH (18)	mg/kg	0.8	35	0	-	-
		Surrogates						
		d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.46	-	94
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.42	-	84
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.43	-	86

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE196259.001	LB180605.025	Arochlor 1016	mg/kg	0.2	<0.2	-	-
		Arochlor 1221	mg/kg	0.2	<0.2	-	-
		Arochlor 1232	mg/kg	0.2	<0.2	-	-
		Arochlor 1242	mg/kg	0.2	<0.2	-	-
		Arochlor 1248	mg/kg	0.2	<0.2	-	-
		Arochlor 1254	mg/kg	0.2	<0.2	-	-
		Arochlor 1260	mg/kg	0.2	<0.2	0.4	105
		Arochlor 1262	mg/kg	0.2	<0.2	-	-
		Arochlor 1268	mg/kg	0.2	<0.2	-	-
		Total PCBs (Arochlors)	mg/kg	1	<1	-	-
		Surrogates					
		Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	-	104

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE196259.020	LB180867.013	Total Phenols	mg/kg	5	<5	<5	2.5	70 @

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE196259.001	LB180621.004	Arsenic, As	mg/kg	1	49	4	50	89
		Cadmium, Cd	mg/kg	0.3	52	1.3	50	101
		Chromium, Cr	mg/kg	0.5	58	8.5	50	99
		Copper, Cu	mg/kg	0.5	58	3.9	50	108
		Nickel, Ni	mg/kg	0.5	52	1.8	50	100
		Lead, Pb	mg/kg	1	59	9	50	99
		Zinc, Zn	mg/kg	2	71	37	50	67 @

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE196270.001	LB180605.025	TRH C10-C14	mg/kg	20	0	40	105
		TRH C15-C28	mg/kg	45	0	40	113
		TRH C29-C36	mg/kg	45	0	40	110
		TRH C37-C40	mg/kg	100	0	-	-
		TRH C10-C36 Total	mg/kg	110	0	-	-
		TRH C10-C40 Total (F bands)	mg/kg	210	0	-	-
		TRH F Bands					
		TRH >C10-C16	mg/kg	25	0	40	105
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	0	-	-
		TRH >C16-C34 (F3)	mg/kg	90	0	40	115
		TRH >C34-C40 (F4)	mg/kg	120	0	-	-

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR
-----------	---------------	-----------	-------	-----

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%	
SE196270.001	LB180601.004	Monocyclic	Benzene	mg/kg	0.1	1.8	0.01	2.9	63	
			Aromatic	Toluene	mg/kg	0.1	2.0	0.01	2.9	67
			Ethylbenzene	mg/kg	0.1	2.2	0.01	2.9	74	
			m/p-xylene	mg/kg	0.2	3.9	0.02	5.8	67	
			o-xylene	mg/kg	0.1	2.1	0.01	2.9	70	
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	0.02	-	-	
		Surrogates	d4-1,2-dichloroethane (Surrogate)		mg/kg	-	7.6	7.4	-	76
			d8-toluene (Surrogate)		mg/kg	-	7.2	7	-	72
			Bromofluorobenzene (Surrogate)		mg/kg	-	9.5	7.75	-	95
		Totals	Total Xylenes		mg/kg	0.3	6.0	0.03	-	-
			Total BTEX		mg/kg	0.6	12	0.06	-	-

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%	
SE196270.001	LB180601.004	TRH C6-C10	mg/kg	25	<25	0	24.65	82	
		TRH C6-C9	mg/kg	20	<20	0	23.2	85	
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.6	7.4	-	76
			d8-toluene (Surrogate)	mg/kg	-	7.2	7	-	72
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.5	7.75	-	95
		VPH F	Benzene (F0)	mg/kg	0.1	1.8	0.01	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	-0.06	7.25	114

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No matrix spike duplicates were required for this job.



Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here : [https://www.sgs.com.au/~media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022\\_QA\\_QC\\_Plan.pdf](https://www.sgs.com.au/~media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022_QA_QC_Plan.pdf)

- \* NATA accreditation does not cover the performance of this service .
  - \*\* Indicative data, theoretical holding time exceeded.
  - Sample not analysed for this analyte.
  - IS Insufficient sample for analysis.
  - LNR Sample listed, but not received.
  - LOR Limit of reporting.
  - QFH QC result is above the upper tolerance.
  - QFL QC result is below the lower tolerance.
- 
- ① At least 2 of 3 surrogates are within acceptance criteria.
  - ② RPD failed acceptance criteria due to sample heterogeneity.
  - ③ Results less than 5 times LOR preclude acceptance criteria for RPD.
  - ④ Recovery failed acceptance criteria due to matrix interference.
  - ⑤ Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
  - ⑥ LOR was raised due to sample matrix interference.
  - ⑦ LOR was raised due to dilution of significantly high concentration of analyte in sample.
  - ⑧ Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
  - ⑨ Recovery failed acceptance criteria due to sample heterogeneity.
  - ⑩ LOR was raised due to high conductivity of the sample (required dilution).
  - † Refer to Analytical Report comments for further information.

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law .

This test report shall not be reproduced, except in full.

## CLIENT DETAILS

Contact Saurabh Sapkota  
 Client Geotechnique  
 Address P.O. Box 880  
 NSW 2751

Telephone 02 4722 2700  
 Facsimile 02 4722 6161  
 Email Saurabh@geotech.com.au

Project **14513-1 Marsden Park**  
 Order Number (Not specified)  
 Samples 12

## 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 **SE196259 R0**  
 Date Received 08 Aug 2019  
 Date Reported 15 Aug 2019

## 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.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

## SIGNATORIES



Akheeque Beniamen  
Chemist



Bennet Lo  
Senior Organic Chemist/Metals Chemis



Dong Liang  
Metals/Inorganics Team Leader



Ly Kim Ha  
Organic Section Head



Ravee Sivasubramaniam  
Hygiene Team Leader

### RESULTS

Fibre Identification in soil

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE196259.001	TP1	Other	745g Clay,Sand,Soil, Rocks	07 Aug 2019	No Asbestos Found	<0.01
SE196259.004	TP2	Other	692g Clay,Sand,Soil, Rocks	07 Aug 2019	No Asbestos Found	<0.01
SE196259.005	TP2	Other	470g Clay,Rocks	07 Aug 2019	No Asbestos Found	<0.01
SE196259.006	TP3	Other	723g Clay,Sand,Soil, Rocks	07 Aug 2019	No Asbestos Found	<0.01
SE196259.008	TP4	Other	745g Clay,Sand,Soil, Rocks	07 Aug 2019	No Asbestos Found	<0.01
SE196259.009	TP4	Other	439g Clay,Rocks	07 Aug 2019	No Asbestos Found	<0.01
SE196259.010	TP5	Other	651g Clay,Sand,Soil, Rocks	07 Aug 2019	No Asbestos Found Organic Fibres Detected	<0.01
SE196259.012	TP6	Other	690g Clay,Sand,Soil, Rocks	07 Aug 2019	No Asbestos Found	<0.01
SE196259.013	TP6	Other	348g Clay,Rocks	07 Aug 2019	No Asbestos Found	<0.01
SE196259.015	TP7	Other	730g Clay,Sand,Soil, Rocks	07 Aug 2019	No Asbestos Found	<0.01
SE196259.017	TP8	Other	645g Clay,Sand,Soil, Rocks	07 Aug 2019	No Asbestos Found Organic Fibres Detected	<0.01
SE196259.018	TP8	Other	342g Clay,Rocks	07 Aug 2019	No Asbestos Found	<0.01

## 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 unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
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	<p>The sample can be reported "no asbestos found at the reporting limit of 0.1 g/kg" (&lt;0.01%w/w) where AN602 section 4.5 of this method has been followed, and if-</p> <ul style="list-style-type: none"> <li>(a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres);</li> <li>(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</li> <li>(c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.</li> </ul>

## 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.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

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 and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: [www.sgs.com.au/pv.sgsvr/en-qb/environment](http://www.sgs.com.au/pv.sgsvr/en-qb/environment).

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

This test report shall not be reproduced, except in full.

**E-MAILED**

81811006-39

**GEOTECHNIQUE PTY LTD**

1 LEMKO PLACE PENRITH NSW 2750

Tel: (02) 4722 2700

**CHAIN OF CUSTODY**

Results Required By: Normal Turnaround  
Except pH Results Required By 3 days

Date: Thursday, 15 August 2019  
Date: Tuesday, 13 August 2019

Your Reference No.:

TO: SGS UNIT 16, 33 MADDOX STREET ALEXANDRIA NSW 2015 Tel: 02 8594 0400								Sampled By: IC								Ref No: 14513/1								Project Manager: SAURABH SAPKOTA							
Location	Depth (m)	Date	Soil	Water	Material	Metals As Cd Cr Cu Pb Hg Ni Zn	pH	CEC	CL8 TRH BTEX PAH	CL10 Metals* TRH BTEX PAH	CL16 Metals* TRH BTEX PAH OC PCB	Be B Co Mn Se	Mn	Asbestos 0.001% w/w	Asbestos	BTEX	TRH & BTEX	PAH	OCF & PCB	Phenol	Cyanide	VOC	OCF OPP & PCB								
1	TP1	0.0-0.15	7/08/19	GP	Clay						✓				✓					✓											
2	TP1	0.3-0.6	07/08/19	GP	Clay		✓	✓			✓																				
3	TP1	0.65-0.75	07/08/19	G	Clay	✓	✓	✓																							
4	TP2	0.0-0.15	07/08/19	GP	Clay		✓	✓			✓				✓					✓											
5	TP2	0.3-0.6	07/08/19	GP	Clay	✓									✓																
	TP2	0.65-0.75	07/08/19	G	Clay																										
6	TP3	0.0-0.15	07/08/19	GP	Clay						✓				✓					✓											
7	TP3	0.5-0.6	07/08/19	G	Clay		✓	✓			✓				✓					✓											
8	TP4	0.0-0.15	07/08/19	GP	Clay		✓	✓			✓				✓					✓											
9	TP4	0.3-0.6	07/08/19	GP	Clay	✓									✓																
	TP4	0.75-0.85	07/08/19	G	Clay																										
10	TP5	0.0-0.15	07/08/19	GP	Clay						✓				✓					✓											
11	TP5	0.3-0.6	07/08/19	GP	Clay		✓	✓			✓																				
	TP5	0.75-0.85	07/08/19	G	Clay																										
12	TP6	0.0-0.15	07/08/19	GP	Clay		✓	✓			✓				✓					✓											
13	TP6	0.3-0.5	07/08/19	GP	Clay	✓									✓																
14	TP6	0.55-0.65	07/08/19	G	Clay	✓	✓	✓																							
15	TP7	0.0-0.15	07/08/19	GP	Clay						✓				✓					✓											
16	TP7	0.3-0.5	07/08/19	GP	Clay		✓	✓			✓																				
	TP7	0.55-0.65	07/08/19	G	Clay																										
17	TP8	0.0-0.15	07/08/19	GP	Clay		✓	✓			✓				✓					✓											
18	TP8	0.2-0.5	07/08/19	GP	Clay	✓									✓																
19	TP8	0.55-0.65	07/08/19	G	Clay	✓	✓	✓																							
20	DDS1		07/08/19	G	Clay						✓									✓											
	DDS2		07/08/19	G	Clay																										
21	RS1		07/08/19		WG/Vial	✓													✓												
22	TS1															✓															

Relinquished by			Received by		
Name	Signature	Date	Name	Signature	Date
SAURABH SAPKOTA	SS	08/08/19	Suba	Suba	08/08/19 @ 4.~

WG: Water sample (glass bottle) G Soil sample (glass jar) FCP Fibro Cement Piece (plastic bag) \*. As,Cd,Cr,Cu,Pb,Hg,Ni & Zn (8 metals)  
WP: Water sample (plastic bottle) P Soil sample (plastic bag) ✓ Test required

SGS EHS Alexandria Laboratory



**SE196259 COC**  
Received: 09 - Aug - 2019



## SAMPLE RECEIPT ADVICE

SE196259

### CLIENT DETAILS

Contact Saurabh Sapkota  
Client Geotechnique  
Address P.O. Box 880  
NSW 2751  
  
Telephone 02 4722 2700  
Facsimile 02 4722 6161  
Email Saurabh@geotech.com.au  
  
Project **14513-1 Marsden Park**  
Order Number (Not specified)  
Samples 22

### 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  
  
Samples Received Thu 8/8/2019  
Report Due Thu 15/8/2019  
SGS Reference **SE196259**

### SUBMISSION DETAILS

This is to confirm that 22 samples were received on Thursday 8/8/2019. Results are expected to be ready by COB Thursday 15/8/2019. Please quote SGS reference SE196259 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	20 Clay, 1 Sand, 1 Water
Date documentation received	8/8/2019@6:39pm	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	11.3°C	Sufficient sample for analysis	Yes
Turnaround time requested	3 Day/Standard		

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

### COMMENTS

5 samples have been placed on hold as no tests have been assigned for them by the client. These samples will not be processed.

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

## CLIENT DETAILS

Client **Geotechnique**

Project **14513-1 Marsden Park**

## SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	pH in soil (1:5)	Total Phenolics in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	TP1 0.0-0.15	28	26	11	-	1	10	11	7
002	TP1 0.3-0.6	28	26	11	1	-	10	11	7
003	TP1 0.65-0.75	-	-	-	1	-	-	-	-
004	TP2 0.0-0.15	28	26	11	1	1	10	11	7
006	TP3 0.0-0.15	28	26	11	-	1	10	11	7
007	TP3 0.5-0.6	28	26	11	1	-	10	11	7
008	TP4 0.0-0.15	28	26	11	1	1	10	11	7
010	TP5 0.0-0.15	28	26	11	-	1	10	11	7
011	TP5 0.3-0.6	28	26	11	1	-	10	11	7
012	TP6 0.0-0.15	28	26	11	1	1	10	11	7
014	TP6 0.55-0.65	-	-	-	1	-	-	-	-
015	TP7 0.0-0.15	28	26	11	-	1	10	11	7
016	TP7 0.3-0.5	28	26	11	1	-	10	11	7
017	TP8 0.0-0.15	28	26	11	1	1	10	11	7
019	TP8 0.55-0.65	-	-	-	1	-	-	-	-
020	DDS1	28	26	11	-	1	10	11	7
022	TS1	-	-	-	-	-	-	8	-

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .



## CLIENT DETAILS

Client Geotechnique

Project 14513-1 Marsden Park

## SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Fibre Identification in soil	Gravimetric Determination of Asbestos in Soil	Mercury in Soil	Moisture Content	Total Recoverable Elements in Soil/Waste
001	TP1 0.0-0.15	-	2	9	1	1	7
002	TP1 0.3-0.6	13	-	-	1	1	7
003	TP1 0.65-0.75	13	-	-	1	1	7
004	TP2 0.0-0.15	13	2	9	1	1	7
005	TP2 0.3-0.6	-	2	9	1	1	7
006	TP3 0.0-0.15	-	2	9	1	1	7
007	TP3 0.5-0.6	13	-	-	1	1	7
008	TP4 0.0-0.15	13	2	9	1	1	7
009	TP4 0.3-0.6	-	2	9	1	1	7
010	TP5 0.0-0.15	-	2	9	1	1	7
011	TP5 0.3-0.6	13	-	-	1	1	7
012	TP6 0.0-0.15	13	2	9	1	1	7
013	TP6 0.3-0.5	-	2	9	1	1	7
014	TP6 0.55-0.65	13	-	-	1	1	7
015	TP7 0.0-0.15	-	2	9	1	1	7
016	TP7 0.3-0.5	13	-	-	1	1	7
017	TP8 0.0-0.15	13	2	9	1	1	7
018	TP8 0.2-0.5	-	2	9	1	1	7
019	TP8 0.55-0.65	13	-	-	1	1	7
020	DDS1	-	-	-	1	1	7

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .



## SAMPLE RECEIPT ADVICE

SE196259

### CLIENT DETAILS

Client **Geotechnique**

Project **14513-1 Marsden Park**

### SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water	Metals in Water (Dissolved) by ICPOES	OC Pesticides in Water
021	RS1	1	7	28

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.  
The numbers shown in the table indicate the number of results requested in each package.  
Please indicate as soon as possible should your request differ from these details .  
Testing as per this table shall commence immediately unless the client intervenes with a correction .

## **CERTIFICATE OF ANALYSIS 223488**

### **Client Details**

<b>Client</b>	Geotechnique Pty Ltd
<b>Attention</b>	Saurabh Sapkota
<b>Address</b>	PO Box 880, Penrith, NSW, 2751

### **Sample Details**

<b>Your Reference</b>	<b><u>14513/1, Marsden Park</u></b>
<b>Number of Samples</b>	2 soil
<b>Date samples received</b>	08/08/2019
<b>Date completed instructions received</b>	08/08/2019

### **Analysis Details**

Please refer to the following pages for results, methodology summary and quality control data.  
 Samples were analysed as received from the client. Results relate specifically to the samples as received.  
 Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

### **Report Details**

<b>Date results requested by</b>	16/08/2019
<b>Date of Issue</b>	14/08/2019
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. <b>Tests not covered by NATA are denoted with *</b>	

#### **Results Approved By**

Diego Bigolin, Team Leader, Inorganics  
 Loren Bardwell, Senior Chemist  
 Steven Luong, Organics Supervisor

#### **Authorised By**



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		223488-1
Your Reference	UNITS	DSS1
Date Sampled		07/08/2019
Type of sample		soil
Date extracted	-	12/08/2019
Date analysed	-	14/08/2019
TRH C <sub>6</sub> - C <sub>9</sub>	mg/kg	<25
TRH C <sub>6</sub> - C <sub>10</sub>	mg/kg	<25
vTPH C <sub>6</sub> - C <sub>10</sub> less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<3
Surrogate aaa-Trifluorotoluene	%	62

svTRH (C10-C40) in Soil		
Our Reference		223488-1
Your Reference	UNITS	DSS1
Date Sampled		07/08/2019
Type of sample		soil
Date extracted	-	12/08/2019
Date analysed	-	13/08/2019
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	<50
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	<100
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	<100
TRH >C <sub>10</sub> -C <sub>16</sub>	mg/kg	<50
TRH >C <sub>10</sub> - C <sub>16</sub> less Naphthalene (F2)	mg/kg	<50
TRH >C <sub>16</sub> -C <sub>34</sub>	mg/kg	<100
TRH >C <sub>34</sub> -C <sub>40</sub>	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	88

PAHs in Soil		
Our Reference		223488-1
Your Reference	UNITS	DSS1
Date Sampled		07/08/2019
Type of sample		soil
Date extracted	-	12/08/2019
Date analysed	-	12/08/2019
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	96

Organochlorine Pesticides in soil		
Our Reference		223488-1
Your Reference	UNITS	DSS1
Date Sampled		07/08/2019
Type of sample		soil
Date extracted	-	12/08/2019
Date analysed	-	13/08/2019
HCB	mg/kg	<0.1
alpha-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1
Surrogate TCMX	%	99



PCBs in Soil		
Our Reference		223488-1
Your Reference	UNITS	DSS1
Date Sampled		07/08/2019
Type of sample		soil
Date extracted	-	12/08/2019
Date analysed	-	13/08/2019
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate TCMX	%	99

Acid Extractable metals in soil		
Our Reference		223488-1
Your Reference	UNITS	DSS1
Date Sampled		07/08/2019
Type of sample		soil
Date prepared	-	12/08/2019
Date analysed	-	12/08/2019
Arsenic	mg/kg	5
Cadmium	mg/kg	<0.4
Chromium	mg/kg	14
Copper	mg/kg	4
Lead	mg/kg	11
Mercury	mg/kg	<0.1
Nickel	mg/kg	3
Zinc	mg/kg	19

Misc Soil - Inorg		
Our Reference		223488-1
Your Reference	UNITS	DSS1
Date Sampled		07/08/2019
Type of sample		soil
Date prepared	-	12/08/2019
Date analysed	-	12/08/2019
Total Phenolics (as Phenol)	mg/kg	<5

Moisture		
Our Reference		223488-1
Your Reference	UNITS	DSS1
Date Sampled		07/08/2019
Type of sample		soil
Date prepared	-	12/08/2019
Date analysed	-	13/08/2019
Moisture	%	5.0

Method ID	Methodology Summary
<b>Inorg-008</b>	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
<b>Inorg-031</b>	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
<b>Metals-020</b>	Determination of various metals by ICP-AES.
<b>Metals-021</b>	Determination of Mercury by Cold Vapour AAS.
<b>Org-003</b>	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
<b>Org-003</b>	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.  F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.  Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
<b>Org-005</b>	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
<b>Org-005</b>	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
<b>Org-006</b>	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
<b>Org-006</b>	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs.

Method ID	Methodology Summary
<b>Org-012</b>	<p>Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.</p> <p>For soil results:-</p> <ol style="list-style-type: none"> <li>1. 'EQ PQL' values are assuming all contributing PAHs reported as &lt;PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present.</li> <li>2. 'EQ zero' values are assuming all contributing PAHs reported as &lt;PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL.</li> <li>3. 'EQ half PQL' values are assuming all contributing PAHs reported as &lt;PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above.</li> </ol> <p>Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.</p>
<b>Org-014</b>	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
<b>Org-016</b>	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
<b>Org-016</b>	<p>Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.</p> <p>Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.</p>

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			12/08/2019	[NT]	[NT]	[NT]	[NT]	12/08/2019	[NT]
Date analysed	-			14/08/2019	[NT]	[NT]	[NT]	[NT]	14/08/2019	[NT]
TRH C <sub>6</sub> - C <sub>9</sub>	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	93	[NT]
TRH C <sub>6</sub> - C <sub>10</sub>	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	93	[NT]
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	[NT]	[NT]	91	[NT]
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	[NT]	[NT]	93	[NT]
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	94	[NT]
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]
naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	96	[NT]	[NT]	[NT]	[NT]	92	[NT]



QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			12/08/2019	[NT]	[NT]	[NT]	[NT]	12/08/2019	[NT]
Date analysed	-			12/08/2019	[NT]	[NT]	[NT]	[NT]	12/08/2019	[NT]
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	90	[NT]
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	95	[NT]
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	88	[NT]
TRH >C <sub>10</sub> -C <sub>16</sub>	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	90	[NT]
TRH >C <sub>16</sub> -C <sub>34</sub>	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	95	[NT]
TRH >C <sub>34</sub> -C <sub>40</sub>	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	88	[NT]
Surrogate o-Terphenyl	%		Org-003	89	[NT]	[NT]	[NT]	[NT]	94	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			12/08/2019	[NT]	[NT]	[NT]	[NT]	12/08/2019	[NT]
Date analysed	-			12/08/2019	[NT]	[NT]	[NT]	[NT]	12/08/2019	[NT]
Naphthalene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	91	[NT]
Phenanthrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	[NT]	[NT]	[NT]	[NT]	99	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	97	[NT]	[NT]	[NT]	[NT]	92	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			12/08/2019	[NT]	[NT]	[NT]	[NT]	12/08/2019	[NT]
Date analysed	-			13/08/2019	[NT]	[NT]	[NT]	[NT]	13/08/2019	[NT]
HCB	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	87	[NT]
gamma-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	85	[NT]
Heptachlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	76	[NT]
delta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	91	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Dieldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Endrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	91	[NT]
pp-DDD	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Endosulfan II	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	76	[NT]
Methoxychlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCMX	%		Org-005	102	[NT]	[NT]	[NT]	[NT]	109	[NT]

Client Reference: 14513/1, Marsden Park

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			12/08/2019	[NT]	[NT]	[NT]	[NT]	12/08/2019	[NT]
Date analysed	-			13/08/2019	[NT]	[NT]	[NT]	[NT]	13/08/2019	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCMX	%		Org-006	102	[NT]	[NT]	[NT]	[NT]	109	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date prepared	-			12/08/2019	[NT]	[NT]	[NT]	[NT]	12/08/2019	[NT]
Date analysed	-			12/08/2019	[NT]	[NT]	[NT]	[NT]	12/08/2019	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	108	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	97	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	111	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]

**Client Reference: 14513/1, Marsden Park**

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date prepared	-			12/08/2019	[NT]	[NT]	[NT]	[NT]	12/08/2019	[NT]
Date analysed	-			12/08/2019	[NT]	[NT]	[NT]	[NT]	12/08/2019	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	[NT]	[NT]	[NT]	[NT]	101	[NT]

## Result Definitions

<b>NT</b>	Not tested
<b>NA</b>	Test not required
<b>INS</b>	Insufficient sample for this test
<b>PQL</b>	Practical Quantitation Limit
<b>&lt;</b>	Less than
<b>&gt;</b>	Greater than
<b>RPD</b>	Relative Percent Difference
<b>LCS</b>	Laboratory Control Sample
<b>NS</b>	Not specified
<b>NEPM</b>	National Environmental Protection Measure
<b>NR</b>	Not Reported

## Quality Control Definitions

<b>Blank</b>	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
<b>Duplicate</b>	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
<b>Matrix Spike</b>	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
<b>LCS (Laboratory Control Sample)</b>	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
<b>Surrogate Spike</b>	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	

## Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.



Lemko Place

PENRITH NSW 2750

Tel: (02) 4722 2700

Page 1 of 1

TO: ENVIROLAB SERVICES PTY LD  
12 ASHLEY STREET  
CHATSWOOD NSW 2067

PH: 02 9910 6200

ATTN: MS AILEEN HIE

Sampling By: IC

Ref No: 14513/1

Project:

Project Manager: SS

Location: Marsden Park

Sampling details				Sample type		Results required by: NORMAL TURNAROUND TIME									
Location	Depth (m)	Date	Time	Soil	Water	METALS As, Cd, Cr, Cu, Pb, Hg, Ni and Zn	TRH & BTEX	PAH	OCP	PCB	PHENOL	CYANIDE	COMBO NO		
DSS1		7/08/2019	-	G		✓	✓	✓	✓	✓	✓		7	Envirolab Services	
DSS2		7/08/2019	-	G										12 Ashley St	
														Chatswood NSW 2067	
														Ph: (02) 9910 6200	
														Job No: 223 488	
														Date Received: 08/08/19	
														Time Received: 15:46	
														Received by: SLB	
														Temp: Cool/Ambient	
														Cooling: Icepack	
														Security: Intact/Broken/None	
Relinquished by						Received by									
Name		Signature		Date		Name		Signature		Date					
SAURABH SAPKOTA		SS		8/08/2019		S. Bolton		SLB		08/08/19					

Legend:

WG Water sample, glass bottle      G Soil sample (glass jar)      P Soil sample (plastic bag)

WP Water sample, plastic bottle      ✓ Test required

recd

## SAMPLE RECEIPT ADVICE

### Client Details

<b>Client</b>	Geotechnique Pty Ltd
<b>Attention</b>	Saurabh Sapkota

### Sample Login Details

<b>Your reference</b>	14513/1, Marsden Park
<b>Envirolab Reference</b>	223488
<b>Date Sample Received</b>	08/08/2019
<b>Date Instructions Received</b>	08/08/2019
<b>Date Results Expected to be Reported</b>	16/08/2019

### Sample Condition

<b>Samples received in appropriate condition for analysis</b>	Yes
<b>No. of Samples Provided</b>	2 soil
<b>Turnaround Time Requested</b>	Standard
<b>Temperature on Receipt (°C)</b>	8.1
<b>Cooling Method</b>	Ice
<b>Sampling Date Provided</b>	YES

### Comments

Nil

Please direct any queries to:

#### Aileen Hie

**Phone:** 02 9910 6200  
**Fax:** 02 9910 6201  
**Email:** ahie@envirolab.com.au

#### Jacinta Hurst

**Phone:** 02 9910 6200  
**Fax:** 02 9910 6201  
**Email:** jhurst@envirolab.com.au

*Analysis Underway, details on the following page:*



**EnviroLab Services Pty Ltd**

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	On Hold
DSS1	✓	✓	✓	✓	✓	✓	✓	
DSS2								✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

### Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

## CLIENT DETAILS

Contact **Anwar Barbhuyia**  
 Client **Geotechnique**  
 Address **P.O. Box 880  
 PENRITH NSW 2751**

Telephone **02 4722 2700**  
 Facsimile **02 4722 6161**  
 Email **anwar@geotech.com.au**

Project **14513-2 Marsden Park**  
 Order Number **(Not specified)**  
 Samples **90**

## 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 **SE198142 R0**  
 Date Received **25/9/2019**  
 Date Reported **2/10/2019**

## 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.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin and Ravee Sivasubramaniam .

## SIGNATORIES



**Bennet LO**  
 Senior Organic Chemist/Metals Chemist



**Dong LIANG**  
 Metals/Inorganics Team Leader



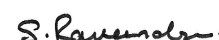
**Huong CRAWFORD**  
 Production Manager



**Kamrul AHSAN**  
 Senior Chemist



**Ly Kim HA**  
 Organic Section Head



**Ravee SIVASUBRAMANIAM**  
 Hygiene Team Leader

VOC's in Soil [AN433] Tested: 27/9/2019

PARAMETER	UOM	LOR	TP1	TP1	TP1	TP2	TP2
			CLAY 0.2-0.5 23/9/2019 SE198142.002	CLAY 1.2-1.5 23/9/2019 SE198142.003	CLAY 2.2-2.4 23/9/2019 SE198142.004	CLAY 0.2-0.5 23/9/2019 SE198142.007	CLAY 1.2-1.5 23/9/2019 SE198142.008
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	TP2	TP3	TP3	TP3	TP4
			CLAY 2.2-2.5 23/9/2019 SE198142.009	CLAY 0.2-0.5 23/9/2019 SE198142.011	CLAY 1.2-1.5 23/9/2019 SE198142.012	CLAY 2.2-2.5 23/9/2019 SE198142.013	CLAY 0.2-0.5 23/9/2019 SE198142.016
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	TP4	TP4	TP5	TP5	TP5
			CLAY 1.2-1.5 23/9/2019 SE198142.017	CLAY 2.2-2.5 23/9/2019 SE198142.018	CLAY 0.2-0.5 23/9/2019 SE198142.020	CLAY 1.2-1.5 23/9/2019 SE198142.021	CLAY 2.2-2.5 23/9/2019 SE198142.022
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	TP6	TP6	TP7	TP7	TP8
			CLAY 0.2-0.5 23/9/2019 SE198142.025	CLAY 1.2-1.5 23/9/2019 SE198142.026	CLAY 0.2-0.5 23/9/2019 SE198142.029	CLAY 1.2-1.5 23/9/2019 SE198142.030	CLAY 0.2-0.5 23/9/2019 SE198142.033
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: 27/9/2019 (continued)

PARAMETER	UOM	LOR	TP8	TP8	TP9	TP9	TP10
			CLAY 1.2-1.5 23/9/2019 SE198142.034	CLAY 2.2-2.5 23/9/2019 SE198142.035	CLAY 0.2-0.5 23/9/2019 SE198142.038	CLAY 1.2-1.5 23/9/2019 SE198142.039	CLAY 0.2-0.5 23/9/2019 SE198142.042
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	TP10	TP11	TP11	TP11	TP12
			CLAY 1.2-1.5 23/9/2019 SE198142.043	CLAY 0.2-0.5 23/9/2019 SE198142.046	CLAY 1.2-1.5 23/9/2019 SE198142.047	CLAY 1.7-1.8 23/9/2019 SE198142.048	CLAY 0.2-0.5 23/9/2019 SE198142.051
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	TP12	TP12	TP13	TP13	TP13
			CLAY 1.2-1.5 23/9/2019 SE198142.052	CLAY 1.8-1.9 23/9/2019 SE198142.053	CLAY 0.2-0.5 23/9/2019 SE198142.056	CLAY 1.2-1.5 23/9/2019 SE198142.057	CLAY 1.9-2.0 23/9/2019 SE198142.058
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	TP14	TP14	TP14	TP15	TP15
			CLAY 0.2-0.5 23/9/2019 SE198142.061	CLAY 1.2-1.5 23/9/2019 SE198142.062	CLAY 1.8-2.0 23/9/2019 SE198142.063	CLAY 0.2-0.5 23/9/2019 SE198142.066	CLAY 1.2-1.5 23/9/2019 SE198142.067
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: 27/9/2019 (continued)

PARAMETER	UOM	LOR	TP16	TP16	TP17	TP17	TP18
			CLAY 0.2-0.5 23/9/2019 SE198142.070	CLAY 1.2-1.5 23/9/2019 SE198142.071	CLAY 0.2-0.5 23/9/2019 SE198142.074	CLAY 1.0-1.3 23/9/2019 SE198142.075	CLAY 0.2-0.5 23/9/2019 SE198142.078
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	TP21	TP22	TP23
			CLAY 0.0-0.15 24/9/2019 SE198142.084	CLAY 0.0-0.15 24/9/2019 SE198142.086	CLAY 0.0-0.15 24/9/2019 SE198142.088
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1

## Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 27/9/2019

PARAMETER	UOM	LOR	TP1	TP1	TP1	TP2	TP2
			CLAY 0.2-0.5 23/9/2019 SE198142.002	CLAY 1.2-1.5 23/9/2019 SE198142.003	CLAY 2.2-2.4 23/9/2019 SE198142.004	CLAY 0.2-0.5 23/9/2019 SE198142.007	CLAY 1.2-1.5 23/9/2019 SE198142.008
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	TP2	TP3	TP3	TP3	TP4
			CLAY 2.2-2.5 23/9/2019 SE198142.009	CLAY 0.2-0.5 23/9/2019 SE198142.011	CLAY 1.2-1.5 23/9/2019 SE198142.012	CLAY 2.2-2.5 23/9/2019 SE198142.013	CLAY 0.2-0.5 23/9/2019 SE198142.016
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	TP4	TP4	TP5	TP5	TP5
			CLAY 1.2-1.5 23/9/2019 SE198142.017	CLAY 2.2-2.5 23/9/2019 SE198142.018	CLAY 0.2-0.5 23/9/2019 SE198142.020	CLAY 1.2-1.5 23/9/2019 SE198142.021	CLAY 2.2-2.5 23/9/2019 SE198142.022
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	TP6	TP6	TP7	TP7	TP8
			CLAY 0.2-0.5 23/9/2019 SE198142.025	CLAY 1.2-1.5 23/9/2019 SE198142.026	CLAY 0.2-0.5 23/9/2019 SE198142.029	CLAY 1.2-1.5 23/9/2019 SE198142.030	CLAY 0.2-0.5 23/9/2019 SE198142.033
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	TP8	TP8	TP9	TP9	TP10
			CLAY 1.2-1.5 23/9/2019 SE198142.034	CLAY 2.2-2.5 23/9/2019 SE198142.035	CLAY 0.2-0.5 23/9/2019 SE198142.038	CLAY 1.2-1.5 23/9/2019 SE198142.039	CLAY 0.2-0.5 23/9/2019 SE198142.042
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	TP10	TP11	TP11	TP11	TP12
			CLAY 1.2-1.5 23/9/2019 SE198142.043	CLAY 0.2-0.5 23/9/2019 SE198142.046	CLAY 1.2-1.5 23/9/2019 SE198142.047	CLAY 1.7-1.8 23/9/2019 SE198142.048	CLAY 0.2-0.5 23/9/2019 SE198142.051
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



## Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 27/9/2019 (continued)

PARAMETER	UOM	LOR	TP12	TP12	TP13	TP13	TP13
			CLAY 1.2-1.5 23/9/2019 SE198142.052	CLAY 1.8-1.9 23/9/2019 SE198142.053	CLAY 0.2-0.5 23/9/2019 SE198142.056	CLAY 1.2-1.5 23/9/2019 SE198142.057	CLAY 1.9-2.0 23/9/2019 SE198142.058
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	TP14	TP14	TP14	TP15	TP15
			CLAY 0.2-0.5 23/9/2019 SE198142.061	CLAY 1.2-1.5 23/9/2019 SE198142.062	CLAY 1.8-2.0 23/9/2019 SE198142.063	CLAY 0.2-0.5 23/9/2019 SE198142.066	CLAY 1.2-1.5 23/9/2019 SE198142.067
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	TP16	TP16	TP17	TP17	TP18
			CLAY 0.2-0.5 23/9/2019 SE198142.070	CLAY 1.2-1.5 23/9/2019 SE198142.071	CLAY 0.2-0.5 23/9/2019 SE198142.074	CLAY 1.0-1.3 23/9/2019 SE198142.075	CLAY 0.2-0.5 23/9/2019 SE198142.078
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	TP21	TP22	TP23
			CLAY 0.0-0.15 24/9/2019 SE198142.084	CLAY 0.0-0.15 24/9/2019 SE198142.086	CLAY 0.0-0.15 24/9/2019 SE198142.088
TRH C6-C9	mg/kg	20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25

## TRH (Total Recoverable Hydrocarbons) in Soil [AN403]    Tested: 27/9/2019

PARAMETER	UOM	LOR	TP1	TP1	TP2	TP2	TP3
			CLAY 0.2-0.5 23/9/2019 SE198142.002	CLAY 1.2-1.5 23/9/2019 SE198142.003	CLAY 0.2-0.5 23/9/2019 SE198142.007	CLAY 2.2-2.5 23/9/2019 SE198142.009	CLAY 0.2-0.5 23/9/2019 SE198142.011
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	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	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 (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	TP3	TP4	TP4	TP5	TP5
			CLAY 1.2-1.5 23/9/2019 SE198142.012	CLAY 0.2-0.5 23/9/2019 SE198142.016	CLAY 2.2-2.5 23/9/2019 SE198142.018	CLAY 0.2-0.5 23/9/2019 SE198142.020	CLAY 1.2-1.5 23/9/2019 SE198142.021
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	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	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 (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	TP6	TP7	TP8	TP8	TP9
			CLAY 0.2-0.5 23/9/2019 SE198142.025	CLAY 0.2-0.5 23/9/2019 SE198142.029	CLAY 0.2-0.5 23/9/2019 SE198142.033	CLAY 1.2-1.5 23/9/2019 SE198142.034	CLAY 0.2-0.5 23/9/2019 SE198142.038
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	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	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 (F bands)	mg/kg	210	<210	<210	<210	<210	<210

## TRH (Total Recoverable Hydrocarbons) in Soil [AN403]    Tested: 27/9/2019    (continued)

PARAMETER	UOM	LOR	TP10	TP11	TP11	TP12	TP12
			CLAY 0.2-0.5 23/9/2019 SE198142.042	CLAY 0.2-0.5 23/9/2019 SE198142.046	CLAY 1.2-1.5 23/9/2019 SE198142.047	CLAY 0.2-0.5 23/9/2019 SE198142.051	CLAY 1.8-1.9 23/9/2019 SE198142.053
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	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	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 (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	TP13	TP13	TP14	TP14	TP15
			CLAY 0.2-0.5 23/9/2019 SE198142.056	CLAY 1.9-2.0 23/9/2019 SE198142.058	CLAY 0.2-0.5 23/9/2019 SE198142.061	CLAY 1.8-2.0 23/9/2019 SE198142.063	CLAY 0.2-0.5 23/9/2019 SE198142.066
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	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	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 (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	TP16	TP16	TP17	TP18	TP21
			CLAY 0.2-0.5 23/9/2019 SE198142.070	CLAY 1.2-1.5 23/9/2019 SE198142.071	CLAY 0.2-0.5 23/9/2019 SE198142.074	CLAY 0.2-0.5 23/9/2019 SE198142.078	CLAY 0.0-0.15 24/9/2019 SE198142.084
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	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	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 (F bands)	mg/kg	210	<210	<210	<210	<210	<210

TRH (Total Recoverable Hydrocarbons) in Soil [AN403]    Tested: 27/9/2019    (continued)

PARAMETER	UOM	LOR	TP22	TP23
			CLAY 0.0-0.15 24/9/2019 SE198142.086	CLAY 0.0-0.15 24/9/2019 SE198142.088
TRH C10-C14	mg/kg	20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110
TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420]    Tested: 27/9/2019

PARAMETER	UOM	LOR	TP1	TP1	TP2	TP2	TP3
			CLAY 0.2-0.5 23/9/2019 SE198142.002	CLAY 1.2-1.5 23/9/2019 SE198142.003	CLAY 0.2-0.5 23/9/2019 SE198142.007	CLAY 2.2-2.5 23/9/2019 SE198142.009	CLAY 0.2-0.5 23/9/2019 SE198142.011
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 (mg/kg)	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	TP3	TP4	TP4	TP5	TP5
			CLAY 1.2-1.5 23/9/2019 SE198142.012	CLAY 0.2-0.5 23/9/2019 SE198142.016	CLAY 2.2-2.5 23/9/2019 SE198142.018	CLAY 0.2-0.5 23/9/2019 SE198142.020	CLAY 1.2-1.5 23/9/2019 SE198142.021
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 (mg/kg)	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: 27/9/2019 (continued)

PARAMETER	UOM	LOR	TP6	TP7	TP8	TP8	TP9
			CLAY 0.2-0.5 23/9/2019 SE198142.025	CLAY 0.2-0.5 23/9/2019 SE198142.029	CLAY 0.2-0.5 23/9/2019 SE198142.033	CLAY 1.2-1.5 23/9/2019 SE198142.034	CLAY 0.2-0.5 23/9/2019 SE198142.038
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 (mg/kg)	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	TP10	TP11	TP11	TP12	TP12
			CLAY 0.2-0.5 23/9/2019 SE198142.042	CLAY 0.2-0.5 23/9/2019 SE198142.046	CLAY 1.2-1.5 23/9/2019 SE198142.047	CLAY 0.2-0.5 23/9/2019 SE198142.051	CLAY 1.8-1.9 23/9/2019 SE198142.053
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 (mg/kg)	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: 27/9/2019 (continued)

PARAMETER	UOM	LOR	TP13	TP13	TP14	TP14	TP15
			CLAY 0.2-0.5 23/9/2019 SE198142.056	CLAY 1.9-2.0 23/9/2019 SE198142.058	CLAY 0.2-0.5 23/9/2019 SE198142.061	CLAY 1.8-2.0 23/9/2019 SE198142.063	CLAY 0.2-0.5 23/9/2019 SE198142.066
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 (mg/kg)	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	TP16	TP16	TP17	TP18	TP21
			CLAY 0.2-0.5 23/9/2019 SE198142.070	CLAY 1.2-1.5 23/9/2019 SE198142.071	CLAY 0.2-0.5 23/9/2019 SE198142.074	CLAY 0.2-0.5 23/9/2019 SE198142.078	CLAY 0.0-0.15 24/9/2019 SE198142.084
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 (mg/kg)	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: 27/9/2019    (continued)

PARAMETER	UOM	LOR	TP22	TP23
			CLAY 0.0-0.15 24/9/2019 SE198142.086	CLAY 0.0-0.15 24/9/2019 SE198142.088
Naphthalene	mg/kg	0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8



OC Pesticides in Soil [AN420]    Tested: 27/9/2019

PARAMETER	UOM	LOR	TP1	TP1	TP1	TP2	TP2
			CLAY 0.0-0.15 23/9/2019 SE198142.001	CLAY 0.2-0.5 23/9/2019 SE198142.002	CLAY 1.2-1.5 23/9/2019 SE198142.003	CLAY 0.0-0.15 23/9/2019 SE198142.006	CLAY 0.2-0.5 23/9/2019 SE198142.007
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 27/9/2019    (continued)

PARAMETER	UOM	LOR	TP2	TP3	TP3	TP3	TP4
			CLAY 2.2-2.5 23/9/2019 SE198142.009	CLAY 0.0-0.15 23/9/2019 SE198142.010	CLAY 0.2-0.5 23/9/2019 SE198142.011	CLAY 1.2-1.5 23/9/2019 SE198142.012	CLAY 0.0-0.15 23/9/2019 SE198142.015
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 27/9/2019    (continued)

PARAMETER	UOM	LOR	TP4	TP4	TP5	TP5	TP5
			CLAY 0.2-0.5 23/9/2019 SE198142.016	CLAY 2.2-2.5 23/9/2019 SE198142.018	CLAY 0.0-0.15 23/9/2019 SE198142.019	CLAY 0.2-0.5 23/9/2019 SE198142.020	CLAY 1.2-1.5 23/9/2019 SE198142.021
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 27/9/2019    (continued)

PARAMETER	UOM	LOR	TP6	TP6	TP7	TP7	TP8
			CLAY 0.0-0.15 23/9/2019 SE198142.024	CLAY 0.2-0.5 23/9/2019 SE198142.025	CLAY 0.0-0.15 23/9/2019 SE198142.028	CLAY 0.2-0.5 23/9/2019 SE198142.029	CLAY 0.0-0.15 23/9/2019 SE198142.032
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 27/9/2019    (continued)

PARAMETER	UOM	LOR	TP8	TP8	TP9	TP9	TP10
			CLAY 0.2-0.5 23/9/2019 SE198142.033	CLAY 1.2-1.5 23/9/2019 SE198142.034	CLAY 0.0-0.15 23/9/2019 SE198142.037	CLAY 0.2-0.5 23/9/2019 SE198142.038	CLAY 0.0-0.15 23/9/2019 SE198142.041
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 27/9/2019    (continued)

PARAMETER	UOM	LOR	TP10	TP11	TP11	TP11	TP12
			CLAY 0.2-0.5 23/9/2019 SE198142.042	CLAY 0.0-0.15 23/9/2019 SE198142.045	CLAY 0.2-0.5 23/9/2019 SE198142.046	CLAY 1.2-1.5 23/9/2019 SE198142.047	CLAY 0.0-0.15 23/9/2019 SE198142.050
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 27/9/2019    (continued)

PARAMETER	UOM	LOR	TP12	TP12	TP13	TP13	TP13
			CLAY 0.2-0.5 23/9/2019 SE198142.051	CLAY 1.8-1.9 23/9/2019 SE198142.053	CLAY 0.0-0.15 23/9/2019 SE198142.055	CLAY 0.2-0.5 23/9/2019 SE198142.056	CLAY 1.9-2.0 23/9/2019 SE198142.058
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 27/9/2019    (continued)

PARAMETER	UOM	LOR	TP14	TP14	TP14	TP15	TP15
			CLAY 0.0-0.15 23/9/2019 SE198142.060	CLAY 0.2-0.5 23/9/2019 SE198142.061	CLAY 1.8-2.0 23/9/2019 SE198142.063	CLAY 0.0-0.15 23/9/2019 SE198142.065	CLAY 0.2-0.5 23/9/2019 SE198142.066
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 27/9/2019    (continued)

PARAMETER	UOM	LOR	TP16	TP16	TP16	TP17	TP17
			CLAY 0.0-0.15 23/9/2019 SE198142.069	CLAY 0.2-0.5 23/9/2019 SE198142.070	CLAY 1.2-1.5 23/9/2019 SE198142.071	CLAY 0.0-0.15 23/9/2019 SE198142.073	CLAY 0.2-0.5 23/9/2019 SE198142.074
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 27/9/2019    (continued)

PARAMETER	UOM	LOR	TP18	TP18	TP19	TP20	TP21
			CLAY 0.0-0.15 23/9/2019 SE198142.077	CLAY 0.2-0.5 23/9/2019 SE198142.078	CLAY 0.0-0.15 23/9/2019 SE198142.080	CLAY 0.0-0.15 23/9/2019 SE198142.082	CLAY 0.0-0.15 24/9/2019 SE198142.084
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 27/9/2019    (continued)

PARAMETER	UOM	LOR	TP22	TP23	TP24
			CLAY 0.0-0.15 24/9/2019 SE198142.086	CLAY 0.0-0.15 24/9/2019 SE198142.088	CLAY 0.0-0.15 24/9/2019 SE198142.090
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	0.05	<0.05	<0.05	<0.05
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: 27/9/2019

PARAMETER	UOM	LOR	TP1	TP1	TP2	TP2	TP3
			CLAY 0.2-0.5 23/9/2019 SE198142.002	CLAY 1.2-1.5 23/9/2019 SE198142.003	CLAY 0.2-0.5 23/9/2019 SE198142.007	CLAY 2.2-2.5 23/9/2019 SE198142.009	CLAY 0.2-0.5 23/9/2019 SE198142.011
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	TP3	TP4	TP4	TP5	TP5
			CLAY 1.2-1.5 23/9/2019 SE198142.012	CLAY 0.2-0.5 23/9/2019 SE198142.016	CLAY 2.2-2.5 23/9/2019 SE198142.018	CLAY 0.2-0.5 23/9/2019 SE198142.020	CLAY 1.2-1.5 23/9/2019 SE198142.021
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	TP6	TP7	TP8	TP8	TP9
			CLAY 0.2-0.5 23/9/2019 SE198142.025	CLAY 0.2-0.5 23/9/2019 SE198142.029	CLAY 0.2-0.5 23/9/2019 SE198142.033	CLAY 1.2-1.5 23/9/2019 SE198142.034	CLAY 0.2-0.5 23/9/2019 SE198142.038
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

PCBs in Soil [AN420] Tested: 27/9/2019 (continued)

PARAMETER	UOM	LOR	TP10	TP11	TP11	TP12	TP12
			CLAY 0.2-0.5 23/9/2019 SE198142.042	CLAY 0.2-0.5 23/9/2019 SE198142.046	CLAY 1.2-1.5 23/9/2019 SE198142.047	CLAY 0.2-0.5 23/9/2019 SE198142.051	CLAY 1.8-1.9 23/9/2019 SE198142.053
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	TP13	TP13	TP14	TP14	TP15
			CLAY 0.2-0.5 23/9/2019 SE198142.056	CLAY 1.9-2.0 23/9/2019 SE198142.058	CLAY 0.2-0.5 23/9/2019 SE198142.061	CLAY 1.8-2.0 23/9/2019 SE198142.063	CLAY 0.2-0.5 23/9/2019 SE198142.066
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	TP16	TP16	TP17	TP17	TP18
			CLAY 0.2-0.5 23/9/2019 SE198142.070	CLAY 1.2-1.5 23/9/2019 SE198142.071	CLAY 0.0-0.15 23/9/2019 SE198142.073	CLAY 0.2-0.5 23/9/2019 SE198142.074	CLAY 0.0-0.15 23/9/2019 SE198142.077
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

PCBs in Soil [AN420] Tested: 27/9/2019 (continued)

PARAMETER	UOM	LOR	TP18	TP19	TP20	TP21	TP22
			CLAY 0.2-0.5 23/9/2019 SE198142.078	CLAY 0.0-0.15 23/9/2019 SE198142.080	CLAY 0.0-0.15 23/9/2019 SE198142.082	CLAY 0.0-0.15 24/9/2019 SE198142.084	CLAY 0.0-0.15 24/9/2019 SE198142.086
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	TP23	TP24
			CLAY 0.0-0.15 24/9/2019 SE198142.088	CLAY 0.0-0.15 24/9/2019 SE198142.090
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

Total Phenolics in Soil [AN289] Tested: 1/10/2019

PARAMETER	UOM	LOR	TP1	TP1	TP2	TP2	TP3
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.2-0.5	1.2-1.5	0.2-0.5	2.2-2.5	0.2-0.5
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.002	SE198142.003	SE198142.007	SE198142.009	SE198142.011
Total Phenols	mg/kg	5	<5.0	<5.0	<5.0	<5.0	<5.0

PARAMETER	UOM	LOR	TP3	TP4	TP4	TP5	TP5
			CLAY	CLAY	CLAY	CLAY	CLAY
			1.2-1.5	0.2-0.5	2.2-2.5	0.2-0.5	1.2-1.5
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.012	SE198142.016	SE198142.018	SE198142.020	SE198142.021
Total Phenols	mg/kg	5	<5.0	<5.0	<5.0	<5.0	<5.0

PARAMETER	UOM	LOR	TP6	TP7	TP8	TP8	TP9
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.2-0.5	0.2-0.5	0.2-0.5	1.2-1.5	0.2-0.5
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.025	SE198142.029	SE198142.033	SE198142.034	SE198142.038
Total Phenols	mg/kg	5	<5.0	<5.0	<5.0	<5.0	<5.0

PARAMETER	UOM	LOR	TP10	TP11	TP11	TP12	TP12
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.2-0.5	0.2-0.5	1.2-1.5	0.2-0.5	1.8-1.9
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.042	SE198142.046	SE198142.047	SE198142.051	SE198142.053
Total Phenols	mg/kg	5	<5.0	<5.0	<5.0	<5.0	<5.0

PARAMETER	UOM	LOR	TP13	TP13	TP14	TP14	TP15
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.2-0.5	1.9-2.0	0.2-0.5	1.8-2.0	0.2-0.5
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.056	SE198142.058	SE198142.061	SE198142.063	SE198142.066
Total Phenols	mg/kg	5	<5.0	<5.0	<5.0	<5.0	<5.0

PARAMETER	UOM	LOR	TP16	TP16	TP17	TP18	TP21
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.2-0.5	1.2-1.5	0.2-0.5	0.2-0.5	0.0-0.15
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	24/9/2019
			SE198142.070	SE198142.071	SE198142.074	SE198142.078	SE198142.084
Total Phenols	mg/kg	5	<5.0	<5.0	<5.0	<5.0	<5.0

PARAMETER	UOM	LOR	TP22	TP23
			CLAY	CLAY
			0.0-0.15	0.0-0.15
			24/9/2019	24/9/2019
			SE198142.086	SE198142.088
Total Phenols	mg/kg	5	<5.0	<5.0

pH in soil (1:5) [AN101] Tested: 27/9/2019

PARAMETER	UOM	LOR	TP1 CLAY 0.0-0.15 23/9/2019 SE198142.001	TP1 CLAY 0.2-0.5 23/9/2019 SE198142.002	TP1 CLAY 1.2-1.5 23/9/2019 SE198142.003	TP1 CLAY 2.45-2.55 23/9/2019 SE198142.005	TP2 CLAY 0.2-0.5 23/9/2019 SE198142.007
pH	pH Units	0.1	5.4	4.7	5.1	4.9	5.1

PARAMETER	UOM	LOR	TP2 CLAY 2.2-2.5 23/9/2019 SE198142.009	TP3 CLAY 0.2-0.5 23/9/2019 SE198142.011	TP3 CLAY 1.2-1.5 23/9/2019 SE198142.012	TP3 CLAY 2.85-2.95 23/9/2019 SE198142.014	TP4 CLAY 0.0-0.15 23/9/2019 SE198142.015
pH	pH Units	0.1	7.7	5.0	8.1	6.9	6.0

PARAMETER	UOM	LOR	TP4 CLAY 0.2-0.5 23/9/2019 SE198142.016	TP4 CLAY 2.2-2.5 23/9/2019 SE198142.018	TP5 CLAY 0.2-0.5 23/9/2019 SE198142.020	TP5 CLAY 1.2-1.5 23/9/2019 SE198142.021	TP5 CLAY 2.65-2.75 23/9/2019 SE198142.023
pH	pH Units	0.1	4.9	5.3	5.5	5.1	5.7

PARAMETER	UOM	LOR	TP6 CLAY 0.0-0.15 23/9/2019 SE198142.024	TP6 CLAY 0.2-0.5 23/9/2019 SE198142.025	TP7 CLAY 0.2-0.5 23/9/2019 SE198142.029	TP7 CLAY 2.05-2.15 23/9/2019 SE198142.031	TP8 CLAY 0.0-0.15 23/9/2019 SE198142.032
pH	pH Units	0.1	5.9	5.1	5.0	5.3	5.8

PARAMETER	UOM	LOR	TP8 CLAY 0.2-0.5 23/9/2019 SE198142.033	TP8 CLAY 1.2-1.5 23/9/2019 SE198142.034	TP9 CLAY 0.0-0.15 23/9/2019 SE198142.037	TP9 CLAY 0.2-0.5 23/9/2019 SE198142.038	TP10 CLAY 0.0-0.15 23/9/2019 SE198142.041
pH	pH Units	0.1	5.1	6.7	6.1	5.2	6.0

PARAMETER	UOM	LOR	TP10 CLAY 0.2-0.5 23/9/2019 SE198142.042	TP10 CLAY 2.25-2.35 23/9/2019 SE198142.044	TP11 CLAY 0.2-0.5 23/9/2019 SE198142.046	TP11 CLAY 1.2-1.5 23/9/2019 SE198142.047	TP11 CLAY 1.85-1.95 23/9/2019 SE198142.049
pH	pH Units	0.1	4.8	5.9	5.5	5.1	5.1

PARAMETER	UOM	LOR	TP12 CLAY 0.0-0.15 23/9/2019 SE198142.050	TP12 CLAY 0.2-0.5 23/9/2019 SE198142.051	TP12 CLAY 1.8-1.9 23/9/2019 SE198142.053	TP12 CLAY 1.95-2.05 23/9/2019 SE198142.054	TP13 CLAY 0.2-0.5 23/9/2019 SE198142.056
pH	pH Units	0.1	5.9	5.1	6.1	5.7	5.2



pH in soil (1:5) [AN101] Tested: 27/9/2019 (continued)

PARAMETER	UOM	LOR	TP13	TP14	TP14	TP14	TP14
			CLAY	CLAY	CLAY	CLAY	CLAY
			1.9-2.0	0.0-0.15	0.2-0.5	1.8-2.0	2.05-2.15
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.058	SE198142.060	SE198142.061	SE198142.063	SE198142.064
pH	pH Units	0.1	6.6	5.8	5.4	6.2	5.8

PARAMETER	UOM	LOR	TP15	TP16	TP16	TP16	TP16
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.2-0.5	0.0-0.15	0.2-0.5	1.2-1.5	2.05-2.15
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.066	SE198142.069	SE198142.070	SE198142.071	SE198142.072
pH	pH Units	0.1	5.5	6.1	5.4	5.4	4.6

PARAMETER	UOM	LOR	TP17	TP18	TP18	TP18	TP20
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.2-0.5	0.0-0.15	0.2-0.5	1.05-1.15	0.0-0.15
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.074	SE198142.077	SE198142.078	SE198142.079	SE198142.082
pH	pH Units	0.1	5.6	5.3	5.4	4.8	6.1

PARAMETER	UOM	LOR	TP21	TP21	TP22	TP23	TP23
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.55-0.65	0.0-0.15	0.0-0.15	0.55-0.65
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198142.084	SE198142.085	SE198142.086	SE198142.088	SE198142.089
pH	pH Units	0.1	6.3	7.3	5.2	6.0	5.9

PARAMETER	UOM	LOR	TP24
			CLAY
			0.0-0.15
			24/9/2019
			SE198142.090
pH	pH Units	0.1	6.0

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122] Tested: 30/9/2019

PARAMETER	UOM	LOR	TP1	TP1	TP1	TP1	TP2
			CLAY 0.0-0.15 23/9/2019 SE198142.001	CLAY 0.2-0.5 23/9/2019 SE198142.002	CLAY 1.2-1.5 23/9/2019 SE198142.003	CLAY 2.45-2.55 23/9/2019 SE198142.005	CLAY 0.2-0.5 23/9/2019 SE198142.007
Exchangeable Sodium, Na	mg/kg	2	600	900	990	1200	1800
Exchangeable Sodium, Na	meq/100g	0.01	2.6	3.9	4.3	5.4	7.9
Exchangeable Sodium Percentage*	%	0.1	30.7	37.2	39.0	27.6	33.5
Exchangeable Potassium, K	mg/kg	2	59	100	75	170	160
Exchangeable Potassium, K	meq/100g	0.01	0.15	0.27	0.19	0.44	0.41
Exchangeable Potassium Percentage*	%	0.1	1.8	2.5	1.7	2.3	1.7
Exchangeable Calcium, Ca	mg/kg	2	290	19	110	240	300
Exchangeable Calcium, Ca	meq/100g	0.01	1.4	0.09	0.54	1.2	1.5
Exchangeable Calcium Percentage*	%	0.1	17.0	0.9	4.9	6.1	6.3
Exchangeable Magnesium, Mg	mg/kg	2	520	760	730	1500	1700
Exchangeable Magnesium, Mg	meq/100g	0.02	4.3	6.2	6.0	12	14
Exchangeable Magnesium Percentage*	%	0.1	50.5	59.3	54.4	64.0	58.5
Cation Exchange Capacity	meq/100g	0.02	8.5	11	11	19	24

PARAMETER	UOM	LOR	TP2	TP3	TP3	TP3	TP4
			CLAY 2.2-2.5 23/9/2019 SE198142.009	CLAY 0.2-0.5 23/9/2019 SE198142.011	CLAY 1.2-1.5 23/9/2019 SE198142.012	CLAY 2.85-2.95 23/9/2019 SE198142.014	CLAY 0.0-0.15 23/9/2019 SE198142.015
Exchangeable Sodium, Na	mg/kg	2	1200	1300	1500	260	610
Exchangeable Sodium, Na	meq/100g	0.01	5.4	5.8	6.7	1.1	2.7
Exchangeable Sodium Percentage*	%	0.1	34.4	32.2	40.6	17.7	30.7
Exchangeable Potassium, K	mg/kg	2	140	140	160	71	77
Exchangeable Potassium, K	meq/100g	0.01	0.36	0.35	0.40	0.18	0.20
Exchangeable Potassium Percentage*	%	0.1	2.3	2.0	2.4	2.9	2.3
Exchangeable Calcium, Ca	mg/kg	2	250	73	290	670	450
Exchangeable Calcium, Ca	meq/100g	0.01	1.2	0.36	1.5	3.4	2.2
Exchangeable Calcium Percentage*	%	0.1	7.8	2.0	8.9	53.6	25.8
Exchangeable Magnesium, Mg	mg/kg	2	1100	1400	970	200	440
Exchangeable Magnesium, Mg	meq/100g	0.02	8.8	12	8.0	1.6	3.6
Exchangeable Magnesium Percentage*	%	0.1	55.5	63.8	48.2	25.8	41.3
Cation Exchange Capacity	meq/100g	0.02	16	18	17	6.3	8.7

PARAMETER	UOM	LOR	TP4	TP4	TP5	TP5	TP5
			CLAY 0.2-0.5 23/9/2019 SE198142.016	CLAY 2.2-2.5 23/9/2019 SE198142.018	CLAY 0.2-0.5 23/9/2019 SE198142.020	CLAY 1.2-1.5 23/9/2019 SE198142.021	CLAY 2.65-2.75 23/9/2019 SE198142.023
Exchangeable Sodium, Na	mg/kg	2	1800	1100	480	1600	690
Exchangeable Sodium, Na	meq/100g	0.01	7.8	4.7	2.1	7.1	3.0
Exchangeable Sodium Percentage*	%	0.1	33.2	34.8	22.4	28.8	25.4
Exchangeable Potassium, K	mg/kg	2	140	100	96	180	83
Exchangeable Potassium, K	meq/100g	0.01	0.35	0.26	0.25	0.46	0.21
Exchangeable Potassium Percentage*	%	0.1	1.5	1.9	2.6	1.9	1.8
Exchangeable Calcium, Ca	mg/kg	2	160	110	52	410	40
Exchangeable Calcium, Ca	meq/100g	0.01	0.78	0.53	0.26	2.1	0.20
Exchangeable Calcium Percentage*	%	0.1	3.3	4.0	2.8	8.4	1.7
Exchangeable Magnesium, Mg	mg/kg	2	1800	970	820	1800	1000
Exchangeable Magnesium, Mg	meq/100g	0.02	14	8.0	6.7	15	8.4
Exchangeable Magnesium Percentage*	%	0.1	62.0	59.3	72.2	60.9	71.1
Cation Exchange Capacity	meq/100g	0.02	23	13	9.3	25	12

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122] Tested: 30/9/2019 (continued)

PARAMETER	UOM	LOR	TP6	TP6	TP7	TP7	TP8
			CLAY 0.0-0.15 23/9/2019 SE198142.024	CLAY 0.2-0.5 23/9/2019 SE198142.025	CLAY 0.2-0.5 23/9/2019 SE198142.029	CLAY 2.05-2.15 23/9/2019 SE198142.031	CLAY 0.0-0.15 23/9/2019 SE198142.032
Exchangeable Sodium, Na	mg/kg	2	430	940	1600	670	320
Exchangeable Sodium, Na	meq/100g	0.01	1.8	4.1	7.1	2.9	1.4
Exchangeable Sodium Percentage*	%	0.1	23.8	43.6	36.6	22.8	24.5
Exchangeable Potassium, K	mg/kg	2	49	80	150	81	56
Exchangeable Potassium, K	meq/100g	0.01	0.13	0.20	0.38	0.21	0.14
Exchangeable Potassium Percentage*	%	0.1	1.6	2.2	1.9	1.6	2.5
Exchangeable Calcium, Ca	mg/kg	2	330	43	50	42	340
Exchangeable Calcium, Ca	meq/100g	0.01	1.7	0.22	0.25	0.21	1.7
Exchangeable Calcium Percentage*	%	0.1	21.5	2.3	1.3	1.6	30.0
Exchangeable Magnesium, Mg	mg/kg	2	500	590	1400	1200	300
Exchangeable Magnesium, Mg	meq/100g	0.02	4.1	4.9	12	9.5	2.5
Exchangeable Magnesium Percentage*	%	0.1	53.1	51.9	60.2	74.0	43.0
Cation Exchange Capacity	meq/100g	0.02	7.8	9.4	19	13	5.7

PARAMETER	UOM	LOR	TP8	TP8	TP9	TP9	TP10
			CLAY 0.2-0.5 23/9/2019 SE198142.033	CLAY 1.2-1.5 23/9/2019 SE198142.034	CLAY 0.0-0.15 23/9/2019 SE198142.037	CLAY 0.2-0.5 23/9/2019 SE198142.038	CLAY 0.0-0.15 23/9/2019 SE198142.041
Exchangeable Sodium, Na	mg/kg	2	1000	1000	250	1000	350
Exchangeable Sodium, Na	meq/100g	0.01	4.5	4.5	1.1	4.3	1.5
Exchangeable Sodium Percentage*	%	0.1	33.3	35.3	20.0	33.0	22.9
Exchangeable Potassium, K	mg/kg	2	120	92	61	73	54
Exchangeable Potassium, K	meq/100g	0.01	0.31	0.24	0.16	0.19	0.14
Exchangeable Potassium Percentage*	%	0.1	2.3	1.8	2.8	1.4	2.1
Exchangeable Calcium, Ca	mg/kg	2	110	150	330	75	290
Exchangeable Calcium, Ca	meq/100g	0.01	0.55	0.75	1.7	0.37	1.4
Exchangeable Calcium Percentage*	%	0.1	4.1	5.9	30.5	2.8	21.6
Exchangeable Magnesium, Mg	mg/kg	2	990	890	310	1000	430
Exchangeable Magnesium, Mg	meq/100g	0.02	8.1	7.3	2.6	8.2	3.6
Exchangeable Magnesium Percentage*	%	0.1	60.3	57.0	46.6	62.7	53.5
Cation Exchange Capacity	meq/100g	0.02	13	13	5.5	13	6.7

PARAMETER	UOM	LOR	TP10	TP10	TP11	TP11	TP11
			CLAY 0.2-0.5 23/9/2019 SE198142.042	CLAY 2.25-2.35 23/9/2019 SE198142.044	CLAY 0.2-0.5 23/9/2019 SE198142.046	CLAY 1.2-1.5 23/9/2019 SE198142.047	CLAY 1.85-1.95 23/9/2019 SE198142.049
Exchangeable Sodium, Na	mg/kg	2	1900	760	890	1400	530
Exchangeable Sodium, Na	meq/100g	0.01	8.1	3.3	3.9	6.0	2.3
Exchangeable Sodium Percentage*	%	0.1	34.6	21.0	38.7	31.4	28.2
Exchangeable Potassium, K	mg/kg	2	150	110	63	160	32
Exchangeable Potassium, K	meq/100g	0.01	0.38	0.28	0.16	0.41	0.08
Exchangeable Potassium Percentage*	%	0.1	1.6	1.8	1.6	2.2	1.0
Exchangeable Calcium, Ca	mg/kg	2	110	370	61	170	55
Exchangeable Calcium, Ca	meq/100g	0.01	0.53	1.9	0.30	0.86	0.27
Exchangeable Calcium Percentage*	%	0.1	2.2	11.8	3.0	4.5	3.4
Exchangeable Magnesium, Mg	mg/kg	2	1800	1300	690	1500	670
Exchangeable Magnesium, Mg	meq/100g	0.02	14	10	5.7	12	5.5
Exchangeable Magnesium Percentage*	%	0.1	61.5	65.5	56.7	62.0	67.4
Cation Exchange Capacity	meq/100g	0.02	23	16	10	19	8.1

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122] Tested: 30/9/2019 (continued)

PARAMETER	UOM	LOR	TP12	TP12	TP12	TP12	TP13
			CLAY 0.0-0.15 23/9/2019 SE198142.050	CLAY 0.2-0.5 23/9/2019 SE198142.051	CLAY 1.8-1.9 23/9/2019 SE198142.053	CLAY 1.95-2.05 23/9/2019 SE198142.054	CLAY 0.2-0.5 23/9/2019 SE198142.056
Exchangeable Sodium, Na	mg/kg	2	270	1500	150	370	1000
Exchangeable Sodium, Na	meq/100g	0.01	1.2	6.6	0.65	1.6	4.5
Exchangeable Sodium Percentage*	%	0.1	26.6	34.4	36.7	17.2	31.7
Exchangeable Potassium, K	mg/kg	2	49	150	15	39	110
Exchangeable Potassium, K	meq/100g	0.01	0.13	0.38	0.04	0.10	0.28
Exchangeable Potassium Percentage*	%	0.1	2.8	2.0	2.1	1.1	2.0
Exchangeable Calcium, Ca	mg/kg	2	210	140	74	97	14
Exchangeable Calcium, Ca	meq/100g	0.01	1.1	0.70	0.37	0.48	0.07
Exchangeable Calcium Percentage*	%	0.1	23.5	3.6	20.7	5.2	0.5
Exchangeable Magnesium, Mg	mg/kg	2	260	1400	88	860	1100
Exchangeable Magnesium, Mg	meq/100g	0.02	2.1	11	0.72	7.1	9.4
Exchangeable Magnesium Percentage*	%	0.1	47.1	59.9	40.4	76.5	65.8
Cation Exchange Capacity	meq/100g	0.02	4.5	19	1.8	9.2	14

PARAMETER	UOM	LOR	TP13	TP14	TP14	TP14	TP14
			CLAY 1.9-2.0 23/9/2019 SE198142.058	CLAY 0.0-0.15 23/9/2019 SE198142.060	CLAY 0.2-0.5 23/9/2019 SE198142.061	CLAY 1.8-2.0 23/9/2019 SE198142.063	CLAY 2.05-2.15 23/9/2019 SE198142.064
Exchangeable Sodium, Na	mg/kg	2	170	290	920	190	84
Exchangeable Sodium, Na	meq/100g	0.01	0.73	1.2	4.0	0.83	0.37
Exchangeable Sodium Percentage*	%	0.1	39.9	19.7	36.2	28.8	9.5
Exchangeable Potassium, K	mg/kg	2	16	68	94	48	32
Exchangeable Potassium, K	meq/100g	0.01	0.04	0.18	0.24	0.12	0.08
Exchangeable Potassium Percentage*	%	0.1	2.3	2.8	2.2	4.2	2.2
Exchangeable Calcium, Ca	mg/kg	2	60	370	97	210	190
Exchangeable Calcium, Ca	meq/100g	0.01	0.30	1.8	0.48	1.0	0.95
Exchangeable Calcium Percentage*	%	0.1	16.5	29.0	4.4	36.0	24.8
Exchangeable Magnesium, Mg	mg/kg	2	92	370	770	110	300
Exchangeable Magnesium, Mg	meq/100g	0.02	0.76	3.1	6.3	0.89	2.4
Exchangeable Magnesium Percentage*	%	0.1	41.3	48.5	57.3	31.0	63.5
Cation Exchange Capacity	meq/100g	0.02	1.8	6.3	11	2.9	3.8

PARAMETER	UOM	LOR	TP15	TP16	TP16	TP16	TP16
			CLAY 0.2-0.5 23/9/2019 SE198142.066	CLAY 0.0-0.15 23/9/2019 SE198142.069	CLAY 0.2-0.5 23/9/2019 SE198142.070	CLAY 1.2-1.5 23/9/2019 SE198142.071	CLAY 2.05-2.15 23/9/2019 SE198142.072
Exchangeable Sodium, Na	mg/kg	2	910	71	1700	1100	2100
Exchangeable Sodium, Na	meq/100g	0.01	4.0	0.31	7.4	4.8	8.9
Exchangeable Sodium Percentage*	%	0.1	30.4	8.3	33.2	37.8	33.9
Exchangeable Potassium, K	mg/kg	2	130	34	170	90	130
Exchangeable Potassium, K	meq/100g	0.01	0.34	0.09	0.44	0.23	0.33
Exchangeable Potassium Percentage*	%	0.1	2.6	2.3	2.0	1.8	1.3
Exchangeable Calcium, Ca	mg/kg	2	170	260	41	55	26
Exchangeable Calcium, Ca	meq/100g	0.01	0.86	1.3	0.21	0.27	0.13
Exchangeable Calcium Percentage*	%	0.1	6.6	34.6	0.9	2.2	0.5
Exchangeable Magnesium, Mg	mg/kg	2	960	250	1700	900	2100
Exchangeable Magnesium, Mg	meq/100g	0.02	7.9	2.0	14	7.4	17
Exchangeable Magnesium Percentage*	%	0.1	60.4	54.8	63.9	58.3	64.4
Cation Exchange Capacity	meq/100g	0.02	13	3.7	22	13	26

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122] Tested: 30/9/2019 (continued)

PARAMETER	UOM	LOR	TP17	TP18	TP18	TP18	TP20
			CLAY 0.2-0.5 23/9/2019 SE198142.074	CLAY 0.0-0.15 23/9/2019 SE198142.077	CLAY 0.2-0.5 23/9/2019 SE198142.078	CLAY 1.05-1.15 23/9/2019 SE198142.079	CLAY 0.0-0.15 23/9/2019 SE198142.082
Exchangeable Sodium, Na	mg/kg	2	2100	290	1600	1800	110
Exchangeable Sodium, Na	meq/100g	0.01	9.2	1.3	6.8	8.0	0.47
Exchangeable Sodium Percentage*	%	0.1	36.9	18.4	31.2	31.1	9.8
Exchangeable Potassium, K	mg/kg	2	180	62	140	97	49
Exchangeable Potassium, K	meq/100g	0.01	0.46	0.16	0.37	0.25	0.13
Exchangeable Potassium Percentage*	%	0.1	1.8	2.3	1.7	1.0	2.6
Exchangeable Calcium, Ca	mg/kg	2	170	500	73	11	360
Exchangeable Calcium, Ca	meq/100g	0.01	0.87	2.5	0.36	0.06	1.8
Exchangeable Calcium Percentage*	%	0.1	3.5	36.0	1.7	0.2	37.8
Exchangeable Magnesium, Mg	mg/kg	2	1800	370	1700	2100	290
Exchangeable Magnesium, Mg	meq/100g	0.02	14	3.0	14	17	2.4
Exchangeable Magnesium Percentage*	%	0.1	57.7	43.4	65.4	67.7	49.8
Cation Exchange Capacity	meq/100g	0.02	25	7.0	22	26	4.8

PARAMETER	UOM	LOR	TP21	TP21	TP22	TP23	TP23
			CLAY 0.0-0.15 24/9/2019 SE198142.084	CLAY 0.55-0.65 24/9/2019 SE198142.085	CLAY 0.0-0.15 24/9/2019 SE198142.086	CLAY 0.0-0.15 24/9/2019 SE198142.088	CLAY 0.55-0.65 24/9/2019 SE198142.089
Exchangeable Sodium, Na	mg/kg	2	1100	1100	860	220	120
Exchangeable Sodium, Na	meq/100g	0.01	4.9	5.0	3.8	0.97	0.53
Exchangeable Sodium Percentage*	%	0.1	24.4	26.6	31.5	26.9	8.0
Exchangeable Potassium, K	mg/kg	2	120	110	110	64	64
Exchangeable Potassium, K	meq/100g	0.01	0.30	0.27	0.27	0.16	0.16
Exchangeable Potassium Percentage*	%	0.1	1.5	1.4	2.3	4.5	2.5
Exchangeable Calcium, Ca	mg/kg	2	580	220	56	200	280
Exchangeable Calcium, Ca	meq/100g	0.01	2.9	1.1	0.28	1.0	1.4
Exchangeable Calcium Percentage*	%	0.1	14.4	6.0	2.4	28.1	20.8
Exchangeable Magnesium, Mg	mg/kg	2	1500	1500	930	180	560
Exchangeable Magnesium, Mg	meq/100g	0.02	12	12	7.6	1.5	4.6
Exchangeable Magnesium Percentage*	%	0.1	59.7	65.9	63.8	40.5	68.8
Cation Exchange Capacity	meq/100g	0.02	20	19	12	3.6	6.6

PARAMETER	UOM	LOR	TP24
			CLAY 0.0-0.15 24/9/2019 SE198142.090
Exchangeable Sodium, Na	mg/kg	2	380
Exchangeable Sodium, Na	meq/100g	0.01	1.6
Exchangeable Sodium Percentage*	%	0.1	20.7
Exchangeable Potassium, K	mg/kg	2	75
Exchangeable Potassium, K	meq/100g	0.01	0.19
Exchangeable Potassium Percentage*	%	0.1	2.4
Exchangeable Calcium, Ca	mg/kg	2	320
Exchangeable Calcium, Ca	meq/100g	0.01	1.6
Exchangeable Calcium Percentage*	%	0.1	20.2
Exchangeable Magnesium, Mg	mg/kg	2	550
Exchangeable Magnesium, Mg	meq/100g	0.02	4.5
Exchangeable Magnesium Percentage*	%	0.1	56.7
Cation Exchange Capacity	meq/100g	0.02	8.0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 30/9/2019

PARAMETER	UOM	LOR	TP1	TP1	TP1	TP1	TP2
			CLAY 0.0-0.15 23/9/2019 SE198142.001	CLAY 0.2-0.5 23/9/2019 SE198142.002	CLAY 1.2-1.5 23/9/2019 SE198142.003	CLAY 2.45-2.55 23/9/2019 SE198142.005	CLAY 0.0-0.15 23/9/2019 SE198142.006
Arsenic, As	mg/kg	1	4	2	4	5	4
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	0.4
Chromium, Cr	mg/kg	0.5	13	4.9	11	11	10
Copper, Cu	mg/kg	0.5	7.0	7.5	9.2	13	5.4
Lead, Pb	mg/kg	1	15	8	11	14	13
Nickel, Ni	mg/kg	0.5	3.1	1.4	5.1	2.1	3.1
Zinc, Zn	mg/kg	2	42	8	23	14	91

PARAMETER	UOM	LOR	TP2	TP2	TP3	TP3	TP3
			CLAY 0.2-0.5 23/9/2019 SE198142.007	CLAY 2.2-2.5 23/9/2019 SE198142.009	CLAY 0.0-0.15 23/9/2019 SE198142.010	CLAY 0.2-0.5 23/9/2019 SE198142.011	CLAY 1.2-1.5 23/9/2019 SE198142.012
Arsenic, As	mg/kg	1	4	2	5	5	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	10	3.7	14	9.8	4.0
Copper, Cu	mg/kg	0.5	15	5.2	5.4	14	6.1
Lead, Pb	mg/kg	1	13	6	18	11	5
Nickel, Ni	mg/kg	0.5	2.7	5.2	2.9	2.0	1.1
Zinc, Zn	mg/kg	2	20	15	30	17	6

PARAMETER	UOM	LOR	TP3	TP4	TP4	TP4	TP5
			CLAY 2.85-2.95 23/9/2019 SE198142.014	CLAY 0.0-0.15 23/9/2019 SE198142.015	CLAY 0.2-0.5 23/9/2019 SE198142.016	CLAY 2.2-2.5 23/9/2019 SE198142.018	CLAY 0.0-0.15 23/9/2019 SE198142.019
Arsenic, As	mg/kg	1	4	4	5	7	4
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	8.3	11	7.7	11	14
Copper, Cu	mg/kg	0.5	9.6	6.1	9.5	9.8	3.7
Lead, Pb	mg/kg	1	9	13	11	12	15
Nickel, Ni	mg/kg	0.5	5.5	2.7	1.6	3.9	1.9
Zinc, Zn	mg/kg	2	18	36	10	21	15

PARAMETER	UOM	LOR	TP5	TP5	TP5	TP6	TP6
			CLAY 0.2-0.5 23/9/2019 SE198142.020	CLAY 1.2-1.5 23/9/2019 SE198142.021	CLAY 2.65-2.75 23/9/2019 SE198142.023	CLAY 0.0-0.15 23/9/2019 SE198142.024	CLAY 0.2-0.5 23/9/2019 SE198142.025
Arsenic, As	mg/kg	1	4	4	4	5	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	14	9.0	14	7.1	13
Copper, Cu	mg/kg	0.5	8.4	11	9.6	4.0	7.5
Lead, Pb	mg/kg	1	9	11	12	8	16
Nickel, Ni	mg/kg	0.5	2.7	1.7	3.7	1.3	2.2
Zinc, Zn	mg/kg	2	17	12	20	12	10

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 30/9/2019

PARAMETER	UOM	LOR	TP6	TP7	TP7	TP7	TP8
			CLAY 1.55-1.65 23/9/2019 SE198142.027	CLAY 0.0-0.15 23/9/2019 SE198142.028	CLAY 0.2-0.5 23/9/2019 SE198142.029	CLAY 2.05-2.15 23/9/2019 SE198142.031	CLAY 0.0-0.15 23/9/2019 SE198142.032
Arsenic, As	mg/kg	1	3	3	3	4	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	8.2	14	10	11	14
Copper, Cu	mg/kg	0.5	10	4.0	12	9.2	2.8
Lead, Pb	mg/kg	1	13	16	11	13	14
Nickel, Ni	mg/kg	0.5	5.4	2.2	2.0	2.8	2.6
Zinc, Zn	mg/kg	2	21	9	15	18	11

PARAMETER	UOM	LOR	TP8	TP8	TP8	TP9	TP9
			CLAY 0.2-0.5 23/9/2019 SE198142.033	CLAY 1.2-1.5 23/9/2019 SE198142.034	CLAY 2.65-2.75 23/9/2019 SE198142.036	CLAY 0.0-0.15 23/9/2019 SE198142.037	CLAY 0.2-0.5 23/9/2019 SE198142.038
Arsenic, As	mg/kg	1	3	4	4	3	7
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	10	10	13	11	16
Copper, Cu	mg/kg	0.5	11	9.5	13	5.7	12
Lead, Pb	mg/kg	1	12	15	14	13	18
Nickel, Ni	mg/kg	0.5	2.7	4.0	4.4	2.2	6.3
Zinc, Zn	mg/kg	2	16	18	22	11	33

PARAMETER	UOM	LOR	TP9	TP10	TP10	TP10	TP11
			CLAY 2.25-2.35 23/9/2019 SE198142.040	CLAY 0.0-0.15 23/9/2019 SE198142.041	CLAY 0.2-0.5 23/9/2019 SE198142.042	CLAY 2.25-2.35 23/9/2019 SE198142.044	CLAY 0.0-0.15 23/9/2019 SE198142.045
Arsenic, As	mg/kg	1	4	5	4	4	4
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	10	10	12	13	14
Copper, Cu	mg/kg	0.5	12	12	15	11	4.3
Lead, Pb	mg/kg	1	11	12	13	10	18
Nickel, Ni	mg/kg	0.5	6.8	7.3	3.5	4.3	2.2
Zinc, Zn	mg/kg	2	24	25	24	19	13

PARAMETER	UOM	LOR	TP11	TP11	TP11	TP12	TP12
			CLAY 0.2-0.5 23/9/2019 SE198142.046	CLAY 1.2-1.5 23/9/2019 SE198142.047	CLAY 1.85-1.95 23/9/2019 SE198142.049	CLAY 0.0-0.15 23/9/2019 SE198142.050	CLAY 0.2-0.5 23/9/2019 SE198142.051
Arsenic, As	mg/kg	1	2	4	2	2	5
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	7.4	14	17	12	14
Copper, Cu	mg/kg	0.5	8.8	17	5.9	2.3	17
Lead, Pb	mg/kg	1	11	14	6	10	16
Nickel, Ni	mg/kg	0.5	3.9	3.2	2.4	1.4	3.1
Zinc, Zn	mg/kg	2	17	22	8	7	22

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 30/9/2019

PARAMETER	UOM	LOR	TP12	TP12	TP13	TP13	TP13
			CLAY 1.8-1.9 23/9/2019 SE198142.053	CLAY 1.95-2.05 23/9/2019 SE198142.054	CLAY 0.0-0.15 23/9/2019 SE198142.055	CLAY 0.2-0.5 23/9/2019 SE198142.056	CLAY 1.9-2.0 23/9/2019 SE198142.058
Arsenic, As	mg/kg	1	3	1	5	6	4
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	16	24	16	14	20
Copper, Cu	mg/kg	0.5	1.7	4.7	2.1	12	<0.5
Lead, Pb	mg/kg	1	13	10	11	17	15
Nickel, Ni	mg/kg	0.5	1.4	4.0	2.0	3.7	2.4
Zinc, Zn	mg/kg	2	6	6	9	20	9

PARAMETER	UOM	LOR	TP13	TP14	TP14	TP14	TP14
			CLAY 2.05-2.15 23/9/2019 SE198142.059	CLAY 0.0-0.15 23/9/2019 SE198142.060	CLAY 0.2-0.5 23/9/2019 SE198142.061	CLAY 1.8-2.0 23/9/2019 SE198142.063	CLAY 2.05-2.15 23/9/2019 SE198142.064
Arsenic, As	mg/kg	1	3	4	4	3	<1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	31	19	8.5	27	19
Copper, Cu	mg/kg	0.5	<0.5	3.3	9.3	2.5	2.6
Lead, Pb	mg/kg	1	18	12	12	14	10
Nickel, Ni	mg/kg	0.5	1.7	1.4	3.2	2.6	1.6
Zinc, Zn	mg/kg	2	6	9	16	10	4

PARAMETER	UOM	LOR	TP15	TP15	TP15	TP16	TP16
			CLAY 0.0-0.15 23/9/2019 SE198142.065	CLAY 0.2-0.5 23/9/2019 SE198142.066	CLAY 2.05-2.15 23/9/2019 SE198142.068	CLAY 0.0-0.15 23/9/2019 SE198142.069	CLAY 0.2-0.5 23/9/2019 SE198142.070
Arsenic, As	mg/kg	1	3	4	5	3	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	20	11	1.7	8.2	9.0
Copper, Cu	mg/kg	0.5	2.0	10	5.7	2.9	11
Lead, Pb	mg/kg	1	14	11	3	12	12
Nickel, Ni	mg/kg	0.5	1.7	3.4	<0.5	1.6	1.9
Zinc, Zn	mg/kg	2	8	16	2	6	15

PARAMETER	UOM	LOR	TP16	TP16	TP17	TP17	TP17
			CLAY 1.2-1.5 23/9/2019 SE198142.071	CLAY 2.05-2.15 23/9/2019 SE198142.072	CLAY 0.0-0.15 23/9/2019 SE198142.073	CLAY 0.2-0.5 23/9/2019 SE198142.074	CLAY 1.55-1.65 23/9/2019 SE198142.076
Arsenic, As	mg/kg	1	4	3	5	1	1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	10	6.5	14	3.9	19
Copper, Cu	mg/kg	0.5	8.6	6.4	5.2	8.4	1.8
Lead, Pb	mg/kg	1	10	6	20	7	12
Nickel, Ni	mg/kg	0.5	2.1	0.8	3.2	1.6	1.7
Zinc, Zn	mg/kg	2	10	4	15	6	5



## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320]    Tested: 30/9/2019

PARAMETER	UOM	LOR	TP18	TP18	TP18	TP19	TP20
			CLAY 0.0-0.15 23/9/2019 SE198142.077	CLAY 0.2-0.5 23/9/2019 SE198142.078	CLAY 1.05-1.15 23/9/2019 SE198142.079	CLAY 0.0-0.15 23/9/2019 SE198142.080	CLAY 0.0-0.15 23/9/2019 SE198142.082
Arsenic, As	mg/kg	1	<b>4</b>	<b>7</b>	<b>4</b>	<b>2</b>	<b>4</b>
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	<b>11</b>	<b>17</b>	<b>7.9</b>	<b>9.8</b>	<b>19</b>
Copper, Cu	mg/kg	0.5	<b>4.6</b>	<b>16</b>	<b>4.8</b>	<b>2.9</b>	<b>4.1</b>
Lead, Pb	mg/kg	1	<b>18</b>	<b>17</b>	<b>8</b>	<b>11</b>	<b>19</b>
Nickel, Ni	mg/kg	0.5	<b>3.0</b>	<b>3.2</b>	<0.5	<b>1.6</b>	<b>2.3</b>
Zinc, Zn	mg/kg	2	<b>13</b>	<b>27</b>	<b>4</b>	<b>6</b>	<b>18</b>

PARAMETER	UOM	LOR	TP20	TP21	TP21	TP22	TP22
			CLAY 0.25-0.35 23/9/2019 SE198142.083	CLAY 0.0-0.15 24/9/2019 SE198142.084	CLAY 0.55-0.65 24/9/2019 SE198142.085	CLAY 0.0-0.15 24/9/2019 SE198142.086	CLAY 0.55-0.65 24/9/2019 SE198142.087
Arsenic, As	mg/kg	1	<b>3</b>	<b>5</b>	<b>4</b>	<b>6</b>	<b>2</b>
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	<b>21</b>	<b>13</b>	<b>12</b>	<b>14</b>	<b>37</b>
Copper, Cu	mg/kg	0.5	<b>0.8</b>	<b>13</b>	<b>11</b>	<b>10</b>	<b>2.2</b>
Lead, Pb	mg/kg	1	<b>14</b>	<b>16</b>	<b>11</b>	<b>16</b>	<b>18</b>
Nickel, Ni	mg/kg	0.5	<b>1.5</b>	<b>7.7</b>	<b>6.7</b>	<b>9.9</b>	<b>4.0</b>
Zinc, Zn	mg/kg	2	<b>7</b>	<b>25</b>	<b>20</b>	<b>27</b>	<b>9</b>

PARAMETER	UOM	LOR	TP23	TP23	TP24
			CLAY 0.0-0.15 24/9/2019 SE198142.088	CLAY 0.55-0.65 24/9/2019 SE198142.089	CLAY 0.0-0.15 24/9/2019 SE198142.090
Arsenic, As	mg/kg	1	<b>5</b>	<1	<b>5</b>
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	<b>25</b>	<b>26</b>	<b>24</b>
Copper, Cu	mg/kg	0.5	<b>2.1</b>	<b>1.0</b>	<b>3.4</b>
Lead, Pb	mg/kg	1	<b>16</b>	<b>13</b>	<b>15</b>
Nickel, Ni	mg/kg	0.5	<b>2.9</b>	<b>2.1</b>	<b>2.3</b>
Zinc, Zn	mg/kg	2	<b>12</b>	<b>5</b>	<b>11</b>

Mercury in Soil [AN312] Tested: 30/9/2019

PARAMETER	UOM	LOR	TP1	TP1	TP1	TP1	TP2
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.2-0.5	1.2-1.5	2.45-2.55	0.0-0.15
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.001	SE198142.002	SE198142.003	SE198142.005	SE198142.006
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP2	TP2	TP3	TP3	TP3
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.2-0.5	2.2-2.5	0.0-0.15	0.2-0.5	1.2-1.5
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.007	SE198142.009	SE198142.010	SE198142.011	SE198142.012
Mercury	mg/kg	0.05	<0.05	0.06	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP3	TP4	TP4	TP4	TP5
			CLAY	CLAY	CLAY	CLAY	CLAY
			2.85-2.95	0.0-0.15	0.2-0.5	2.2-2.5	0.0-0.15
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.014	SE198142.015	SE198142.016	SE198142.018	SE198142.019
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP5	TP5	TP5	TP6	TP6
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.2-0.5	1.2-1.5	2.65-2.75	0.0-0.15	0.2-0.5
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.020	SE198142.021	SE198142.023	SE198142.024	SE198142.025
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP6	TP7	TP7	TP7	TP8
			CLAY	CLAY	CLAY	CLAY	CLAY
			1.55-1.65	0.0-0.15	0.2-0.5	2.05-2.15	0.0-0.15
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.027	SE198142.028	SE198142.029	SE198142.031	SE198142.032
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP8	TP8	TP8	TP9	TP9
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.2-0.5	1.2-1.5	2.65-2.75	0.0-0.15	0.2-0.5
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.033	SE198142.034	SE198142.036	SE198142.037	SE198142.038
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP9	TP10	TP10	TP10	TP11
			CLAY	CLAY	CLAY	CLAY	CLAY
			2.25-2.35	0.0-0.15	0.2-0.5	2.25-2.35	0.0-0.15
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.040	SE198142.041	SE198142.042	SE198142.044	SE198142.045
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

## Mercury in Soil [AN312] Tested: 30/9/2019 (continued)

PARAMETER	UOM	LOR	TP11	TP11	TP11	TP12	TP12
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.2-0.5	1.2-1.5	1.85-1.95	0.0-0.15	0.2-0.5
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.046	SE198142.047	SE198142.049	SE198142.050	SE198142.051
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP12	TP12	TP13	TP13	TP13
			CLAY	CLAY	CLAY	CLAY	CLAY
			1.8-1.9	1.95-2.05	0.0-0.15	0.2-0.5	1.9-2.0
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.053	SE198142.054	SE198142.055	SE198142.056	SE198142.058
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP13	TP14	TP14	TP14	TP14
			CLAY	CLAY	CLAY	CLAY	CLAY
			2.05-2.15	0.0-0.15	0.2-0.5	1.8-2.0	2.05-2.15
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.059	SE198142.060	SE198142.061	SE198142.063	SE198142.064
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP15	TP15	TP15	TP16	TP16
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.2-0.5	2.05-2.15	0.0-0.15	0.2-0.5
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.065	SE198142.066	SE198142.068	SE198142.069	SE198142.070
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP16	TP16	TP17	TP17	TP17
			CLAY	CLAY	CLAY	CLAY	CLAY
			1.2-1.5	2.05-2.15	0.0-0.15	0.2-0.5	1.55-1.65
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.071	SE198142.072	SE198142.073	SE198142.074	SE198142.076
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP18	TP18	TP18	TP19	TP20
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.2-0.5	1.05-1.15	0.0-0.15	0.0-0.15
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.077	SE198142.078	SE198142.079	SE198142.080	SE198142.082
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP20	TP21	TP21	TP22	TP22
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.25-0.35	0.0-0.15	0.55-0.65	0.0-0.15	0.55-0.65
			23/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198142.083	SE198142.084	SE198142.085	SE198142.086	SE198142.087
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	0.05

Mercury in Soil [AN312]    Tested: 30/9/2019    (continued)

			TP23	TP23	TP24
			CLAY 0.0-0.15 24/9/2019 SE198142.088	CLAY 0.55-0.65 24/9/2019 SE198142.089	CLAY 0.0-0.15 24/9/2019 SE198142.090
PARAMETER	UOM	LOR			
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 27/9/2019

PARAMETER	UOM	LOR	TP1	TP1	TP1	TP1	TP2
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.2-0.5	1.2-1.5	2.45-2.55	0.0-0.15
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.001	SE198142.002	SE198142.003	SE198142.005	SE198142.006
% Moisture	%w/w	1	17.7	20.7	14.5	20.4	13.0

PARAMETER	UOM	LOR	TP2	TP2	TP3	TP3	TP3
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.2-0.5	2.2-2.5	0.0-0.15	0.2-0.5	1.2-1.5
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.007	SE198142.009	SE198142.010	SE198142.011	SE198142.012
% Moisture	%w/w	1	17.4	12.7	14.1	16.2	12.3

PARAMETER	UOM	LOR	TP3	TP4	TP4	TP4	TP5
			CLAY	CLAY	CLAY	CLAY	CLAY
			2.85-2.95	0.0-0.15	0.2-0.5	2.2-2.5	0.0-0.15
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.014	SE198142.015	SE198142.016	SE198142.018	SE198142.019
% Moisture	%w/w	1	9.6	8.1	18.8	15.4	16.0

PARAMETER	UOM	LOR	TP5	TP5	TP5	TP6	TP6
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.2-0.5	1.2-1.5	2.65-2.75	0.0-0.15	0.2-0.5
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.020	SE198142.021	SE198142.023	SE198142.024	SE198142.025
% Moisture	%w/w	1	18.0	18.3	13.4	18.8	18.3

PARAMETER	UOM	LOR	TP6	TP7	TP7	TP7	TP8
			CLAY	CLAY	CLAY	CLAY	CLAY
			1.55-1.65	0.0-0.15	0.2-0.5	2.05-2.15	0.0-0.15
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.027	SE198142.028	SE198142.029	SE198142.031	SE198142.032
% Moisture	%w/w	1	9.5	17.2	16.0	16.3	13.9

PARAMETER	UOM	LOR	TP8	TP8	TP8	TP9	TP9
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.2-0.5	1.2-1.5	2.65-2.75	0.0-0.15	0.2-0.5
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.033	SE198142.034	SE198142.036	SE198142.037	SE198142.038
% Moisture	%w/w	1	13.6	10.2	14.0	13.5	10.8

PARAMETER	UOM	LOR	TP9	TP10	TP10	TP10	TP11
			CLAY	CLAY	CLAY	CLAY	CLAY
			2.25-2.35	0.0-0.15	0.2-0.5	2.25-2.35	0.0-0.15
			23/9/2019	23/9/2019	23/9/2019	23/9/2019	23/9/2019
			SE198142.040	SE198142.041	SE198142.042	SE198142.044	SE198142.045
% Moisture	%w/w	1	10.9	13.8	19.1	17.3	21.6

Moisture Content [AN002] Tested: 27/9/2019 (continued)

PARAMETER	UOM	LOR	TP11 CLAY 0.2-0.5 23/9/2019 SE198142.046	TP11 CLAY 1.2-1.5 23/9/2019 SE198142.047	TP11 CLAY 1.85-1.95 23/9/2019 SE198142.049	TP12 CLAY 0.0-0.15 23/9/2019 SE198142.050	TP12 CLAY 0.2-0.5 23/9/2019 SE198142.051
% Moisture	%w/w	1	12.8	19.9	16.1	15.3	16.8

PARAMETER	UOM	LOR	TP12 CLAY 1.8-1.9 23/9/2019 SE198142.053	TP12 CLAY 1.95-2.05 23/9/2019 SE198142.054	TP13 CLAY 0.0-0.15 23/9/2019 SE198142.055	TP13 CLAY 0.2-0.5 23/9/2019 SE198142.056	TP13 CLAY 1.9-2.0 23/9/2019 SE198142.058
% Moisture	%w/w	1	5.8	17.9	16.5	16.9	6.9

PARAMETER	UOM	LOR	TP13 CLAY 2.05-2.15 23/9/2019 SE198142.059	TP14 CLAY 0.0-0.15 23/9/2019 SE198142.060	TP14 CLAY 0.2-0.5 23/9/2019 SE198142.061	TP14 CLAY 1.8-2.0 23/9/2019 SE198142.063	TP14 CLAY 2.05-2.15 23/9/2019 SE198142.064
% Moisture	%w/w	1	6.2	18.2	11.9	6.4	11.3

PARAMETER	UOM	LOR	TP15 CLAY 0.0-0.15 23/9/2019 SE198142.065	TP15 CLAY 0.2-0.5 23/9/2019 SE198142.066	TP15 CLAY 2.05-2.15 23/9/2019 SE198142.068	TP16 CLAY 0.0-0.15 23/9/2019 SE198142.069	TP16 CLAY 0.2-0.5 23/9/2019 SE198142.070
% Moisture	%w/w	1	12.2	14.1	19.6	15.5	14.1

PARAMETER	UOM	LOR	TP16 CLAY 1.2-1.5 23/9/2019 SE198142.071	TP16 CLAY 2.05-2.15 23/9/2019 SE198142.072	TP17 CLAY 0.0-0.15 23/9/2019 SE198142.073	TP17 CLAY 0.2-0.5 23/9/2019 SE198142.074	TP17 CLAY 1.55-1.65 23/9/2019 SE198142.076
% Moisture	%w/w	1	9.2	21.2	18.7	21.1	7.0

PARAMETER	UOM	LOR	TP18 CLAY 0.0-0.15 23/9/2019 SE198142.077	TP18 CLAY 0.2-0.5 23/9/2019 SE198142.078	TP18 CLAY 1.05-1.15 23/9/2019 SE198142.079	TP19 CLAY 0.0-0.15 23/9/2019 SE198142.080	TP20 CLAY 0.0-0.15 23/9/2019 SE198142.082
% Moisture	%w/w	1	9.0	18.6	17.9	11.5	16.7

PARAMETER	UOM	LOR	TP20 CLAY 0.25-0.35 23/9/2019 SE198142.083	TP21 CLAY 0.0-0.15 24/9/2019 SE198142.084	TP21 CLAY 0.55-0.65 24/9/2019 SE198142.085	TP22 CLAY 0.0-0.15 24/9/2019 SE198142.086	TP22 CLAY 0.55-0.65 24/9/2019 SE198142.087
% Moisture	%w/w	1	7.6	21.7	18.4	21.3	18.3

Moisture Content [AN002]    Tested: 27/9/2019    (continued)

			TP23	TP23	TP24
			CLAY	CLAY	CLAY
			0.0-0.15	0.55-0.65	0.0-0.15
			24/9/2019	24/9/2019	24/9/2019
			SE198142.088	SE198142.089	SE198142.090
PARAMETER	UOM	LOR			
% Moisture	%w/w	1	<b>7.4</b>	<b>14.6</b>	<b>17.7</b>

Fibre Identification in soil [AN602] Tested: 1/10/2019

PARAMETER	UOM	LOR	TP1	TP1	TP2	TP2	TP3
			CLAY 0.2-0.5 23/9/2019 SE198142.002	CLAY 1.2-1.5 23/9/2019 SE198142.003	CLAY 0.2-0.5 23/9/2019 SE198142.007	CLAY 2.2-2.5 23/9/2019 SE198142.009	CLAY 0.2-0.5 23/9/2019 SE198142.011
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	TP3	TP4	TP4	TP5	TP5
			CLAY 1.2-1.5 23/9/2019 SE198142.012	CLAY 0.2-0.5 23/9/2019 SE198142.016	CLAY 2.2-2.5 23/9/2019 SE198142.018	CLAY 0.2-0.5 23/9/2019 SE198142.020	CLAY 1.2-1.5 23/9/2019 SE198142.021
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	TP6	TP7	TP8	TP8	TP9
			CLAY 0.2-0.5 23/9/2019 SE198142.025	CLAY 0.2-0.5 23/9/2019 SE198142.029	CLAY 0.2-0.5 23/9/2019 SE198142.033	CLAY 1.2-1.5 23/9/2019 SE198142.034	CLAY 0.2-0.5 23/9/2019 SE198142.038
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	TP10	TP11	TP11	TP12	TP12
			CLAY 0.2-0.5 23/9/2019 SE198142.042	CLAY 0.2-0.5 23/9/2019 SE198142.046	CLAY 1.2-1.5 23/9/2019 SE198142.047	CLAY 0.2-0.5 23/9/2019 SE198142.051	CLAY 1.8-1.9 23/9/2019 SE198142.053
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	TP13	TP13	TP14	TP14	TP15
			CLAY 0.2-0.5 23/9/2019 SE198142.056	CLAY 1.9-2.0 23/9/2019 SE198142.058	CLAY 0.2-0.5 23/9/2019 SE198142.061	CLAY 1.8-2.0 23/9/2019 SE198142.063	CLAY 0.2-0.5 23/9/2019 SE198142.066
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	TP16	TP16	TP17	TP18	TP21
			CLAY 0.2-0.5 23/9/2019 SE198142.070	CLAY 1.2-1.5 23/9/2019 SE198142.071	CLAY 0.2-0.5 23/9/2019 SE198142.074	CLAY 0.2-0.5 23/9/2019 SE198142.078	CLAY 0.0-0.15 24/9/2019 SE198142.084
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	TP22	TP23
			CLAY 0.0-0.15 24/9/2019 SE198142.086	CLAY 0.0-0.15 24/9/2019 SE198142.088
Asbestos Detected	No unit	-	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01



## Gravimetric Determination of Asbestos in Soil [AN605] Tested: 1/10/2019

PARAMETER	UOM	LOR	TP1	TP1	TP2	TP2	TP3
			CLAY 0.2-0.5 23/9/2019 SE198142.002	CLAY 1.2-1.5 23/9/2019 SE198142.003	CLAY 0.2-0.5 23/9/2019 SE198142.007	CLAY 2.2-2.5 23/9/2019 SE198142.009	CLAY 0.2-0.5 23/9/2019 SE198142.011
Total Sample Weight*	g	1	<b>361</b>	<b>604</b>	<b>404</b>	<b>479</b>	<b>415</b>
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP3	TP4	TP4	TP5	TP5
			CLAY 1.2-1.5 23/9/2019 SE198142.012	CLAY 0.2-0.5 23/9/2019 SE198142.016	CLAY 2.2-2.5 23/9/2019 SE198142.018	CLAY 0.2-0.5 23/9/2019 SE198142.020	CLAY 1.2-1.5 23/9/2019 SE198142.021
Total Sample Weight*	g	1	<b>598</b>	<b>474</b>	<b>518</b>	<b>496</b>	<b>420</b>
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP6	TP7	TP8	TP8	TP9
			CLAY 0.2-0.5 23/9/2019 SE198142.025	CLAY 0.2-0.5 23/9/2019 SE198142.029	CLAY 0.2-0.5 23/9/2019 SE198142.033	CLAY 1.2-1.5 23/9/2019 SE198142.034	CLAY 0.2-0.5 23/9/2019 SE198142.038
Total Sample Weight*	g	1	<b>432</b>	<b>406</b>	<b>435</b>	<b>506</b>	<b>508</b>
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP10	TP11	TP11	TP12	TP12
			CLAY 0.2-0.5 23/9/2019 SE198142.042	CLAY 0.2-0.5 23/9/2019 SE198142.046	CLAY 1.2-1.5 23/9/2019 SE198142.047	CLAY 0.2-0.5 23/9/2019 SE198142.051	CLAY 1.8-1.9 23/9/2019 SE198142.053
Total Sample Weight*	g	1	<b>425</b>	<b>527</b>	<b>386</b>	<b>416</b>	<b>930</b>
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

## Gravimetric Determination of Asbestos in Soil [AN605] Tested: 1/10/2019 (continued)

PARAMETER	UOM	LOR	TP13	TP13	TP14	TP14	TP15
			CLAY 0.2-0.5 23/9/2019 SE198142.056	CLAY 1.9-2.0 23/9/2019 SE198142.058	CLAY 0.2-0.5 23/9/2019 SE198142.061	CLAY 1.8-2.0 23/9/2019 SE198142.063	CLAY 0.2-0.5 23/9/2019 SE198142.066
Total Sample Weight*	g	1	446	917	446	794	392
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP16	TP16	TP17	TP18	TP21
			CLAY 0.2-0.5 23/9/2019 SE198142.070	CLAY 1.2-1.5 23/9/2019 SE198142.071	CLAY 0.2-0.5 23/9/2019 SE198142.074	CLAY 0.2-0.5 23/9/2019 SE198142.078	CLAY 0.0-0.15 24/9/2019 SE198142.084
Total Sample Weight*	g	1	395	472	411	369	424
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP22	TP23
			CLAY 0.0-0.15 24/9/2019 SE198142.086	CLAY 0.0-0.15 24/9/2019 SE198142.088
Total Sample Weight*	g	1	409	769
ACM in >7mm Sample*	g	0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-

## 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.
- 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 CaCl<sub>2</sub>) is made at a ratio of 1:5 and the pH determined and reported on the extract. Reference APHA 4500-H+.
- AN122** Exchangeable Cations, CEC and ESP: Soil sample is extracted in 1M Ammonium Acetate at pH=7 (or 1M Ammonium Chloride at pH=7) with cations (Na, K, Ca & Mg) then determined by ICP OES/ICP MS and reported as Exchangeable Cations. For saline soils, these results can be corrected for water soluble cations and reported as Exchangeable cations in meq/100g or soil can be pre-treated (aqueous ethanol/aqueous glycerol) prior to extraction. Cation Exchange Capacity (CEC) is the sum of the exchangeable cations in meq/100g.
- AN122** The Exchangeable Sodium Percentage (ESP) is calculated as the exchangeable sodium divided by the CEC (all in meq/100g) times 100.  
ESP can be used to categorise the sodicity of the soil as below:
- |           |                |
|-----------|----------------|
| ESP < 6%  | non-sodic      |
| ESP 6-15% | sodic          |
| ESP > 15% | strongly sodic |
- Method is referenced to Rayment and Lyons, 2011, sections 15D3 and 15N1.-
- 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 Recoverable Hydrocarbons - Silica (TRH-Si) 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 unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.

## 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.

## AN605

This technique gravimetrically determines the mass of Asbestos Containing Material retained on a 7mm Sieve and assumes that 15% of this ACM is asbestos. This calculated asbestos weight is then calculated as a percentage of the total sample weight.

## AN605

This technique also gravimetrically determines the mass of Fibrous Asbestos (FA) and Asbestos Fines (AF) Containing Material retained on and passing a 2mm sieve post 7mm sieving. Assumes that FA and AF are 100% asbestos containing. This calculated asbestos weight is then calculated as a percentage of the total sample weight. This does not include free fibres which are only observed by standard trace analysis as per AN 602.

## AN605

Insofar as is technically feasible, this report is consistent with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment Remediation and Management of Asbestos - Contaminated Sites in Western Australia - May 2009.

## FOOTNOTES

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

Unless it is reported that sampling has been performed by SGS, the samples have been 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:

- 1 Bq is equivalent to 27 pCi
- 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 and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: [www.sgs.com.au/pv.sgsvr/en-gb/environment](http://www.sgs.com.au/pv.sgsvr/en-gb/environment).

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

This report must not be reproduced, except in full.



## STATEMENT OF QA/QC PERFORMANCE

SE198142 R0

### CLIENT DETAILS

Contact Anwar Barbhuyia  
Client Geotechnique  
Address P.O. Box 880  
PENRITH NSW 2751

Telephone 02 4722 2700  
Facsimile 02 4722 6161  
Email anwar@geotech.com.au

Project **14513-2 Marsden Park**  
Order Number (Not specified)  
Samples 90

### 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 **SE198142 R0**  
Date Received 25 Sep 2019  
Date Reported 02 Oct 2019

### COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.  
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.  
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Duplicate	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item
	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item
	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item

### SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	73 Clay
Date documentation received	26/9/2019@1:51pm	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	12°C	Sufficient sample for analysis	Yes
Turnaround time requested	3 Day/Standard		

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-ENVJAN122

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE198142.001	LB184228	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP1	SE198142.002	LB184228	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP1	SE198142.003	LB184228	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP1	SE198142.005	LB184228	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP2	SE198142.007	LB184228	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP2	SE198142.009	LB184228	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP3	SE198142.011	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP3	SE198142.012	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP3	SE198142.014	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP4	SE198142.015	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP4	SE198142.016	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP4	SE198142.018	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP5	SE198142.020	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP5	SE198142.021	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP5	SE198142.023	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP6	SE198142.024	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP6	SE198142.025	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP7	SE198142.029	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP7	SE198142.031	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP8	SE198142.032	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP8	SE198142.033	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP8	SE198142.034	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP9	SE198142.037	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP9	SE198142.038	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP10	SE198142.041	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP10	SE198142.042	LB184229	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP10	SE198142.044	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP11	SE198142.046	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP11	SE198142.047	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP11	SE198142.049	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP12	SE198142.050	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP12	SE198142.051	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP12	SE198142.053	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP12	SE198142.054	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP13	SE198142.056	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP13	SE198142.058	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP14	SE198142.060	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP14	SE198142.061	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP14	SE198142.063	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP14	SE198142.064	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP15	SE198142.066	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP16	SE198142.069	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP16	SE198142.070	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP16	SE198142.071	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP16	SE198142.072	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP17	SE198142.074	LB184230	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP18	SE198142.077	LB184231	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP18	SE198142.078	LB184231	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP18	SE198142.079	LB184231	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP20	SE198142.082	LB184231	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP21	SE198142.084	LB184231	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP21	SE198142.085	LB184231	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP22	SE198142.086	LB184231	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP23	SE198142.088	LB184231	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP23	SE198142.089	LB184231	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP24	SE198142.090	LB184231	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019

## Fibre Identification in soil

Method: ME-(AU)-ENVJAN602

Sample Name	Sample No.	QC Ref
-------------	------------	--------

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Fibre Identification in soil (continued)

Method: ME-(AU)-ENVJAN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE198142.002	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP1	SE198142.003	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP2	SE198142.007	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP2	SE198142.009	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP3	SE198142.011	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP3	SE198142.012	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP4	SE198142.016	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP4	SE198142.018	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP5	SE198142.020	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP5	SE198142.021	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP6	SE198142.025	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP7	SE198142.029	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP8	SE198142.033	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP8	SE198142.034	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP9	SE198142.038	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP10	SE198142.042	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP11	SE198142.046	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP11	SE198142.047	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP12	SE198142.051	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP12	SE198142.053	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP13	SE198142.056	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP13	SE198142.058	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP14	SE198142.061	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP14	SE198142.063	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP15	SE198142.066	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP16	SE198142.070	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP16	SE198142.071	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP17	SE198142.074	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP18	SE198142.078	LB184388	23 Sep 2019	25 Sep 2019	22 Sep 2020	01 Oct 2019	22 Sep 2020	02 Oct 2019
TP21	SE198142.084	LB184388	24 Sep 2019	25 Sep 2019	23 Sep 2020	01 Oct 2019	23 Sep 2020	02 Oct 2019
TP22	SE198142.086	LB184388	24 Sep 2019	25 Sep 2019	23 Sep 2020	01 Oct 2019	23 Sep 2020	02 Oct 2019
TP23	SE198142.088	LB184388	24 Sep 2019	25 Sep 2019	23 Sep 2020	01 Oct 2019	23 Sep 2020	02 Oct 2019

## Gravimetric Determination of Asbestos in Soil

Method: ME-(AU)-ENVJAN605

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE198142.002	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP1	SE198142.003	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP2	SE198142.007	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP2	SE198142.009	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP3	SE198142.011	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP3	SE198142.012	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP4	SE198142.016	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP4	SE198142.018	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP5	SE198142.020	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP5	SE198142.021	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP6	SE198142.025	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP7	SE198142.029	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP8	SE198142.033	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP8	SE198142.034	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP9	SE198142.038	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP10	SE198142.042	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP11	SE198142.046	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP11	SE198142.047	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP12	SE198142.051	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP12	SE198142.053	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP13	SE198142.056	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP13	SE198142.058	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP14	SE198142.061	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP14	SE198142.063	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP15	SE198142.066	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019



SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Gravimetric Determination of Asbestos in Soil (continued)

Method: ME-(AU)-ENVJAN605

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP16	SE198142.070	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP16	SE198142.071	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP17	SE198142.074	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP18	SE198142.078	LB184388	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	02 Oct 2019
TP21	SE198142.084	LB184388	24 Sep 2019	25 Sep 2019	22 Mar 2020	01 Oct 2019	22 Mar 2020	02 Oct 2019
TP22	SE198142.086	LB184388	24 Sep 2019	25 Sep 2019	22 Mar 2020	01 Oct 2019	22 Mar 2020	02 Oct 2019
TP23	SE198142.088	LB184388	24 Sep 2019	25 Sep 2019	22 Mar 2020	01 Oct 2019	22 Mar 2020	02 Oct 2019

## Mercury in Soil

Method: ME-(AU)-ENVJAN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE198142.001	LB184293	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP1	SE198142.002	LB184293	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP1	SE198142.003	LB184293	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP1	SE198142.005	LB184293	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP2	SE198142.006	LB184293	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP2	SE198142.007	LB184293	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP2	SE198142.009	LB184293	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP3	SE198142.010	LB184293	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP3	SE198142.011	LB184294	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP3	SE198142.012	LB184294	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP3	SE198142.014	LB184294	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP4	SE198142.015	LB184294	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP4	SE198142.016	LB184294	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP4	SE198142.018	LB184294	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP5	SE198142.019	LB184294	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP5	SE198142.020	LB184294	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP5	SE198142.021	LB184294	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP5	SE198142.023	LB184294	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP6	SE198142.024	LB184294	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP6	SE198142.025	LB184294	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP6	SE198142.027	LB184294	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP7	SE198142.028	LB184294	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP7	SE198142.029	LB184294	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP7	SE198142.031	LB184294	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP8	SE198142.032	LB184294	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP8	SE198142.033	LB184294	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP8	SE198142.034	LB184294	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP8	SE198142.036	LB184295	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP9	SE198142.037	LB184295	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP9	SE198142.038	LB184295	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP9	SE198142.040	LB184295	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP10	SE198142.041	LB184295	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP10	SE198142.042	LB184295	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP10	SE198142.044	LB184295	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP11	SE198142.045	LB184295	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP11	SE198142.046	LB184295	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP11	SE198142.047	LB184295	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP11	SE198142.049	LB184295	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP12	SE198142.050	LB184295	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP12	SE198142.051	LB184295	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP12	SE198142.053	LB184295	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP12	SE198142.054	LB184295	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP13	SE198142.055	LB184295	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP13	SE198142.056	LB184295	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP13	SE198142.058	LB184295	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP13	SE198142.059	LB184295	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP14	SE198142.060	LB184296	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP14	SE198142.061	LB184296	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP14	SE198142.063	LB184296	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP14	SE198142.064	LB184296	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Mercury in Soil (continued)

Method: ME-(AU)-ENVJAN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP15	SE198142.065	LB184296	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP15	SE198142.066	LB184296	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP15	SE198142.068	LB184296	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP16	SE198142.069	LB184296	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP16	SE198142.070	LB184296	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP16	SE198142.071	LB184296	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP16	SE198142.072	LB184296	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP17	SE198142.073	LB184296	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP17	SE198142.074	LB184296	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP17	SE198142.076	LB184296	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP18	SE198142.077	LB184296	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP18	SE198142.078	LB184296	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP18	SE198142.079	LB184296	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP19	SE198142.080	LB184296	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP20	SE198142.082	LB184296	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP20	SE198142.083	LB184298	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
TP21	SE198142.084	LB184298	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP21	SE198142.085	LB184298	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP22	SE198142.086	LB184298	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP22	SE198142.087	LB184298	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP23	SE198142.088	LB184298	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP23	SE198142.089	LB184298	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP24	SE198142.090	LB184298	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019

## Moisture Content

Method: ME-(AU)-ENVJAN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE198142.001	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP1	SE198142.002	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP1	SE198142.003	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP1	SE198142.004	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	27 Sep 2019
TP1	SE198142.005	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP2	SE198142.006	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP2	SE198142.007	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP2	SE198142.008	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	27 Sep 2019
TP2	SE198142.009	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP3	SE198142.010	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP3	SE198142.011	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP3	SE198142.012	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP3	SE198142.013	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	27 Sep 2019
TP3	SE198142.014	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP4	SE198142.015	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP4	SE198142.016	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP4	SE198142.017	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	27 Sep 2019
TP4	SE198142.018	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP5	SE198142.019	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP5	SE198142.020	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP5	SE198142.021	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP5	SE198142.022	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	27 Sep 2019
TP5	SE198142.023	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP6	SE198142.024	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP6	SE198142.025	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP6	SE198142.026	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	27 Sep 2019
TP6	SE198142.027	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP7	SE198142.028	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP7	SE198142.029	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP7	SE198142.030	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	27 Sep 2019
TP7	SE198142.031	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP8	SE198142.032	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP8	SE198142.033	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP8	SE198142.034	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Moisture Content (continued)

Method: ME-(AU)-ENVJAN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP8	SE198142.035	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	27 Sep 2019
TP8	SE198142.036	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP9	SE198142.037	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP9	SE198142.038	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP9	SE198142.039	LB184135	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	27 Sep 2019
TP9	SE198142.040	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP10	SE198142.041	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP10	SE198142.042	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP10	SE198142.043	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	27 Sep 2019
TP10	SE198142.044	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP11	SE198142.045	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP11	SE198142.046	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP11	SE198142.047	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP11	SE198142.048	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	27 Sep 2019
TP11	SE198142.049	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP12	SE198142.050	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP12	SE198142.051	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP12	SE198142.052	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	27 Sep 2019
TP12	SE198142.053	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP12	SE198142.054	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP13	SE198142.055	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP13	SE198142.056	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP13	SE198142.057	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	27 Sep 2019
TP13	SE198142.058	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP13	SE198142.059	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP14	SE198142.060	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP14	SE198142.061	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP14	SE198142.062	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	27 Sep 2019
TP14	SE198142.063	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP14	SE198142.064	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP15	SE198142.065	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP15	SE198142.066	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP15	SE198142.067	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	27 Sep 2019
TP15	SE198142.068	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP16	SE198142.069	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP16	SE198142.070	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP16	SE198142.071	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP16	SE198142.072	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP17	SE198142.073	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP17	SE198142.074	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP17	SE198142.075	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	27 Sep 2019
TP17	SE198142.076	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP18	SE198142.077	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP18	SE198142.078	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP18	SE198142.079	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP19	SE198142.080	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP20	SE198142.082	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP20	SE198142.083	LB184136	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP21	SE198142.084	LB184136	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP21	SE198142.085	LB184136	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP22	SE198142.086	LB184136	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP22	SE198142.087	LB184136	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP23	SE198142.088	LB184136	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP23	SE198142.089	LB184136	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019
TP24	SE198142.090	LB184136	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	02 Oct 2019	30 Sep 2019

## OC Pesticides in Soil

Method: ME-(AU)-ENVJAN020

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE198142.001	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP1	SE198142.002	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## OC Pesticides in Soil (continued)

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE198142.003	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP1	SE198142.004	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP2	SE198142.006	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP2	SE198142.007	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP2	SE198142.008	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP2	SE198142.009	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP3	SE198142.010	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP3	SE198142.011	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP3	SE198142.012	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP3	SE198142.013	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP4	SE198142.015	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP4	SE198142.016	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP4	SE198142.017	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP4	SE198142.018	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP5	SE198142.019	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP5	SE198142.020	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP5	SE198142.021	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP5	SE198142.022	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP6	SE198142.024	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP6	SE198142.025	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP6	SE198142.026	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP7	SE198142.028	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP7	SE198142.029	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP7	SE198142.030	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP8	SE198142.032	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP8	SE198142.033	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP8	SE198142.034	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP8	SE198142.035	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP9	SE198142.037	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP9	SE198142.038	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP9	SE198142.039	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP10	SE198142.041	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP10	SE198142.042	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP10	SE198142.043	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP11	SE198142.045	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP11	SE198142.046	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP11	SE198142.047	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP11	SE198142.048	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP12	SE198142.050	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP12	SE198142.051	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP12	SE198142.052	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP12	SE198142.053	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP13	SE198142.055	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP13	SE198142.056	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP13	SE198142.057	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP13	SE198142.058	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP14	SE198142.060	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP14	SE198142.061	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP14	SE198142.062	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP14	SE198142.063	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP15	SE198142.065	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP15	SE198142.066	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP15	SE198142.067	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP16	SE198142.069	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP16	SE198142.070	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP16	SE198142.071	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP17	SE198142.073	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP17	SE198142.074	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP17	SE198142.075	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP18	SE198142.077	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## OC Pesticides in Soil (continued)

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP18	SE198142.078	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP19	SE198142.080	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP20	SE198142.082	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP21	SE198142.084	LB184148	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP22	SE198142.086	LB184148	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP23	SE198142.088	LB184148	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP24	SE198142.090	LB184148	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE198142.001	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP1	SE198142.002	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP1	SE198142.003	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP1	SE198142.004	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP2	SE198142.006	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP2	SE198142.007	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP2	SE198142.008	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP2	SE198142.009	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP3	SE198142.010	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP3	SE198142.011	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP3	SE198142.012	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP3	SE198142.013	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP4	SE198142.015	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP4	SE198142.016	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP4	SE198142.017	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP4	SE198142.018	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP5	SE198142.019	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP5	SE198142.020	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP5	SE198142.021	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP5	SE198142.022	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP6	SE198142.024	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP6	SE198142.025	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP6	SE198142.026	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP7	SE198142.028	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP7	SE198142.029	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP7	SE198142.030	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP8	SE198142.032	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP8	SE198142.033	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP8	SE198142.034	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP8	SE198142.035	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP9	SE198142.037	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP9	SE198142.038	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP9	SE198142.039	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP10	SE198142.041	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP10	SE198142.042	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP10	SE198142.043	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP11	SE198142.045	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP11	SE198142.046	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP11	SE198142.047	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP11	SE198142.048	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP12	SE198142.050	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP12	SE198142.051	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP12	SE198142.052	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP12	SE198142.053	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP13	SE198142.055	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP13	SE198142.056	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP13	SE198142.057	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP13	SE198142.058	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP14	SE198142.060	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP14	SE198142.061	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019



SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP14	SE198142.062	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP14	SE198142.063	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP15	SE198142.065	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP15	SE198142.066	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP15	SE198142.067	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP16	SE198142.069	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP16	SE198142.070	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP16	SE198142.071	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP17	SE198142.073	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP17	SE198142.074	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP17	SE198142.075	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP18	SE198142.077	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP18	SE198142.078	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP19	SE198142.080	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP20	SE198142.082	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP21	SE198142.084	LB184148	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP22	SE198142.086	LB184148	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP23	SE198142.088	LB184148	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP24	SE198142.090	LB184148	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019

## PCBs in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE198142.001	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP1	SE198142.002	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP1	SE198142.003	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP1	SE198142.004	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP2	SE198142.006	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP2	SE198142.007	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP2	SE198142.008	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP2	SE198142.009	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP3	SE198142.010	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP3	SE198142.011	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP3	SE198142.012	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP3	SE198142.013	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP4	SE198142.015	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP4	SE198142.016	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP4	SE198142.017	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP4	SE198142.018	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP5	SE198142.019	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP5	SE198142.020	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP5	SE198142.021	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP5	SE198142.022	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP6	SE198142.024	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP6	SE198142.025	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP6	SE198142.026	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP7	SE198142.028	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP7	SE198142.029	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP7	SE198142.030	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP8	SE198142.032	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP8	SE198142.033	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP8	SE198142.034	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP8	SE198142.035	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP9	SE198142.037	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP9	SE198142.038	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP9	SE198142.039	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP10	SE198142.041	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP10	SE198142.042	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP10	SE198142.043	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP11	SE198142.045	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP11	SE198142.046	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## PCBs in Soil (continued)

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP11	SE198142.047	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP11	SE198142.048	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP12	SE198142.050	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP12	SE198142.051	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP12	SE198142.052	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP12	SE198142.053	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP13	SE198142.055	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP13	SE198142.056	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP13	SE198142.057	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP13	SE198142.058	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP14	SE198142.060	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP14	SE198142.061	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP14	SE198142.062	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP14	SE198142.063	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP15	SE198142.065	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP15	SE198142.066	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP15	SE198142.067	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP16	SE198142.069	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP16	SE198142.070	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP16	SE198142.071	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP17	SE198142.073	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP17	SE198142.074	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP17	SE198142.075	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP18	SE198142.077	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP18	SE198142.078	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP19	SE198142.080	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP20	SE198142.082	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP21	SE198142.084	LB184148	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP22	SE198142.086	LB184148	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP23	SE198142.088	LB184148	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP24	SE198142.090	LB184148	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019

## pH in soil (1:5)

Method: ME-(AU)-ENVJAN101

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE198142.001	LB184150	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP1	SE198142.002	LB184150	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP1	SE198142.003	LB184150	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP1	SE198142.004	LB184150	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP1	SE198142.005	LB184150	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP2	SE198142.007	LB184150	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP2	SE198142.008	LB184150	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP2	SE198142.009	LB184150	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP3	SE198142.011	LB184150	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP3	SE198142.012	LB184150	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP3	SE198142.013	LB184150	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP3	SE198142.014	LB184150	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP4	SE198142.015	LB184150	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP4	SE198142.016	LB184150	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP4	SE198142.017	LB184150	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP4	SE198142.018	LB184150	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP5	SE198142.020	LB184150	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP5	SE198142.021	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP5	SE198142.022	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP5	SE198142.023	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP6	SE198142.024	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP6	SE198142.025	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP6	SE198142.026	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP7	SE198142.029	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP7	SE198142.030	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP7	SE198142.031	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## pH in soil (1:5) (continued)

Method: ME-(AU)-ENVJAN101

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP8	SE198142.032	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP8	SE198142.033	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP8	SE198142.034	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP8	SE198142.035	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP9	SE198142.037	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP9	SE198142.038	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP9	SE198142.039	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP10	SE198142.041	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP10	SE198142.042	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP10	SE198142.043	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP10	SE198142.044	LB184151	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP11	SE198142.046	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP11	SE198142.047	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP11	SE198142.048	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP11	SE198142.049	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP12	SE198142.050	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP12	SE198142.051	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP12	SE198142.052	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP12	SE198142.053	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP12	SE198142.054	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP13	SE198142.056	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP13	SE198142.057	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP13	SE198142.058	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP14	SE198142.060	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP14	SE198142.061	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP14	SE198142.062	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP14	SE198142.063	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP14	SE198142.064	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP15	SE198142.066	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP15	SE198142.067	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP16	SE198142.069	LB184152	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP16	SE198142.070	LB184153	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP16	SE198142.071	LB184153	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP16	SE198142.072	LB184153	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP17	SE198142.074	LB184153	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP17	SE198142.075	LB184153	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP18	SE198142.077	LB184153	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP18	SE198142.078	LB184153	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP18	SE198142.079	LB184153	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP20	SE198142.082	LB184153	23 Sep 2019	25 Sep 2019	30 Sep 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP21	SE198142.084	LB184153	24 Sep 2019	25 Sep 2019	01 Oct 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP21	SE198142.085	LB184153	24 Sep 2019	25 Sep 2019	01 Oct 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP22	SE198142.086	LB184153	24 Sep 2019	25 Sep 2019	01 Oct 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP23	SE198142.088	LB184153	24 Sep 2019	25 Sep 2019	01 Oct 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP23	SE198142.089	LB184153	24 Sep 2019	25 Sep 2019	01 Oct 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019
TP24	SE198142.090	LB184153	24 Sep 2019	25 Sep 2019	01 Oct 2019	27 Sep 2019	28 Sep 2019	27 Sep 2019

## Total Phenolics in Soil

Method: ME-(AU)-ENVJAN289

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE198142.002	LB184346	23 Sep 2019	25 Sep 2019	07 Oct 2019	01 Oct 2019	07 Oct 2019	01 Oct 2019
TP1	SE198142.003	LB184346	23 Sep 2019	25 Sep 2019	07 Oct 2019	01 Oct 2019	07 Oct 2019	01 Oct 2019
TP2	SE198142.007	LB184346	23 Sep 2019	25 Sep 2019	07 Oct 2019	01 Oct 2019	07 Oct 2019	01 Oct 2019
TP2	SE198142.009	LB184346	23 Sep 2019	25 Sep 2019	07 Oct 2019	01 Oct 2019	07 Oct 2019	01 Oct 2019
TP3	SE198142.011	LB184346	23 Sep 2019	25 Sep 2019	07 Oct 2019	01 Oct 2019	07 Oct 2019	01 Oct 2019
TP3	SE198142.012	LB184346	23 Sep 2019	25 Sep 2019	07 Oct 2019	01 Oct 2019	07 Oct 2019	01 Oct 2019
TP4	SE198142.016	LB184346	23 Sep 2019	25 Sep 2019	07 Oct 2019	01 Oct 2019	07 Oct 2019	01 Oct 2019
TP4	SE198142.018	LB184346	23 Sep 2019	25 Sep 2019	07 Oct 2019	01 Oct 2019	07 Oct 2019	01 Oct 2019
TP5	SE198142.020	LB184346	23 Sep 2019	25 Sep 2019	07 Oct 2019	01 Oct 2019	07 Oct 2019	01 Oct 2019
TP5	SE198142.021	LB184346	23 Sep 2019	25 Sep 2019	07 Oct 2019	01 Oct 2019	07 Oct 2019	01 Oct 2019
TP6	SE198142.025	LB184346	23 Sep 2019	25 Sep 2019	07 Oct 2019	01 Oct 2019	07 Oct 2019	01 Oct 2019



SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Total Phenolics in Soil (continued)

Method: ME-(AU)-[ENV]AN289

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP7	SE198142.029	LB184346	23 Sep 2019	25 Sep 2019	07 Oct 2019	01 Oct 2019	07 Oct 2019	01 Oct 2019
TP8	SE198142.033	LB184346	23 Sep 2019	25 Sep 2019	07 Oct 2019	01 Oct 2019	07 Oct 2019	01 Oct 2019
TP8	SE198142.034	LB184346	23 Sep 2019	25 Sep 2019	07 Oct 2019	01 Oct 2019	07 Oct 2019	01 Oct 2019
TP9	SE198142.038	LB184346	23 Sep 2019	25 Sep 2019	07 Oct 2019	01 Oct 2019	07 Oct 2019	01 Oct 2019
TP10	SE198142.042	LB184346	23 Sep 2019	25 Sep 2019	07 Oct 2019	01 Oct 2019	07 Oct 2019	01 Oct 2019
TP11	SE198142.046	LB184453	23 Sep 2019	25 Sep 2019	07 Oct 2019	02 Oct 2019	07 Oct 2019	02 Oct 2019
TP11	SE198142.047	LB184453	23 Sep 2019	25 Sep 2019	07 Oct 2019	02 Oct 2019	07 Oct 2019	02 Oct 2019
TP12	SE198142.051	LB184453	23 Sep 2019	25 Sep 2019	07 Oct 2019	02 Oct 2019	07 Oct 2019	02 Oct 2019
TP12	SE198142.053	LB184453	23 Sep 2019	25 Sep 2019	07 Oct 2019	02 Oct 2019	07 Oct 2019	02 Oct 2019
TP13	SE198142.056	LB184453	23 Sep 2019	25 Sep 2019	07 Oct 2019	02 Oct 2019	07 Oct 2019	02 Oct 2019
TP13	SE198142.058	LB184453	23 Sep 2019	25 Sep 2019	07 Oct 2019	02 Oct 2019	07 Oct 2019	02 Oct 2019
TP14	SE198142.061	LB184453	23 Sep 2019	25 Sep 2019	07 Oct 2019	02 Oct 2019	07 Oct 2019	02 Oct 2019
TP14	SE198142.063	LB184453	23 Sep 2019	25 Sep 2019	07 Oct 2019	02 Oct 2019	07 Oct 2019	02 Oct 2019
TP15	SE198142.066	LB184453	23 Sep 2019	25 Sep 2019	07 Oct 2019	02 Oct 2019	07 Oct 2019	02 Oct 2019
TP16	SE198142.070	LB184453	23 Sep 2019	25 Sep 2019	07 Oct 2019	02 Oct 2019	07 Oct 2019	02 Oct 2019
TP16	SE198142.071	LB184453	23 Sep 2019	25 Sep 2019	07 Oct 2019	02 Oct 2019	07 Oct 2019	02 Oct 2019
TP17	SE198142.074	LB184453	23 Sep 2019	25 Sep 2019	07 Oct 2019	02 Oct 2019	07 Oct 2019	02 Oct 2019
TP18	SE198142.078	LB184453	23 Sep 2019	25 Sep 2019	07 Oct 2019	02 Oct 2019	07 Oct 2019	02 Oct 2019
TP21	SE198142.084	LB184453	24 Sep 2019	25 Sep 2019	08 Oct 2019	02 Oct 2019	08 Oct 2019	02 Oct 2019
TP22	SE198142.086	LB184453	24 Sep 2019	25 Sep 2019	08 Oct 2019	02 Oct 2019	08 Oct 2019	02 Oct 2019
TP23	SE198142.088	LB184453	24 Sep 2019	25 Sep 2019	08 Oct 2019	02 Oct 2019	08 Oct 2019	02 Oct 2019

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE198142.001	LB184283	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP1	SE198142.002	LB184283	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP1	SE198142.003	LB184283	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP1	SE198142.005	LB184283	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP2	SE198142.006	LB184283	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP2	SE198142.007	LB184283	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP2	SE198142.009	LB184283	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP3	SE198142.010	LB184283	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP3	SE198142.011	LB184284	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP3	SE198142.012	LB184284	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP3	SE198142.014	LB184284	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP4	SE198142.015	LB184284	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP4	SE198142.016	LB184284	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP4	SE198142.018	LB184284	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP5	SE198142.019	LB184284	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP5	SE198142.020	LB184284	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP5	SE198142.021	LB184284	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP5	SE198142.023	LB184284	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP6	SE198142.024	LB184284	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP6	SE198142.025	LB184284	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP6	SE198142.027	LB184284	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP7	SE198142.028	LB184284	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP7	SE198142.029	LB184284	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP7	SE198142.031	LB184284	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP8	SE198142.032	LB184284	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP8	SE198142.033	LB184284	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP8	SE198142.034	LB184284	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP8	SE198142.036	LB184285	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP9	SE198142.037	LB184285	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP9	SE198142.038	LB184285	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP9	SE198142.040	LB184285	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP10	SE198142.041	LB184285	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP10	SE198142.042	LB184285	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP10	SE198142.044	LB184285	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP11	SE198142.045	LB184285	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP11	SE198142.046	LB184285	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP11	SE198142.047	LB184285	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP11	SE198142.049	LB184285	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP12	SE198142.050	LB184285	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP12	SE198142.051	LB184285	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP12	SE198142.053	LB184285	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP12	SE198142.054	LB184285	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP13	SE198142.055	LB184285	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP13	SE198142.056	LB184285	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP13	SE198142.058	LB184285	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP13	SE198142.059	LB184285	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP14	SE198142.060	LB184286	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP14	SE198142.061	LB184286	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP14	SE198142.063	LB184286	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP14	SE198142.064	LB184286	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP15	SE198142.065	LB184286	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP15	SE198142.066	LB184286	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP15	SE198142.068	LB184286	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP16	SE198142.069	LB184286	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP16	SE198142.070	LB184286	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP16	SE198142.071	LB184286	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP16	SE198142.072	LB184286	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP17	SE198142.073	LB184286	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP17	SE198142.074	LB184286	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP17	SE198142.076	LB184286	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP18	SE198142.077	LB184286	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP18	SE198142.078	LB184286	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP18	SE198142.079	LB184286	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP19	SE198142.080	LB184286	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP20	SE198142.082	LB184286	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP20	SE198142.083	LB184287	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	02 Oct 2019
TP21	SE198142.084	LB184287	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	02 Oct 2019
TP21	SE198142.085	LB184287	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	02 Oct 2019
TP22	SE198142.086	LB184287	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	02 Oct 2019
TP22	SE198142.087	LB184287	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	02 Oct 2019
TP23	SE198142.088	LB184287	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	02 Oct 2019
TP23	SE198142.089	LB184287	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	02 Oct 2019
TP24	SE198142.090	LB184287	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	02 Oct 2019

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE198142.001	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP1	SE198142.002	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP1	SE198142.003	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP1	SE198142.004	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP2	SE198142.006	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP2	SE198142.007	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP2	SE198142.008	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP2	SE198142.009	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP3	SE198142.010	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP3	SE198142.011	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP3	SE198142.012	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP3	SE198142.013	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP4	SE198142.015	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP4	SE198142.016	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP4	SE198142.017	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP4	SE198142.018	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP5	SE198142.019	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP5	SE198142.020	LB184145	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP5	SE198142.021	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP5	SE198142.022	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-ENVJAN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP6	SE198142.024	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP6	SE198142.025	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP6	SE198142.026	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP7	SE198142.028	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP7	SE198142.029	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP7	SE198142.030	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP8	SE198142.032	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP8	SE198142.033	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP8	SE198142.034	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP8	SE198142.035	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP9	SE198142.037	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP9	SE198142.038	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP9	SE198142.039	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP10	SE198142.041	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP10	SE198142.042	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP10	SE198142.043	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP11	SE198142.045	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP11	SE198142.046	LB184146	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP11	SE198142.047	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP11	SE198142.048	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP12	SE198142.050	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP12	SE198142.051	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP12	SE198142.052	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP12	SE198142.053	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP13	SE198142.055	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP13	SE198142.056	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP13	SE198142.057	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP13	SE198142.058	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP14	SE198142.060	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP14	SE198142.061	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP14	SE198142.062	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP14	SE198142.063	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP15	SE198142.065	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP15	SE198142.066	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP15	SE198142.067	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP16	SE198142.069	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP16	SE198142.070	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP16	SE198142.071	LB184147	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP17	SE198142.073	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP17	SE198142.074	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP17	SE198142.075	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP18	SE198142.077	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP18	SE198142.078	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP19	SE198142.080	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP20	SE198142.082	LB184148	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP21	SE198142.084	LB184148	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP22	SE198142.086	LB184148	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP23	SE198142.088	LB184148	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP24	SE198142.090	LB184148	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019

## VOC's in Soil

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE198142.002	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP1	SE198142.003	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP1	SE198142.004	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP2	SE198142.007	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP2	SE198142.008	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP2	SE198142.009	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP3	SE198142.011	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP3	SE198142.012	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP3	SE198142.013	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP4	SE198142.016	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP4	SE198142.017	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP4	SE198142.018	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP5	SE198142.020	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP5	SE198142.021	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP5	SE198142.022	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP6	SE198142.025	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP6	SE198142.026	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP7	SE198142.029	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP7	SE198142.030	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP8	SE198142.033	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP8	SE198142.034	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP8	SE198142.035	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP9	SE198142.038	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP9	SE198142.039	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP10	SE198142.042	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP10	SE198142.043	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP11	SE198142.046	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP11	SE198142.047	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP11	SE198142.048	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP12	SE198142.051	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP12	SE198142.052	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP12	SE198142.053	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP13	SE198142.056	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP13	SE198142.057	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP13	SE198142.058	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP14	SE198142.061	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP14	SE198142.062	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP14	SE198142.063	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP15	SE198142.066	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP15	SE198142.067	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP16	SE198142.070	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP16	SE198142.071	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP17	SE198142.074	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP17	SE198142.075	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP18	SE198142.078	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP21	SE198142.084	LB184144	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP22	SE198142.086	LB184144	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP23	SE198142.088	LB184144	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1	SE198142.002	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP1	SE198142.003	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP1	SE198142.004	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP2	SE198142.007	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP2	SE198142.008	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP2	SE198142.009	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP3	SE198142.011	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP3	SE198142.012	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP3	SE198142.013	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP4	SE198142.016	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP4	SE198142.017	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP4	SE198142.018	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP5	SE198142.020	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP5	SE198142.021	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP5	SE198142.022	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP6	SE198142.025	LB184142	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP6	SE198142.026	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Volatile Petroleum Hydrocarbons in Soil (continued)

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP7	SE198142.029	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP7	SE198142.030	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP8	SE198142.033	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP8	SE198142.034	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP8	SE198142.035	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP9	SE198142.038	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP9	SE198142.039	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP10	SE198142.042	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP10	SE198142.043	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP11	SE198142.046	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP11	SE198142.047	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP11	SE198142.048	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP12	SE198142.051	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP12	SE198142.052	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP12	SE198142.053	LB184143	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	30 Sep 2019
TP13	SE198142.056	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP13	SE198142.057	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP13	SE198142.058	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP14	SE198142.061	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP14	SE198142.062	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP14	SE198142.063	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP15	SE198142.066	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP15	SE198142.067	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP16	SE198142.070	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP16	SE198142.071	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP17	SE198142.074	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP17	SE198142.075	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP18	SE198142.078	LB184144	23 Sep 2019	25 Sep 2019	07 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP21	SE198142.084	LB184144	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP22	SE198142.086	LB184144	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019
TP23	SE198142.088	LB184144	24 Sep 2019	25 Sep 2019	08 Oct 2019	27 Sep 2019	06 Nov 2019	01 Oct 2019

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## OC Pesticides In Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	TP1	SE198142.001	%	60 - 130%	101
	TP1	SE198142.002	%	60 - 130%	107
	TP1	SE198142.003	%	60 - 130%	101
	TP2	SE198142.006	%	60 - 130%	105
	TP2	SE198142.007	%	60 - 130%	95
	TP2	SE198142.009	%	60 - 130%	103
	TP3	SE198142.010	%	60 - 130%	97
	TP3	SE198142.011	%	60 - 130%	101
	TP3	SE198142.012	%	60 - 130%	103
	TP4	SE198142.015	%	60 - 130%	101
	TP4	SE198142.016	%	60 - 130%	107
	TP4	SE198142.018	%	60 - 130%	106
	TP5	SE198142.019	%	60 - 130%	102
	TP5	SE198142.020	%	60 - 130%	109
	TP5	SE198142.021	%	60 - 130%	85
	TP6	SE198142.024	%	60 - 130%	79
	TP6	SE198142.025	%	60 - 130%	86
	TP7	SE198142.028	%	60 - 130%	83
	TP7	SE198142.029	%	60 - 130%	83
	TP8	SE198142.032	%	60 - 130%	87
	TP8	SE198142.033	%	60 - 130%	85
	TP8	SE198142.034	%	60 - 130%	81
	TP9	SE198142.037	%	60 - 130%	83
	TP9	SE198142.038	%	60 - 130%	83
	TP10	SE198142.041	%	60 - 130%	85
	TP10	SE198142.042	%	60 - 130%	87
	TP11	SE198142.045	%	60 - 130%	86
	TP11	SE198142.046	%	60 - 130%	85
	TP11	SE198142.047	%	60 - 130%	92
	TP12	SE198142.050	%	60 - 130%	87
	TP12	SE198142.051	%	60 - 130%	88
	TP12	SE198142.053	%	60 - 130%	86
	TP13	SE198142.055	%	60 - 130%	83
	TP13	SE198142.056	%	60 - 130%	81
	TP13	SE198142.058	%	60 - 130%	85
	TP14	SE198142.060	%	60 - 130%	85
	TP14	SE198142.061	%	60 - 130%	84
	TP14	SE198142.063	%	60 - 130%	80
	TP15	SE198142.065	%	60 - 130%	83
	TP15	SE198142.066	%	60 - 130%	85
	TP16	SE198142.069	%	60 - 130%	77
	TP16	SE198142.070	%	60 - 130%	91
	TP16	SE198142.071	%	60 - 130%	83
	TP17	SE198142.073	%	60 - 130%	88
	TP17	SE198142.074	%	60 - 130%	87
	TP18	SE198142.077	%	60 - 130%	83
	TP18	SE198142.078	%	60 - 130%	91
	TP19	SE198142.080	%	60 - 130%	83
	TP20	SE198142.082	%	60 - 130%	89
	TP21	SE198142.084	%	60 - 130%	85
	TP22	SE198142.086	%	60 - 130%	85
	TP23	SE198142.088	%	60 - 130%	82
	TP24	SE198142.090	%	60 - 130%	87

## PAH (Polynuclear Aromatic Hydrocarbons) In Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	TP1	SE198142.002	%	70 - 130%	82
	TP1	SE198142.003	%	70 - 130%	80
	TP2	SE198142.007	%	70 - 130%	84
	TP2	SE198142.009	%	70 - 130%	84
	TP3	SE198142.011	%	70 - 130%	92



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	TP3	SE198142.012	%	70 - 130%	86
	TP4	SE198142.016	%	70 - 130%	84
	TP4	SE198142.018	%	70 - 130%	92
	TP5	SE198142.020	%	70 - 130%	78
	TP5	SE198142.021	%	70 - 130%	86
	TP6	SE198142.025	%	70 - 130%	80
	TP7	SE198142.029	%	70 - 130%	84
	TP8	SE198142.033	%	70 - 130%	86
	TP8	SE198142.034	%	70 - 130%	74
	TP9	SE198142.038	%	70 - 130%	80
	TP10	SE198142.042	%	70 - 130%	80
	TP11	SE198142.046	%	70 - 130%	72
	TP11	SE198142.047	%	70 - 130%	84
	TP12	SE198142.051	%	70 - 130%	86
	TP12	SE198142.053	%	70 - 130%	80
	TP13	SE198142.056	%	70 - 130%	82
	TP13	SE198142.058	%	70 - 130%	84
	TP14	SE198142.061	%	70 - 130%	88
	TP14	SE198142.063	%	70 - 130%	90
	TP15	SE198142.066	%	70 - 130%	86
	TP16	SE198142.070	%	70 - 130%	86
	TP16	SE198142.071	%	70 - 130%	86
	TP17	SE198142.074	%	70 - 130%	80
	TP18	SE198142.078	%	70 - 130%	86
d14-p-terphenyl (Surrogate)	TP21	SE198142.084	%	70 - 130%	88
	TP22	SE198142.086	%	70 - 130%	86
	TP23	SE198142.088	%	70 - 130%	82
	TP1	SE198142.002	%	70 - 130%	84
	TP1	SE198142.003	%	70 - 130%	82
	TP2	SE198142.007	%	70 - 130%	86
	TP2	SE198142.009	%	70 - 130%	86
	TP3	SE198142.011	%	70 - 130%	92
	TP3	SE198142.012	%	70 - 130%	88
	TP4	SE198142.016	%	70 - 130%	86
	TP4	SE198142.018	%	70 - 130%	88
	TP5	SE198142.020	%	70 - 130%	76
	TP5	SE198142.021	%	70 - 130%	86
	TP6	SE198142.025	%	70 - 130%	76
	TP7	SE198142.029	%	70 - 130%	80
	TP8	SE198142.033	%	70 - 130%	76
	TP8	SE198142.034	%	70 - 130%	74
	TP9	SE198142.038	%	70 - 130%	76
	TP10	SE198142.042	%	70 - 130%	76
	TP11	SE198142.046	%	70 - 130%	72
	TP11	SE198142.047	%	70 - 130%	86
	TP12	SE198142.051	%	70 - 130%	92
	TP12	SE198142.053	%	70 - 130%	82
	TP13	SE198142.056	%	70 - 130%	82
	TP13	SE198142.058	%	70 - 130%	84
d5-nitrobenzene (Surrogate)	TP14	SE198142.061	%	70 - 130%	92
	TP14	SE198142.063	%	70 - 130%	92
	TP15	SE198142.066	%	70 - 130%	90
	TP16	SE198142.070	%	70 - 130%	90
	TP16	SE198142.071	%	70 - 130%	86
	TP17	SE198142.074	%	70 - 130%	76
	TP18	SE198142.078	%	70 - 130%	84
	TP21	SE198142.084	%	70 - 130%	82
	TP22	SE198142.086	%	70 - 130%	82
	TP23	SE198142.088	%	70 - 130%	80
	TP1	SE198142.002	%	70 - 130%	86
	TP1	SE198142.003	%	70 - 130%	84

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d5-nitrobenzene (Surrogate)	TP2	SE198142.007	%	70 - 130%	88
	TP2	SE198142.009	%	70 - 130%	88
	TP3	SE198142.011	%	70 - 130%	94
	TP3	SE198142.012	%	70 - 130%	90
	TP4	SE198142.016	%	70 - 130%	86
	TP4	SE198142.018	%	70 - 130%	96
	TP5	SE198142.020	%	70 - 130%	80
	TP5	SE198142.021	%	70 - 130%	90
	TP6	SE198142.025	%	70 - 130%	80
	TP7	SE198142.029	%	70 - 130%	88
	TP8	SE198142.033	%	70 - 130%	90
	TP8	SE198142.034	%	70 - 130%	84
	TP9	SE198142.038	%	70 - 130%	86
	TP10	SE198142.042	%	70 - 130%	86
	TP11	SE198142.046	%	70 - 130%	92
	TP11	SE198142.047	%	70 - 130%	86
	TP12	SE198142.051	%	70 - 130%	84
	TP12	SE198142.053	%	70 - 130%	80
	TP13	SE198142.056	%	70 - 130%	82
	TP13	SE198142.058	%	70 - 130%	86
	TP14	SE198142.061	%	70 - 130%	88
	TP14	SE198142.063	%	70 - 130%	94
	TP15	SE198142.066	%	70 - 130%	88
	TP16	SE198142.070	%	70 - 130%	88
	TP16	SE198142.071	%	70 - 130%	86
	TP17	SE198142.074	%	70 - 130%	82
	TP18	SE198142.078	%	70 - 130%	86
	TP21	SE198142.084	%	70 - 130%	86
	TP22	SE198142.086	%	70 - 130%	84
	TP23	SE198142.088	%	70 - 130%	82

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	TP1	SE198142.002	%	60 - 130%	107
	TP1	SE198142.003	%	60 - 130%	101
	TP2	SE198142.007	%	60 - 130%	95
	TP2	SE198142.009	%	60 - 130%	103
	TP3	SE198142.011	%	60 - 130%	101
	TP3	SE198142.012	%	60 - 130%	103
	TP4	SE198142.016	%	60 - 130%	107
	TP4	SE198142.018	%	60 - 130%	106
	TP5	SE198142.020	%	60 - 130%	109
	TP5	SE198142.021	%	60 - 130%	85
	TP6	SE198142.025	%	60 - 130%	86
	TP7	SE198142.029	%	60 - 130%	83
	TP8	SE198142.033	%	60 - 130%	85
	TP8	SE198142.034	%	60 - 130%	81
	TP9	SE198142.038	%	60 - 130%	83
	TP10	SE198142.042	%	60 - 130%	87
	TP11	SE198142.046	%	60 - 130%	85
	TP11	SE198142.047	%	60 - 130%	92
	TP12	SE198142.051	%	60 - 130%	88
	TP12	SE198142.053	%	60 - 130%	86
	TP13	SE198142.056	%	60 - 130%	81
	TP13	SE198142.058	%	60 - 130%	85
	TP14	SE198142.061	%	60 - 130%	84
	TP14	SE198142.063	%	60 - 130%	80
	TP15	SE198142.066	%	60 - 130%	85
	TP16	SE198142.070	%	60 - 130%	91
	TP16	SE198142.071	%	60 - 130%	83
	TP17	SE198142.073	%	60 - 130%	88



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## PCBs in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	TP17	SE198142.074	%	60 - 130%	87
	TP18	SE198142.077	%	60 - 130%	83
	TP18	SE198142.078	%	60 - 130%	91
	TP19	SE198142.080	%	60 - 130%	83
	TP20	SE198142.082	%	60 - 130%	89
	TP21	SE198142.084	%	60 - 130%	85
	TP22	SE198142.086	%	60 - 130%	85
	TP23	SE198142.088	%	60 - 130%	82
	TP24	SE198142.090	%	60 - 130%	87

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	TP1	SE198142.002	%	60 - 130%	97
	TP1	SE198142.003	%	60 - 130%	90
	TP1	SE198142.004	%	60 - 130%	96
	TP2	SE198142.007	%	60 - 130%	93
	TP2	SE198142.008	%	60 - 130%	92
	TP2	SE198142.009	%	60 - 130%	95
	TP3	SE198142.011	%	60 - 130%	98
	TP3	SE198142.012	%	60 - 130%	92
	TP3	SE198142.013	%	60 - 130%	96
	TP4	SE198142.016	%	60 - 130%	93
	TP4	SE198142.017	%	60 - 130%	95
	TP4	SE198142.018	%	60 - 130%	95
	TP5	SE198142.020	%	60 - 130%	94
	TP5	SE198142.021	%	60 - 130%	93
	TP5	SE198142.022	%	60 - 130%	99
	TP6	SE198142.025	%	60 - 130%	92
	TP6	SE198142.026	%	60 - 130%	74
	TP7	SE198142.029	%	60 - 130%	71
	TP7	SE198142.030	%	60 - 130%	72
	TP8	SE198142.033	%	60 - 130%	74
	TP8	SE198142.034	%	60 - 130%	68
	TP8	SE198142.035	%	60 - 130%	73
	TP9	SE198142.038	%	60 - 130%	70
	TP9	SE198142.039	%	60 - 130%	70
	TP10	SE198142.042	%	60 - 130%	67
	TP10	SE198142.043	%	60 - 130%	75
	TP11	SE198142.046	%	60 - 130%	71
	TP11	SE198142.047	%	60 - 130%	66
	TP11	SE198142.048	%	60 - 130%	73
	TP12	SE198142.051	%	60 - 130%	65
	TP12	SE198142.052	%	60 - 130%	74
	TP12	SE198142.053	%	60 - 130%	74
	TP13	SE198142.056	%	60 - 130%	81
	TP13	SE198142.057	%	60 - 130%	80
	TP13	SE198142.058	%	60 - 130%	84
	TP14	SE198142.061	%	60 - 130%	83
	TP14	SE198142.062	%	60 - 130%	79
	TP14	SE198142.063	%	60 - 130%	79
	TP15	SE198142.066	%	60 - 130%	80
	TP15	SE198142.067	%	60 - 130%	79
	TP16	SE198142.070	%	60 - 130%	74
	TP16	SE198142.071	%	60 - 130%	82
	TP17	SE198142.074	%	60 - 130%	75
	TP17	SE198142.075	%	60 - 130%	81
	TP18	SE198142.078	%	60 - 130%	78
	TP21	SE198142.084	%	60 - 130%	75
	TP22	SE198142.086	%	60 - 130%	82
	TP23	SE198142.088	%	60 - 130%	75
d4-1,2-dichloroethane (Surrogate)	TP1	SE198142.002	%	60 - 130%	121

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d4-1,2-dichloroethane (Surrogate)	TP1	SE198142.003	%	60 - 130%	115
	TP1	SE198142.004	%	60 - 130%	125
	TP2	SE198142.007	%	60 - 130%	118
	TP2	SE198142.008	%	60 - 130%	112
	TP2	SE198142.009	%	60 - 130%	126
	TP3	SE198142.011	%	60 - 130%	129
	TP3	SE198142.012	%	60 - 130%	119
	TP3	SE198142.013	%	60 - 130%	124
	TP4	SE198142.016	%	60 - 130%	116
	TP4	SE198142.017	%	60 - 130%	116
	TP4	SE198142.018	%	60 - 130%	119
	TP5	SE198142.020	%	60 - 130%	117
	TP5	SE198142.021	%	60 - 130%	116
	TP5	SE198142.022	%	60 - 130%	126
	TP6	SE198142.025	%	60 - 130%	114
	TP6	SE198142.026	%	60 - 130%	95
	TP7	SE198142.029	%	60 - 130%	91
	TP7	SE198142.030	%	60 - 130%	93
	TP8	SE198142.033	%	60 - 130%	97
	TP8	SE198142.034	%	60 - 130%	90
	TP8	SE198142.035	%	60 - 130%	95
	TP9	SE198142.038	%	60 - 130%	95
	TP9	SE198142.039	%	60 - 130%	93
	TP10	SE198142.042	%	60 - 130%	84
	TP10	SE198142.043	%	60 - 130%	96
	TP11	SE198142.046	%	60 - 130%	89
	TP11	SE198142.047	%	60 - 130%	80
	TP11	SE198142.048	%	60 - 130%	85
	TP12	SE198142.051	%	60 - 130%	78
	TP12	SE198142.052	%	60 - 130%	91
	TP12	SE198142.053	%	60 - 130%	90
	TP13	SE198142.056	%	60 - 130%	83
	TP13	SE198142.057	%	60 - 130%	83
	TP13	SE198142.058	%	60 - 130%	88
	TP14	SE198142.061	%	60 - 130%	86
	TP14	SE198142.062	%	60 - 130%	81
	TP14	SE198142.063	%	60 - 130%	84
	TP15	SE198142.066	%	60 - 130%	84
	TP15	SE198142.067	%	60 - 130%	80
	TP16	SE198142.070	%	60 - 130%	77
	TP16	SE198142.071	%	60 - 130%	87
	TP17	SE198142.074	%	60 - 130%	78
	TP17	SE198142.075	%	60 - 130%	85
	TP18	SE198142.078	%	60 - 130%	81
	TP21	SE198142.084	%	60 - 130%	80
	TP22	SE198142.086	%	60 - 130%	87
	TP23	SE198142.088	%	60 - 130%	84
d8-toluene (Surrogate)	TP1	SE198142.002	%	60 - 130%	94
	TP1	SE198142.003	%	60 - 130%	87
	TP1	SE198142.004	%	60 - 130%	92
	TP2	SE198142.007	%	60 - 130%	90
	TP2	SE198142.008	%	60 - 130%	84
	TP2	SE198142.009	%	60 - 130%	92
	TP3	SE198142.011	%	60 - 130%	94
	TP3	SE198142.012	%	60 - 130%	87
	TP3	SE198142.013	%	60 - 130%	95
	TP4	SE198142.016	%	60 - 130%	89
	TP4	SE198142.017	%	60 - 130%	89
	TP4	SE198142.018	%	60 - 130%	90
	TP5	SE198142.020	%	60 - 130%	88
	TP5	SE198142.021	%	60 - 130%	88

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	TP5	SE198142.022	%	60 - 130%	95
	TP6	SE198142.025	%	60 - 130%	85
	TP6	SE198142.026	%	60 - 130%	92
	TP7	SE198142.029	%	60 - 130%	87
	TP7	SE198142.030	%	60 - 130%	91
	TP8	SE198142.033	%	60 - 130%	96
	TP8	SE198142.034	%	60 - 130%	84
	TP8	SE198142.035	%	60 - 130%	88
	TP9	SE198142.038	%	60 - 130%	87
	TP9	SE198142.039	%	60 - 130%	85
	TP10	SE198142.042	%	60 - 130%	85
	TP10	SE198142.043	%	60 - 130%	95
	TP11	SE198142.046	%	60 - 130%	87
	TP11	SE198142.047	%	60 - 130%	79
	TP11	SE198142.048	%	60 - 130%	87
	TP12	SE198142.051	%	60 - 130%	77
	TP12	SE198142.052	%	60 - 130%	90
	TP12	SE198142.053	%	60 - 130%	92
	TP13	SE198142.056	%	60 - 130%	82
	TP13	SE198142.057	%	60 - 130%	82
	TP13	SE198142.058	%	60 - 130%	87
	TP14	SE198142.061	%	60 - 130%	85
	TP14	SE198142.062	%	60 - 130%	80
	TP14	SE198142.063	%	60 - 130%	84
	TP15	SE198142.066	%	60 - 130%	84
	TP15	SE198142.067	%	60 - 130%	81
	TP16	SE198142.070	%	60 - 130%	78
	TP16	SE198142.071	%	60 - 130%	88
	TP17	SE198142.074	%	60 - 130%	79
	TP17	SE198142.075	%	60 - 130%	85
	TP18	SE198142.078	%	60 - 130%	81
	TP21	SE198142.084	%	60 - 130%	79
	TP22	SE198142.086	%	60 - 130%	86
	TP23	SE198142.088	%	60 - 130%	83

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	TP1	SE198142.002	%	60 - 130%	97
	TP1	SE198142.003	%	60 - 130%	90
	TP1	SE198142.004	%	60 - 130%	96
	TP2	SE198142.007	%	60 - 130%	93
	TP2	SE198142.008	%	60 - 130%	92
	TP2	SE198142.009	%	60 - 130%	95
	TP3	SE198142.011	%	60 - 130%	98
	TP3	SE198142.012	%	60 - 130%	92
	TP3	SE198142.013	%	60 - 130%	96
	TP4	SE198142.016	%	60 - 130%	93
	TP4	SE198142.017	%	60 - 130%	95
	TP4	SE198142.018	%	60 - 130%	95
	TP5	SE198142.020	%	60 - 130%	94
	TP5	SE198142.021	%	60 - 130%	93
	TP5	SE198142.022	%	60 - 130%	99
	TP6	SE198142.025	%	60 - 130%	92
	TP6	SE198142.026	%	60 - 130%	74
	TP7	SE198142.029	%	60 - 130%	71
	TP7	SE198142.030	%	60 - 130%	72
	TP8	SE198142.033	%	60 - 130%	74
	TP8	SE198142.034	%	60 - 130%	68
	TP8	SE198142.035	%	60 - 130%	73
	TP9	SE198142.038	%	60 - 130%	70
	TP9	SE198142.039	%	60 - 130%	70

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Volatile Petroleum Hydrocarbons In Soil (continued)

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	TP10	SE198142.042	%	60 - 130%	67
	TP10	SE198142.043	%	60 - 130%	75
	TP11	SE198142.046	%	60 - 130%	71
	TP11	SE198142.047	%	60 - 130%	66
	TP11	SE198142.048	%	60 - 130%	73
	TP12	SE198142.051	%	60 - 130%	65
	TP12	SE198142.052	%	60 - 130%	74
	TP12	SE198142.053	%	60 - 130%	74
	TP13	SE198142.056	%	60 - 130%	81
	TP13	SE198142.057	%	60 - 130%	80
	TP13	SE198142.058	%	60 - 130%	84
	TP14	SE198142.061	%	60 - 130%	83
	TP14	SE198142.062	%	60 - 130%	79
	TP14	SE198142.063	%	60 - 130%	79
	TP15	SE198142.066	%	60 - 130%	80
	TP15	SE198142.067	%	60 - 130%	79
	TP16	SE198142.070	%	60 - 130%	74
	TP16	SE198142.071	%	60 - 130%	82
	TP17	SE198142.074	%	60 - 130%	75
	TP17	SE198142.075	%	60 - 130%	81
	TP18	SE198142.078	%	60 - 130%	78
	TP21	SE198142.084	%	60 - 130%	75
	TP22	SE198142.086	%	60 - 130%	82
	TP23	SE198142.088	%	60 - 130%	75
d4-1,2-dichloroethane (Surrogate)	TP1	SE198142.002	%	60 - 130%	121
	TP1	SE198142.003	%	60 - 130%	115
	TP1	SE198142.004	%	60 - 130%	125
	TP2	SE198142.007	%	60 - 130%	118
	TP2	SE198142.008	%	60 - 130%	112
	TP2	SE198142.009	%	60 - 130%	126
	TP3	SE198142.011	%	60 - 130%	129
	TP3	SE198142.012	%	60 - 130%	119
	TP3	SE198142.013	%	60 - 130%	124
	TP4	SE198142.016	%	60 - 130%	116
	TP4	SE198142.017	%	60 - 130%	116
	TP4	SE198142.018	%	60 - 130%	119
	TP5	SE198142.020	%	60 - 130%	117
	TP5	SE198142.021	%	60 - 130%	116
	TP5	SE198142.022	%	60 - 130%	126
	TP6	SE198142.025	%	60 - 130%	114
	TP6	SE198142.026	%	60 - 130%	95
	TP7	SE198142.029	%	60 - 130%	91
	TP7	SE198142.030	%	60 - 130%	93
	TP8	SE198142.033	%	60 - 130%	97
	TP8	SE198142.034	%	60 - 130%	90
	TP8	SE198142.035	%	60 - 130%	95
	TP9	SE198142.038	%	60 - 130%	95
	TP9	SE198142.039	%	60 - 130%	93
	TP10	SE198142.042	%	60 - 130%	84
	TP10	SE198142.043	%	60 - 130%	96
	TP11	SE198142.046	%	60 - 130%	89
	TP11	SE198142.047	%	60 - 130%	80
	TP11	SE198142.048	%	60 - 130%	85
	TP12	SE198142.051	%	60 - 130%	78
	TP12	SE198142.052	%	60 - 130%	91
	TP12	SE198142.053	%	60 - 130%	90
	TP13	SE198142.056	%	60 - 130%	83
	TP13	SE198142.057	%	60 - 130%	83
	TP13	SE198142.058	%	60 - 130%	88
	TP14	SE198142.061	%	60 - 130%	86
	TP14	SE198142.062	%	60 - 130%	81

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Volatile Petroleum Hydrocarbons In Soil (continued)

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d4-1,2-dichloroethane (Surrogate)	TP14	SE198142.063	%	60 - 130%	84
	TP15	SE198142.066	%	60 - 130%	84
	TP15	SE198142.067	%	60 - 130%	80
	TP16	SE198142.070	%	60 - 130%	77
	TP16	SE198142.071	%	60 - 130%	87
	TP17	SE198142.074	%	60 - 130%	78
	TP17	SE198142.075	%	60 - 130%	85
	TP18	SE198142.078	%	60 - 130%	81
	TP21	SE198142.084	%	60 - 130%	80
	TP22	SE198142.086	%	60 - 130%	87
d8-toluene (Surrogate)	TP23	SE198142.088	%	60 - 130%	84
	TP1	SE198142.002	%	60 - 130%	94
	TP1	SE198142.003	%	60 - 130%	87
	TP1	SE198142.004	%	60 - 130%	92
	TP2	SE198142.007	%	60 - 130%	90
	TP2	SE198142.008	%	60 - 130%	84
	TP2	SE198142.009	%	60 - 130%	92
	TP3	SE198142.011	%	60 - 130%	94
	TP3	SE198142.012	%	60 - 130%	87
	TP3	SE198142.013	%	60 - 130%	95
	TP4	SE198142.016	%	60 - 130%	89
	TP4	SE198142.017	%	60 - 130%	89
	TP4	SE198142.018	%	60 - 130%	90
	TP5	SE198142.020	%	60 - 130%	88
	TP5	SE198142.021	%	60 - 130%	88
	TP5	SE198142.022	%	60 - 130%	95
	TP6	SE198142.025	%	60 - 130%	85
	TP6	SE198142.026	%	60 - 130%	92
	TP7	SE198142.029	%	60 - 130%	87
	TP7	SE198142.030	%	60 - 130%	91
	TP8	SE198142.033	%	60 - 130%	96
	TP8	SE198142.034	%	60 - 130%	84
	TP8	SE198142.035	%	60 - 130%	88
	TP9	SE198142.038	%	60 - 130%	87
	TP9	SE198142.039	%	60 - 130%	85
	TP10	SE198142.042	%	60 - 130%	85
	TP10	SE198142.043	%	60 - 130%	95
	TP11	SE198142.046	%	60 - 130%	87
	TP11	SE198142.047	%	60 - 130%	79
	TP11	SE198142.048	%	60 - 130%	87
	TP12	SE198142.051	%	60 - 130%	77
	TP12	SE198142.052	%	60 - 130%	90
	TP12	SE198142.053	%	60 - 130%	92
	TP13	SE198142.056	%	60 - 130%	82
	TP13	SE198142.057	%	60 - 130%	82
	TP13	SE198142.058	%	60 - 130%	87
	TP14	SE198142.061	%	60 - 130%	85
	TP14	SE198142.062	%	60 - 130%	80
	TP14	SE198142.063	%	60 - 130%	84
	TP15	SE198142.066	%	60 - 130%	84
	TP15	SE198142.067	%	60 - 130%	81
	TP16	SE198142.070	%	60 - 130%	78
	TP16	SE198142.071	%	60 - 130%	88
	TP17	SE198142.074	%	60 - 130%	79
	TP17	SE198142.075	%	60 - 130%	85
	TP18	SE198142.078	%	60 - 130%	81
	TP21	SE198142.084	%	60 - 130%	79
	TP22	SE198142.086	%	60 - 130%	86
	TP23	SE198142.088	%	60 - 130%	83

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-ENVJAN122

Sample Number	Parameter	Units	LOR	Result
LB184228.001	Exchangeable Sodium, Na	mg/kg	2	0
	Exchangeable Potassium, K	mg/kg	2	0
	Exchangeable Calcium, Ca	mg/kg	2	0
	Exchangeable Magnesium, Mg	mg/kg	2	0
LB184229.001	Exchangeable Sodium, Na	mg/kg	2	0
	Exchangeable Potassium, K	mg/kg	2	0
	Exchangeable Calcium, Ca	mg/kg	2	0
	Exchangeable Magnesium, Mg	mg/kg	2	0
LB184230.001	Exchangeable Sodium, Na	mg/kg	2	0
	Exchangeable Potassium, K	mg/kg	2	0
	Exchangeable Calcium, Ca	mg/kg	2	0
	Exchangeable Magnesium, Mg	mg/kg	2	0
LB184231.001	Exchangeable Sodium, Na	mg/kg	2	0.0001
	Exchangeable Potassium, K	mg/kg	2	1E-005
	Exchangeable Calcium, Ca	mg/kg	2	0.0001
	Exchangeable Magnesium, Mg	mg/kg	2	0

## Mercury in Soil

Method: ME-(AU)-ENVJAN312

Sample Number	Parameter	Units	LOR	Result
LB184293.001	Mercury	mg/kg	0.05	<0.05
LB184294.001	Mercury	mg/kg	0.05	<0.05
LB184295.001	Mercury	mg/kg	0.05	<0.05
LB184296.001	Mercury	mg/kg	0.05	<0.05
LB184298.001	Mercury	mg/kg	0.05	<0.05

## OC Pesticides in Soil

Method: ME-(AU)-ENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB184145.001	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Alpha BHC	mg/kg	0.1	<0.1
	Lindane	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	<0.2
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.05	<0.05
	Endrin	mg/kg	0.2	<0.2
	Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	Endrin Aldehyde	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Endrin Ketone	mg/kg	0.1	<0.1
	Isodrin	mg/kg	0.1	<0.1
	Mirex	mg/kg	0.1	<0.1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	107
	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
LB184146.001	Alpha BHC	mg/kg	0.1	<0.1
	Lindane	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	<0.2
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## OC Pesticides in Soil (continued)

Method: ME-(AU)-ENVJAN420

Sample Number	Parameter	Units	LOR	Result	
LB184146.001	p,p'-DDE	mg/kg	0.1	<0.1	
	Dieldrin	mg/kg	0.05	<0.05	
	Endrin	mg/kg	0.2	<0.2	
	Beta Endosulfan	mg/kg	0.2	<0.2	
	p,p'-DDD	mg/kg	0.1	<0.1	
	p,p'-DDT	mg/kg	0.1	<0.1	
	Endosulfan sulphate	mg/kg	0.1	<0.1	
	Endrin Aldehyde	mg/kg	0.1	<0.1	
	Methoxychlor	mg/kg	0.1	<0.1	
	Endrin Ketone	mg/kg	0.1	<0.1	
	Isodrin	mg/kg	0.1	<0.1	
	Mirex	mg/kg	0.1	<0.1	
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	79
	LB184147.001	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
Alpha BHC		mg/kg	0.1	<0.1	
Lindane		mg/kg	0.1	<0.1	
Heptachlor		mg/kg	0.1	<0.1	
Aldrin		mg/kg	0.1	<0.1	
Beta BHC		mg/kg	0.1	<0.1	
Delta BHC		mg/kg	0.1	<0.1	
Heptachlor epoxide		mg/kg	0.1	<0.1	
Alpha Endosulfan		mg/kg	0.2	<0.2	
Gamma Chlordane		mg/kg	0.1	<0.1	
Alpha Chlordane		mg/kg	0.1	<0.1	
p,p'-DDE		mg/kg	0.1	<0.1	
Dieldrin		mg/kg	0.05	<0.05	
Endrin		mg/kg	0.2	<0.2	
Beta Endosulfan		mg/kg	0.2	<0.2	
p,p'-DDD		mg/kg	0.1	<0.1	
p,p'-DDT		mg/kg	0.1	<0.1	
Endosulfan sulphate		mg/kg	0.1	<0.1	
Endrin Aldehyde		mg/kg	0.1	<0.1	
Methoxychlor		mg/kg	0.1	<0.1	
Endrin Ketone		mg/kg	0.1	<0.1	
Isodrin		mg/kg	0.1	<0.1	
Mirex		mg/kg	0.1	<0.1	
Surrogates		Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	79
LB184148.001	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	
	Alpha BHC	mg/kg	0.1	<0.1	
	Lindane	mg/kg	0.1	<0.1	
	Heptachlor	mg/kg	0.1	<0.1	
	Aldrin	mg/kg	0.1	<0.1	
	Beta BHC	mg/kg	0.1	<0.1	
	Delta BHC	mg/kg	0.1	<0.1	
	Heptachlor epoxide	mg/kg	0.1	<0.1	
	Alpha Endosulfan	mg/kg	0.2	<0.2	
	Gamma Chlordane	mg/kg	0.1	<0.1	
	Alpha Chlordane	mg/kg	0.1	<0.1	
	p,p'-DDE	mg/kg	0.1	<0.1	
	Dieldrin	mg/kg	0.05	<0.05	
	Endrin	mg/kg	0.2	<0.2	
	Beta Endosulfan	mg/kg	0.2	<0.2	
	p,p'-DDD	mg/kg	0.1	<0.1	
	p,p'-DDT	mg/kg	0.1	<0.1	
	Endosulfan sulphate	mg/kg	0.1	<0.1	
	Endrin Aldehyde	mg/kg	0.1	<0.1	
	Methoxychlor	mg/kg	0.1	<0.1	
	Endrin Ketone	mg/kg	0.1	<0.1	
	Isodrin	mg/kg	0.1	<0.1	
	Mirex	mg/kg	0.1	<0.1	
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	81

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB184145.001	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(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
	Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates			
LB184146.001	d5-nitrobenzene (Surrogate)	%	-	86
	2-fluorobiphenyl (Surrogate)	%	-	82
	d14-p-terphenyl (Surrogate)	%	-	84
	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(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
	Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates			
LB184147.001	d5-nitrobenzene (Surrogate)	%	-	90
	2-fluorobiphenyl (Surrogate)	%	-	88
	d14-p-terphenyl (Surrogate)	%	-	88
	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(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
	Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates			
LB184148.001	d5-nitrobenzene (Surrogate)	%	-	86
	2-fluorobiphenyl (Surrogate)	%	-	84
	d14-p-terphenyl (Surrogate)	%	-	86
	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(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
	Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates			
LB184148.001	d5-nitrobenzene (Surrogate)	%	-	86
	2-fluorobiphenyl (Surrogate)	%	-	84
	d14-p-terphenyl (Surrogate)	%	-	86
	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(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
	Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates			
LB184148.001	d5-nitrobenzene (Surrogate)	%	-	86
	2-fluorobiphenyl (Surrogate)	%	-	84
	d14-p-terphenyl (Surrogate)	%	-	86
	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(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
	Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates			



Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-ENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB184148.001	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(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
Surrogates	Total PAH (18)	mg/kg	0.8	<0.8
	d5-nitrobenzene (Surrogate)	%	-	90
	2-fluorobiphenyl (Surrogate)	%	-	90
	d14-p-terphenyl (Surrogate)	%	-	90

## PCBs in Soil

Method: ME-(AU)-ENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB184145.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2
	Arochlor 1254	mg/kg	0.2	<0.2
	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1	<1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	107
LB184146.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2
	Arochlor 1254	mg/kg	0.2	<0.2
	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1	<1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	79
LB184147.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2
	Arochlor 1254	mg/kg	0.2	<0.2
	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1	<1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	79
LB184148.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2
	Arochlor 1254	mg/kg	0.2	<0.2

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## PCBs in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB184148.001	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1	<1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	81

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR	Result
LB184346.001	Total Phenols	mg/kg	5	<5.0
LB184453.001	Total Phenols	mg/kg	5	<5.0

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB184283.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2
LB184284.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2
LB184285.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2
LB184286.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2
LB184287.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB184145.001	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-C36 Total	mg/kg	110	<110
LB184146.001	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-C36 Total	mg/kg	110	<110

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB184147.001	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-C36 Total	mg/kg	110	<110
LB184148.001	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-C36 Total	mg/kg	110	<110

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB184142.001	Monocyclic Aromatic Hydrocarbons	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
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	127
		d8-toluene (Surrogate)	%	-	100
		Bromofluorobenzene (Surrogate)	%	-	107
	Totals	Total BTEX	mg/kg	0.6	<0.6
LB184143.001	Monocyclic Aromatic Hydrocarbons	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
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	102
		d8-toluene (Surrogate)	%	-	103
		Bromofluorobenzene (Surrogate)	%	-	78
	Totals	Total BTEX	mg/kg	0.6	<0.6
LB184144.001	Monocyclic Aromatic Hydrocarbons	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
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	92
		d8-toluene (Surrogate)	%	-	92
		Bromofluorobenzene (Surrogate)	%	-	89
	Totals	Total BTEX	mg/kg	0.6	<0.6

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB184142.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	127
LB184143.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	102
LB184144.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	92

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Mercury in Soil

Method: ME-(AU)-ENVJAN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198048.010	LB184293.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE198107.003	LB184298.020	Mercury	mg/kg	0.05	0.00479999990.0040606060	0.0040606060	200	0
SE198142.010	LB184293.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE198142.023	LB184294.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE198142.034	LB184294.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE198142.047	LB184295.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE198142.059	LB184295.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE198142.071	LB184296.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE198142.082	LB184296.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE198193.002	LB184298.014	Mercury	mg/kg	0.05	<0.05	<0.05	191	0

## Moisture Content

Method: ME-(AU)-ENVJAN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198142.020	LB184135.022	% Moisture	%w/w	1	18.0	17.5	36	3
SE198142.049	LB184136.011	% Moisture	%w/w	1	16.1	16.3	36	1
SE198142.059	LB184136.022	% Moisture	%w/w	1	6.2	5.1	48	19
SE198142.090	LB184136.055	% Moisture	%w/w	1	17.7	17.1	36	3

## OC Pesticides in Soil

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198142.011	LB184145.026	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.05	<0.05	<0.05	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.16	30	4
SE198142.033	LB184146.028	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## OC Pesticides in Soil (continued)

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198142.033	LB184146.028	Dieldrin	mg/kg	0.05	<0.05	<0.05	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.13	30
SE198142.046	LB184146.029	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.05	<0.05	<0.05	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.12	30
SE198142.066	LB184147.029	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.05	<0.05	<0.05	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## OC Pesticides in Soil (continued)

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE198142.066	LB184147.029	p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0	
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0	
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0	
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0	
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0	
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0	
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0	
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0	
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)		mg/kg	-	0.13	0.13	30	2
SE198142.078	LB184148.017	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0	
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0	
		Lindane	mg/kg	0.1	<0.1	<0.1	200	0	
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0	
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0	
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0	
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0	
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0	
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0	
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0	
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0	
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0	
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0	
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0	
		Dieldrin	mg/kg	0.05	<0.05	<0.05	200	0	
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0	
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0	
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0	
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0	
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0	
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0	
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0	
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0	
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0	
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0	
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0	
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0	
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)		mg/kg	-	0.14	0.13	30	4
SE198142.088	LB184148.018	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0	
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0	
		Lindane	mg/kg	0.1	<0.1	<0.1	200	0	
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0	
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0	
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0	
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0	
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0	
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0	
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0	
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0	
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0	
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0	
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0	
		Dieldrin	mg/kg	0.05	<0.05	<0.05	200	0	
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0	
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0	
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0	
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0	
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0	
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0	
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0	
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0	
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0	

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## OC Pesticides in Soil (continued)

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198142.088	LB184148.018	Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	-	0.12	0.13	30	2

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198142.016	LB184145.025	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
		Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	30	7
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	7
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	7
SE198142.033	LB184146.014	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
		Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	0
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	12
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	0
SE198142.071	LB184147.027	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]JAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198142.071	LB184147.027	Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
		Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates						
		d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	30	0
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	2
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	7
SE198142.088	LB184148.014	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
		Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates						
		d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	30	8
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	8
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	11

## PCBs in Soil

Method: ME-(AU)-[ENV]JAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198142.011	LB184145.024	Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
		Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates						
		Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	30	4
SE198142.033	LB184146.028	Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0



Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## PCBs in Soil (continued)

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198142.033	LB184146.028	Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
		Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	30	1
SE198142.046	LB184146.029	Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	30	5
SE198142.066	LB184147.029	Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	30	2
SE198142.078	LB184148.017	Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	30	4
SE198142.088	LB184148.018	Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	30	2

## pH in soil (1:5)

Method: ME-(AU)-ENVJAN101

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198142.012	LB184150.014	pH	pH Units	0.1	8.1	8.2	31	1
SE198142.020	LB184150.022	pH	pH Units	0.1	5.5	5.4	32	2
SE198142.032	LB184151.014	pH	pH Units	0.1	5.8	5.7	32	1
SE198142.044	LB184151.025	pH	pH Units	0.1	5.9	5.8	32	2

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## pH in soil (1:5) (continued)

Method: ME-(AU)-[ENV]AN101

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198142.056	LB184152.014	pH	pH Units	0.1	5.2	5.2	32	1
SE198142.069	LB184152.025	pH	pH Units	0.1	6.1	6.1	32	0
SE198142.084	LB184153.014	pH	pH Units	0.1	6.3	6.2	32	1
SE198142.090	LB184153.020	pH	pH Units	0.1	6.0	6.1	32	0

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198142.002	LB184346.004	Total Phenols	mg/kg	5	<5.0	<5.0	200	0
SE198142.058	LB184453.022	Total Phenols	mg/kg	5	<5.0	<5.0	73	37

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198048.010	LB184283.014	Arsenic, As	mg/kg	1	6	6	47	6
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	10	9.0	35	11
		Copper, Cu	mg/kg	0.5	16	17	33	1
		Nickel, Ni	mg/kg	0.5	3.3	3.2	46	3
		Lead, Pb	mg/kg	1	12	11	39	15
		Zinc, Zn	mg/kg	2	21	20	40	5
SE198107.003	LB184287.020	Arsenic, As	mg/kg	1	4.57803865424.1495081967	53	10	
		Cadmium, Cd	mg/kg	0.3	0.05955619180.0357675111	200	0	
		Chromium, Cr	mg/kg	0.5	29.65486041585.3926676602	32	18	
		Copper, Cu	mg/kg	0.5	9.112097351411.3373472425	35	22	
		Nickel, Ni	mg/kg	0.5	6.39862562637.1845007451	37	12	
		Lead, Pb	mg/kg	1	8.62282032929.7511773472	41	12	
		Zinc, Zn	mg/kg	2	24.30854688689.1735320417	36	47 @	
SE198142.010	LB184283.024	Arsenic, As	mg/kg	1	5	4	54	23
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	14	11	34	24
		Copper, Cu	mg/kg	0.5	5.4	4.3	40	23
		Nickel, Ni	mg/kg	0.5	2.9	2.2	50	28
		Lead, Pb	mg/kg	1	18	11	37	51 @
		Zinc, Zn	mg/kg	2	30	26	37	14
SE198142.023	LB184284.014	Arsenic, As	mg/kg	1	4	6	51	28
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	14	10	34	28
		Copper, Cu	mg/kg	0.5	9.6	9.9	35	3
		Nickel, Ni	mg/kg	0.5	3.7	4.3	42	14
		Lead, Pb	mg/kg	1	12	14	38	12
		Zinc, Zn	mg/kg	2	20	21	40	6
SE198142.034	LB184284.024	Arsenic, As	mg/kg	1	4	4	55	8
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	10	9.9	35	5
		Copper, Cu	mg/kg	0.5	9.5	8.8	35	7
		Nickel, Ni	mg/kg	0.5	4.0	4.0	43	1
		Lead, Pb	mg/kg	1	15	13	37	19
		Zinc, Zn	mg/kg	2	18	17	41	8
SE198142.047	LB184285.014	Arsenic, As	mg/kg	1	4	5	52	7
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	14	14	34	5
		Copper, Cu	mg/kg	0.5	17	14	33	24
		Nickel, Ni	mg/kg	0.5	3.2	3.1	46	4
		Lead, Pb	mg/kg	1	14	15	37	4
		Zinc, Zn	mg/kg	2	22	19	40	12
SE198142.059	LB184285.024	Arsenic, As	mg/kg	1	3	3	66	1
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	31	28	32	12
		Copper, Cu	mg/kg	0.5	<0.5	0.7	200	39
		Nickel, Ni	mg/kg	0.5	1.7	1.4	63	22
		Lead, Pb	mg/kg	1	18	15	36	16

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198142.059	LB184285.024	Zinc, Zn	mg/kg	2	6	5	65	21
SE198142.071	LB184286.014	Arsenic, As	mg/kg	1	4	4	54	3
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	10	9.9	35	4
		Copper, Cu	mg/kg	0.5	8.6	7.3	36	17
		Nickel, Ni	mg/kg	0.5	2.1	1.5	58	37
		Lead, Pb	mg/kg	1	10	10	40	0
		Zinc, Zn	mg/kg	2	10	7	54	41
SE198142.082	LB184286.024	Arsenic, As	mg/kg	1	4	4	56	15
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	19	13	33	39 @
		Copper, Cu	mg/kg	0.5	4.1	4.6	41	10
		Nickel, Ni	mg/kg	0.5	2.3	2.5	50	8
		Lead, Pb	mg/kg	1	19	17	36	11
		Zinc, Zn	mg/kg	2	18	14	43	30
SE198193.002	LB184287.014	Arsenic, As	mg/kg	1	3	4	57	12
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	138	0
		Chromium, Cr	mg/kg	0.5	10	13	34	22
		Copper, Cu	mg/kg	0.5	21	23	32	11
		Nickel, Ni	mg/kg	0.5	0.9	1.1	80	12
		Lead, Pb	mg/kg	1	17	20	35	14
		Zinc, Zn	mg/kg	2	43	49	34	12

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198142.016	LB184145.025	TRH C10-C14	mg/kg	20	<20	<20	200	0
		TRH C15-C28	mg/kg	45	<45	<45	200	0
		TRH C29-C36	mg/kg	45	<45	<45	200	0
		TRH C37-C40	mg/kg	100	<100	<100	200	0
		TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
		TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands						
		TRH >C10-C16	mg/kg	25	<25	<25	200	0
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
		TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
		TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE198142.033	LB184146.014	TRH C10-C14	mg/kg	20	<20	<20	200	0
		TRH C15-C28	mg/kg	45	<45	<45	200	0
		TRH C29-C36	mg/kg	45	<45	<45	200	0
		TRH C37-C40	mg/kg	100	<100	<100	200	0
		TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
		TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands						
		TRH >C10-C16	mg/kg	25	<25	<25	200	0
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
		TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
		TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE198142.046	LB184146.027	TRH C10-C14	mg/kg	20	<20	<20	200	0
		TRH C15-C28	mg/kg	45	<45	<45	200	0
		TRH C29-C36	mg/kg	45	<45	<45	200	0
		TRH C37-C40	mg/kg	100	<100	<100	200	0
		TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
		TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands						
		TRH >C10-C16	mg/kg	25	<25	<25	200	0
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
		TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
		TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE198142.071	LB184147.027	TRH C10-C14	mg/kg	20	<20	<20	200	0
		TRH C15-C28	mg/kg	45	<45	<45	200	0
		TRH C29-C36	mg/kg	45	<45	<45	200	0
		TRH C37-C40	mg/kg	100	<100	<100	200	0
		TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
		TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-ENVJAN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198142.071	LB184147.027	TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE198142.088	LB184148.014	TRH F Bands	TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

## VOC's in Soil

Method: ME-(AU)-ENVJAN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198142.016	LB184142.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.6	11.0	50	5
			d8-toluene (Surrogate)	mg/kg	-	8.9	8.5	50	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.3	9.2	50	1
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE198142.025	LB184142.021	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.4	11.9	50	4
			d8-toluene (Surrogate)	mg/kg	-	8.5	9.1	50	7
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.2	9.6	50	4
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE198142.043	LB184143.014	Monocyclic	o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE198142.053	LB184143.021	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.0	8.9	50	1
			d8-toluene (Surrogate)	mg/kg	-	9.2	9.1	50	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.4	7.4	50	0
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE198142.071	LB184144.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.7	8.6	50	1

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## VOC's in Soil (continued)

Method: ME-(AU)-ENVJAN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198142.071	LB184144.014	Surrogates	d8-toluene (Surrogate)	mg/kg	-	8.8	8.8	50	0
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.2	8.1	50	1
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE198142.088	LB184144.021	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.4	8.0	50	5
			d8-toluene (Surrogate)	mg/kg	-	8.3	7.9	50	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.5	7.1	50	6
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198142.016	LB184142.014	Surrogates	TRH C6-C10	mg/kg	25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	200	0
		VPH F Bands	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.6	11.0	30
			d8-toluene (Surrogate)	mg/kg	-	8.9	8.5	30
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.3	9.2	30
			Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	200	0
SE198142.025	LB184142.021	Surrogates	TRH C6-C10	mg/kg	25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	200	0
		VPH F Bands	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.4	11.9	30
			d8-toluene (Surrogate)	mg/kg	-	8.5	9.1	30
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.2	9.6	30
			Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	200	0
SE198142.043	LB184143.014	VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	200	0
SE198142.053	LB184143.021	Surrogates	TRH C6-C10	mg/kg	25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	200	0
		VPH F Bands	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.0	8.9	30
			d8-toluene (Surrogate)	mg/kg	-	9.2	9.1	30
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.4	7.4	30
			Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	200	0
SE198142.071	LB184144.014	Surrogates	TRH C6-C10	mg/kg	25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	200	0
		VPH F Bands	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.7	8.6	30
			d8-toluene (Surrogate)	mg/kg	-	8.8	8.8	30
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.2	8.1	30
			Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	200	0
SE198142.088	LB184144.021	Surrogates	TRH C6-C10	mg/kg	25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	200	0
		VPH F Bands	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.4	8.0	30
			d8-toluene (Surrogate)	mg/kg	-	8.3	7.9	30
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.5	7.1	30
			Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

#### Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]JAN122

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184228.002	Exchangeable Sodium, Na	mg/kg	2	NA	72.68	80 - 120	101
	Exchangeable Potassium, K	mg/kg	2	NA	238.12	80 - 120	90
	Exchangeable Calcium, Ca	mg/kg	2	NA	692	80 - 120	93
	Exchangeable Magnesium, Mg	mg/kg	2	NA	134.2	80 - 120	108
LB184229.002	Exchangeable Sodium, Na	mg/kg	2	NA	72.68	80 - 120	111
	Exchangeable Potassium, K	mg/kg	2	NA	238.12	80 - 120	96
	Exchangeable Calcium, Ca	mg/kg	2	NA	692	80 - 120	98
	Exchangeable Magnesium, Mg	mg/kg	2	NA	134.2	80 - 120	104
LB184230.002	Exchangeable Sodium, Na	mg/kg	2	NA	72.68	80 - 120	110
	Exchangeable Potassium, K	mg/kg	2	NA	238.12	80 - 120	97
	Exchangeable Calcium, Ca	mg/kg	2	NA	692	80 - 120	98
	Exchangeable Magnesium, Mg	mg/kg	2	NA	134.2	80 - 120	105
LB184231.002	Exchangeable Sodium, Na	mg/kg	2	NA	72.68	80 - 120	112
	Exchangeable Potassium, K	mg/kg	2	NA	238.12	80 - 120	98
	Exchangeable Calcium, Ca	mg/kg	2	NA	692	80 - 120	97
	Exchangeable Magnesium, Mg	mg/kg	2	NA	134.2	80 - 120	105

#### Mercury in Soil

Method: ME-(AU)-[ENV]JAN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184293.002	Mercury	mg/kg	0.05	0.18	0.2	70 - 130	91
LB184294.002	Mercury	mg/kg	0.05	0.20	0.2	70 - 130	99
LB184295.002	Mercury	mg/kg	0.05	0.18	0.2	70 - 130	92
LB184296.002	Mercury	mg/kg	0.05	0.19	0.2	70 - 130	97
LB184298.002	Mercury	mg/kg	0.05	0.19	0.2	70 - 130	95

#### OC Pesticides in Soil

Method: ME-(AU)-[ENV]JAN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184145.002	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	111
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	110
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	103
	Dieldrin	mg/kg	0.05	0.19	0.2	60 - 140	96
	Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	98
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	85
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.17	0.15	40 - 130
LB184146.002	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	91
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	91
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	87
	Dieldrin	mg/kg	0.05	0.18	0.2	60 - 140	91
	Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	88
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	82
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.12	0.15	40 - 130
LB184147.002	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	90
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	91
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	86
	Dieldrin	mg/kg	0.05	0.18	0.2	60 - 140	91
	Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	88
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	83
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.12	0.15	40 - 130
LB184148.002	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	90
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	91
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	86
	Dieldrin	mg/kg	0.05	0.18	0.2	60 - 140	90
	Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	86
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	78
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.12	0.15	40 - 130

#### PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]JAN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184145.002	Naphthalene	mg/kg	0.1	4.4	4	60 - 140	111
	Acenaphthylene	mg/kg	0.1	4.6	4	60 - 140	114
	Acenaphthene	mg/kg	0.1	4.6	4	60 - 140	114
	Phenanthrene	mg/kg	0.1	4.7	4	60 - 140	117

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

#### PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184145.002	Anthracene	mg/kg	0.1	4.5	4	60 - 140	113
	Fluoranthene	mg/kg	0.1	4.4	4	60 - 140	110
	Pyrene	mg/kg	0.1	4.7	4	60 - 140	117
	Benzo(a)pyrene	mg/kg	0.1	5.0	4	60 - 140	126
	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	100
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	96
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	92
LB184146.002	Naphthalene	mg/kg	0.1	4.2	4	60 - 140	106
	Acenaphthylene	mg/kg	0.1	4.4	4	60 - 140	110
	Acenaphthene	mg/kg	0.1	4.4	4	60 - 140	111
	Phenanthrene	mg/kg	0.1	4.5	4	60 - 140	111
	Anthracene	mg/kg	0.1	4.3	4	60 - 140	107
	Fluoranthene	mg/kg	0.1	4.1	4	60 - 140	102
	Pyrene	mg/kg	0.1	4.4	4	60 - 140	111
	Benzo(a)pyrene	mg/kg	0.1	4.8	4	60 - 140	121
	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	92
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	92
LB184147.002	Naphthalene	mg/kg	0.1	4.2	4	60 - 140	105
	Acenaphthylene	mg/kg	0.1	4.2	4	60 - 140	106
	Acenaphthene	mg/kg	0.1	4.4	4	60 - 140	110
	Phenanthrene	mg/kg	0.1	4.5	4	60 - 140	112
	Anthracene	mg/kg	0.1	4.2	4	60 - 140	106
	Fluoranthene	mg/kg	0.1	4.3	4	60 - 140	107
	Pyrene	mg/kg	0.1	4.3	4	60 - 140	108
	Benzo(a)pyrene	mg/kg	0.1	4.5	4	60 - 140	111
	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	86
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	80
LB184148.002	Naphthalene	mg/kg	0.1	4.3	4	60 - 140	108
	Acenaphthylene	mg/kg	0.1	4.6	4	60 - 140	114
	Acenaphthene	mg/kg	0.1	4.5	4	60 - 140	112
	Phenanthrene	mg/kg	0.1	4.7	4	60 - 140	116
	Anthracene	mg/kg	0.1	4.4	4	60 - 140	109
	Fluoranthene	mg/kg	0.1	4.3	4	60 - 140	107
	Pyrene	mg/kg	0.1	4.6	4	60 - 140	115
	Benzo(a)pyrene	mg/kg	0.1	5.0	4	60 - 140	125
	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	100
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	94

#### PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184145.002	Arochlor 1260	mg/kg	0.2	0.3	0.4	60 - 140	81
LB184146.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	108
LB184147.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	112
LB184148.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	106

#### pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184150.003	pH	pH Units	0.1	7.4	7.415	98 - 102	100
LB184151.003	pH	pH Units	0.1	7.4	7.415	98 - 102	100
LB184152.003	pH	pH Units	0.1	7.4	7.415	98 - 102	100
LB184153.003	pH	pH Units	0.1	7.4	7.415	98 - 102	100

#### Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184346.002	Total Phenols	mg/kg	5	<5.0	2.5	70 - 130	98
LB184453.002	Total Phenols	mg/kg	5	<5.0	2.5	70 - 130	100

#### Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR
---------------	-----------	-------	-----

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

**Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)**
**Method: ME-(AU)-[ENV]AN040/AN320**

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184283.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	110
	Cadmium, Cd	mg/kg	0.3	5.5	4.62	80 - 120	119
	Chromium, Cr	mg/kg	0.5	37	38.31	80 - 120	95
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	107
	Nickel, Ni	mg/kg	0.5	200	187	80 - 120	105
	Lead, Pb	mg/kg	1	99	89.9	80 - 120	110
	Zinc, Zn	mg/kg	2	300	273	80 - 120	108
LB184284.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	109
	Cadmium, Cd	mg/kg	0.3	4.1	4.62	80 - 120	89
	Chromium, Cr	mg/kg	0.5	35	38.31	80 - 120	91
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	107
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	100
	Lead, Pb	mg/kg	1	93	89.9	80 - 120	104
	Zinc, Zn	mg/kg	2	280	273	80 - 120	101
LB184285.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	110
	Cadmium, Cd	mg/kg	0.3	5.3	4.62	80 - 120	115
	Chromium, Cr	mg/kg	0.5	40	38.31	80 - 120	104
	Copper, Cu	mg/kg	0.5	320	290	80 - 120	111
	Nickel, Ni	mg/kg	0.5	210	187	80 - 120	110
	Lead, Pb	mg/kg	1	100	89.9	80 - 120	114
	Zinc, Zn	mg/kg	2	310	273	80 - 120	113
LB184286.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	109
	Cadmium, Cd	mg/kg	0.3	5.2	4.62	80 - 120	113
	Chromium, Cr	mg/kg	0.5	34	38.31	80 - 120	89
	Copper, Cu	mg/kg	0.5	300	290	80 - 120	104
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	101
	Lead, Pb	mg/kg	1	98	89.9	80 - 120	109
	Zinc, Zn	mg/kg	2	290	273	80 - 120	107
LB184287.002	Arsenic, As	mg/kg	1	340	318.22	80 - 120	108
	Cadmium, Cd	mg/kg	0.3	5.3	4.62	80 - 120	115
	Chromium, Cr	mg/kg	0.5	41	38.31	80 - 120	108
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	108
	Nickel, Ni	mg/kg	0.5	200	187	80 - 120	108
	Lead, Pb	mg/kg	1	99	89.9	80 - 120	110
	Zinc, Zn	mg/kg	2	300	273	80 - 120	110

**TRH (Total Recoverable Hydrocarbons) In Soil**
**Method: ME-(AU)-[ENV]AN403**

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB184145.002	TRH C10-C14	mg/kg	20	44	40	60 - 140	110	
	TRH C15-C28	mg/kg	45	<45	40	60 - 140	110	
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	85	
	TRH F Bands	TRH >C10-C16	mg/kg	25	43	40	60 - 140	108
	TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	108	
	TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	85	
LB184146.002	TRH C10-C14	mg/kg	20	39	40	60 - 140	98	
	TRH C15-C28	mg/kg	45	<45	40	60 - 140	93	
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	75	
	TRH F Bands	TRH >C10-C16	mg/kg	25	39	40	60 - 140	98
	TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	88	
	TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	75	
LB184147.002	TRH C10-C14	mg/kg	20	44	40	60 - 140	110	
	TRH C15-C28	mg/kg	45	<45	40	60 - 140	98	
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	80	
	TRH F Bands	TRH >C10-C16	mg/kg	25	42	40	60 - 140	105
	TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	90	
	TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	80	
LB184148.002	TRH C10-C14	mg/kg	20	44	40	60 - 140	110	
	TRH C15-C28	mg/kg	45	<45	40	60 - 140	98	
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	80	
	TRH F Bands	TRH >C10-C16	mg/kg	25	42	40	60 - 140	105
	TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	90	



Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

**TRH (Total Recoverable Hydrocarbons) in Soil (continued)**
**Method: ME-(AU)-[ENV]AN403**

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB184148.002	TRH F Bands	TRH >C34-C40 (F4)	ma/ka	120	<120	20	60 - 140	80

**VOC's in Soil**
**Method: ME-(AU)-[ENV]AN433**

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184142.002	Monocyclic	Benzene	mg/kg	0.1	4.3	5	60 - 140	86
	Aromatic	Toluene	mg/kg	0.1	4.6	5	60 - 140	91
		Ethylbenzene	mg/kg	0.1	4.8	5	60 - 140	97
		m/p-xylene	mg/kg	0.2	9.9	10	60 - 140	99
		o-xylene	mg/kg	0.1	4.9	5	60 - 140	98
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.1	10	70 - 130	91
		d8-toluene (Surrogate)	mg/kg	-	9.2	10	70 - 130	92
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.3	10	70 - 130	93
LB184143.002	Monocyclic	Benzene	mg/kg	0.1	4.9	5	60 - 140	97
	Aromatic	Toluene	mg/kg	0.1	4.9	5	60 - 140	97
		Ethylbenzene	mg/kg	0.1	4.9	5	60 - 140	97
		m/p-xylene	mg/kg	0.2	9.7	10	60 - 140	97
		o-xylene	mg/kg	0.1	4.9	5	60 - 140	97
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.9	10	70 - 130	89
		d8-toluene (Surrogate)	mg/kg	-	9.7	10	70 - 130	97
		Bromofluorobenzene (Surrogate)	mg/kg	-	10.6	10	70 - 130	106
LB184144.002	Monocyclic	Benzene	mg/kg	0.1	4.3	5	60 - 140	86
	Aromatic	Toluene	mg/kg	0.1	4.3	5	60 - 140	87
		Ethylbenzene	mg/kg	0.1	4.2	5	60 - 140	84
		m/p-xylene	mg/kg	0.2	8.4	10	60 - 140	84
		o-xylene	mg/kg	0.1	4.2	5	60 - 140	84
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.7	10	70 - 130	87
		d8-toluene (Surrogate)	mg/kg	-	8.6	10	70 - 130	86
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.3	10	70 - 130	83

**Volatile Petroleum Hydrocarbons in Soil**
**Method: ME-(AU)-[ENV]AN433**

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB184142.002	TRH C6-C10	mg/kg	25	70	92.5	60 - 140	75	
	TRH C6-C9	mg/kg	20	60	80	60 - 140	75	
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.1	10	70 - 130	91
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.3	10	70 - 130	93
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	41	62.5	60 - 140	66
	LB184143.002	TRH C6-C10	mg/kg	25	72	92.5	60 - 140	78
TRH C6-C9		mg/kg	20	62	80	60 - 140	78	
Surrogates		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.9	10	70 - 130	89
		Bromofluorobenzene (Surrogate)	mg/kg	-	10.6	10	70 - 130	106
VPH F Bands		TRH C6-C10 minus BTEX (F1)	mg/kg	25	43	62.5	60 - 140	68
LB184144.002		TRH C6-C10	mg/kg	25	72	92.5	60 - 140	78
	TRH C6-C9	mg/kg	20	63	80	60 - 140	79	
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.7	10	70 - 130	87
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.3	10	70 - 130	83
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	46	62.5	60 - 140	74

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Mercury in Soil

Method: ME-(AU)-[ENV]JAN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198048.001	LB184293.004	Mercury	mg/kg	0.05	0.19	<0.05	0.2	91
SE198142.011	LB184294.004	Mercury	mg/kg	0.05	0.22	<0.05	0.2	101
SE198142.036	LB184295.004	Mercury	mg/kg	0.05	0.19	<0.05	0.2	92
SE198142.060	LB184296.004	Mercury	mg/kg	0.05	0.21	<0.05	0.2	97
SE198142.083	LB184298.004	Mercury	mg/kg	0.05	0.18	<0.05	0.2	83

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]JAN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198142.001	LB184145.004	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Lindane	mg/kg	0.1	<0.1	<0.1	-	-
		Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	123
		Aldrin	mg/kg	0.1	0.2	<0.1	0.2	122
		Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	113
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
		Dieldrin	mg/kg	0.05	0.21	<0.05	0.2	106
		Endrin	mg/kg	0.2	0.2	<0.2	0.2	110
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	-	-
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	90
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	-	-
SE198142.055	LB184147.028	Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
		Mirex	mg/kg	0.1	<0.1	<0.1	-	-
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.15	-	109
SE198142.055	LB184147.028	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Lindane	mg/kg	0.1	<0.1	<0.1	-	-
		Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	91
		Aldrin	mg/kg	0.1	0.2	<0.1	0.2	91
		Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	88
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
		Dieldrin	mg/kg	0.05	0.18	<0.05	0.2	90
		Endrin	mg/kg	0.2	<0.2	<0.2	0.2	88
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	-	-
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	84
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	-	-

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198142.055	LB184147.028	Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
		Mirex	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.12	85

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198142.002	LB184145.026	Naphthalene	mg/kg	0.1	4.1	<0.1	4	104
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Acenaphthylene	mg/kg	0.1	4.3	<0.1	4	108
		Acenaphthene	mg/kg	0.1	4.4	<0.1	4	110
		Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
		Phenanthrene	mg/kg	0.1	4.4	<0.1	4	111
		Anthracene	mg/kg	0.1	4.2	<0.1	4	105
		Fluoranthene	mg/kg	0.1	4.1	<0.1	4	103
		Pyrene	mg/kg	0.1	4.3	<0.1	4	107
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
		Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(a)pyrene	mg/kg	0.1	4.8	<0.1	4	119
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	4.8	<0.2	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	4.9	<0.3	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	4.8	<0.2	-	-
		Total PAH (18)	mg/kg	0.8	35	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.4	104
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	102
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.4	98
SE198142.021	LB184146.004	Naphthalene	mg/kg	0.1	4.2	<0.1	4	106
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Acenaphthylene	mg/kg	0.1	4.5	<0.1	4	113
		Acenaphthene	mg/kg	0.1	4.4	<0.1	4	111
		Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
		Phenanthrene	mg/kg	0.1	4.4	<0.1	4	111
		Anthracene	mg/kg	0.1	4.3	<0.1	4	108
		Fluoranthene	mg/kg	0.1	4.2	<0.1	4	104
		Pyrene	mg/kg	0.1	4.5	<0.1	4	111
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
		Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(a)pyrene	mg/kg	0.1	4.9	<0.1	4	122
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	4.9	<0.2	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	5.0	<0.3	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	5.0	<0.2	-	-
		Total PAH (18)	mg/kg	0.8	35	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	98
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	98
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.4	92
SE198142.053	LB184147.028	Naphthalene	mg/kg	0.1	4.3	<0.1	4	108
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Acenaphthylene	mg/kg	0.1	4.4	<0.1	4	109
		Acenaphthene	mg/kg	0.1	4.3	<0.1	4	109

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198142.053	LB184147.028	Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
		Phenanthrene	mg/kg	0.1	4.4	<0.1	4	109
		Anthracene	mg/kg	0.1	4.1	<0.1	4	103
		Fluoranthene	mg/kg	0.1	4.0	<0.1	4	101
		Pyrene	mg/kg	0.1	4.4	<0.1	4	109
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
		Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(a)pyrene	mg/kg	0.1	4.5	<0.1	4	111
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	4.5	<0.2	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	4.6	<0.3	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	4.5	<0.2	-	-
		Surrogates	Total PAH (18)	mg/kg	0.8	34	<0.8	-
d5-nitrobenzene (Surrogate)	mg/kg		-	0.4	0.4	-	84	
2-fluorobiphenyl (Surrogate)	mg/kg		-	0.4	0.4	-	88	
d14-p-terphenyl (Surrogate)	mg/kg		-	0.4	0.4	-	84	

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198142.056	LB184147.028	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	0.4	<0.2	0.4	110
		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	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	85

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198142.042	LB184346.021	Total Phenols	mg/kg	5	<5.0	<5.0	2.5	93
SE198142.088	LB184453.021	Total Phenols	mg/kg	5	<5.0	<5.0	2.5	83

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198048.001	LB184283.004	Arsenic, As	mg/kg	1	47	4	50	87
		Cadmium, Cd	mg/kg	0.3	39	<0.3	50	78
		Chromium, Cr	mg/kg	0.5	58	14	50	88
		Copper, Cu	mg/kg	0.5	56	15	50	82
		Nickel, Ni	mg/kg	0.5	53	9.0	50	89
		Lead, Pb	mg/kg	1	54	11	50	86
		Zinc, Zn	mg/kg	2	78	36	50	85
SE198142.011	LB184284.004	Arsenic, As	mg/kg	1	49	5	50	89
		Cadmium, Cd	mg/kg	0.3	44	<0.3	50	87
		Chromium, Cr	mg/kg	0.5	57	9.8	50	95
		Copper, Cu	mg/kg	0.5	58	14	50	88
		Nickel, Ni	mg/kg	0.5	48	2.0	50	92
		Lead, Pb	mg/kg	1	56	11	50	90
		Zinc, Zn	mg/kg	2	62	17	50	90
SE198142.036	LB184285.004	Arsenic, As	mg/kg	1	50	4	50	91
		Cadmium, Cd	mg/kg	0.3	41	<0.3	50	82
		Chromium, Cr	mg/kg	0.5	56	13	50	86
		Copper, Cu	mg/kg	0.5	55	13	50	83
		Nickel, Ni	mg/kg	0.5	52	4.4	50	95

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198142.036	LB184285.004	Lead, Pb	mg/kg	1	60	14	50	91
		Zinc, Zn	mg/kg	2	66	22	50	89
SE198142.060	LB184286.004	Arsenic, As	mg/kg	1	45	4	50	83
		Cadmium, Cd	mg/kg	0.3	40	<0.3	50	81
		Chromium, Cr	mg/kg	0.5	58	19	50	78
		Copper, Cu	mg/kg	0.5	49	3.3	50	91
		Nickel, Ni	mg/kg	0.5	47	1.4	50	92
		Lead, Pb	mg/kg	1	55	12	50	85
		Zinc, Zn	mg/kg	2	55	9	50	92
SE198142.083	LB184287.004	Arsenic, As	mg/kg	1	42	3	50	78
		Cadmium, Cd	mg/kg	0.3	42	<0.3	50	84
		Chromium, Cr	mg/kg	0.5	65	21	50	89
		Copper, Cu	mg/kg	0.5	50	0.8	50	98
		Nickel, Ni	mg/kg	0.5	49	1.5	50	94
		Lead, Pb	mg/kg	1	60	14	50	92
		Zinc, Zn	mg/kg	2	56	7	50	96

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198142.002	LB184145.024	TRH C10-C14	mg/kg	20	42	<20	40	105
		TRH C15-C28	mg/kg	45	<45	<45	40	100
		TRH C29-C36	mg/kg	45	<45	<45	40	75
		TRH C37-C40	mg/kg	100	<100	<100	-	-
		TRH C10-C36 Total	mg/kg	110	<110	<110	-	-
		TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	40	103
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	40	95
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-
SE198142.021	LB184146.028	TRH C10-C14	mg/kg	20	45	<20	40	113
		TRH C15-C28	mg/kg	45	<45	<45	40	105
		TRH C29-C36	mg/kg	45	<45	<45	40	78
		TRH C37-C40	mg/kg	100	<100	<100	-	-
		TRH C10-C36 Total	mg/kg	110	<110	<110	-	-
		TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	40	113
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	40	95
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-
SE198142.056	LB184147.028	TRH C10-C14	mg/kg	20	44	<20	40	110
		TRH C15-C28	mg/kg	45	<45	<45	40	98
		TRH C29-C36	mg/kg	45	<45	<45	40	85
		TRH C37-C40	mg/kg	100	<100	<100	-	-
		TRH C10-C36 Total	mg/kg	110	<110	<110	-	-
		TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	40	108
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	40	93
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198142.002	LB184142.004	Monocyclic	Benzene	mg/kg	0.1	<0.1	5	81
		Aromatic	Toluene	mg/kg	0.1	<0.1	5	93
			Ethylbenzene	mg/kg	0.1	<0.1	5	87
			m/p-xylene	mg/kg	0.2	<0.2	10	90
			o-xylene	mg/kg	0.1	<0.1	5	90
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.9	10	89
			d8-toluene (Surrogate)	mg/kg	-	8.8	10	88
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.8	10	88
		Totals	Total Xylenes	mg/kg	0.3	<0.3	-	-

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198142.002	LB184142.004	Totals	Total BTEX	mg/kg	0.6	27	<0.6	-
SE198142.026	LB184143.004	Monocyclic	Benzene	mg/kg	0.1	4.4	<0.1	5
		Aromatic	Toluene	mg/kg	0.1	4.4	<0.1	5
			Ethylbenzene	mg/kg	0.1	4.4	<0.1	5
			m/p-xylene	mg/kg	0.2	8.9	<0.2	10
			o-xylene	mg/kg	0.1	4.4	<0.1	5
		Polycyclic	Naphthalene	mg/kg	0.1	4.0	<0.1	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.4	9.5	10
			d8-toluene (Surrogate)	mg/kg	-	8.4	9.2	10
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.5	7.4	10
		Totals	Total Xylenes	mg/kg	0.3	13	<0.3	-
			Total BTEX	mg/kg	0.6	26	<0.6	-
SE198142.056	LB184144.004	Monocyclic	Benzene	mg/kg	0.1	3.8	<0.1	5
		Aromatic	Toluene	mg/kg	0.1	3.9	<0.1	5
			Ethylbenzene	mg/kg	0.1	3.8	<0.1	5
			m/p-xylene	mg/kg	0.2	7.7	<0.2	10
			o-xylene	mg/kg	0.1	3.8	<0.1	5
		Polycyclic	Naphthalene	mg/kg	0.1	4.1	<0.1	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.1	8.3	10
			d8-toluene (Surrogate)	mg/kg	-	8.1	8.2	10
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.1	8.1	10
		Totals	Total Xylenes	mg/kg	0.3	12	<0.3	-
			Total BTEX	mg/kg	0.6	23	<0.6	-

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198142.002	LB184142.004	TRH C6-C10	mg/kg	25	66	<25	92.5	71
		TRH C6-C9	mg/kg	20	57	<20	80	71
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.9	12.1	10
			d8-toluene (Surrogate)	mg/kg	-	8.8	9.4	10
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.8	9.7	-
		VPH F	Benzene (F0)	mg/kg	0.1	4.1	<0.1	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	39	<25	62.5
SE198142.026	LB184143.004	TRH C6-C10	mg/kg	25	69	<25	92.5	74
		TRH C6-C9	mg/kg	20	59	<20	80	74
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.4	9.5	10
			d8-toluene (Surrogate)	mg/kg	-	8.4	9.2	10
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.5	7.4	-
		VPH F	Benzene (F0)	mg/kg	0.1	4.4	<0.1	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	42	<25	62.5
SE198142.056	LB184144.004	TRH C6-C10	mg/kg	25	65	<25	92.5	70
		TRH C6-C9	mg/kg	20	57	<20	80	71
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.1	8.3	10
			d8-toluene (Surrogate)	mg/kg	-	8.1	8.2	10
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.1	8.1	-
		VPH F	Benzene (F0)	mg/kg	0.1	3.8	<0.1	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	42	<25	62.5

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here : [https://www.sgs.com.au/~media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022\\_QA\\_QC\\_Plan.pdf](https://www.sgs.com.au/~media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022_QA_QC_Plan.pdf)

- \* NATA accreditation does not cover the performance of this service .
  - \*\* Indicative data, theoretical holding time exceeded.
  - Sample not analysed for this analyte.
  - IS Insufficient sample for analysis.
  - LNR Sample listed, but not received.
  - LOR Limit of reporting.
  - QFH QC result is above the upper tolerance.
  - QFL QC result is below the lower tolerance.
- 
- ① At least 2 of 3 surrogates are within acceptance criteria.
  - ② RPD failed acceptance criteria due to sample heterogeneity.
  - ③ Results less than 5 times LOR preclude acceptance criteria for RPD.
  - ④ Recovery failed acceptance criteria due to matrix interference.
  - ⑤ Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
  - ⑥ LOR was raised due to sample matrix interference.
  - ⑦ LOR was raised due to dilution of significantly high concentration of analyte in sample.
  - ⑧ Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
  - ⑨ Recovery failed acceptance criteria due to sample heterogeneity.
  - ⑩ LOR was raised due to high conductivity of the sample (required dilution).
  - † Refer to Analytical Report comments for further information.

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law .

This test report shall not be reproduced, except in full.



## CLIENT DETAILS

Contact Anwar Barbhuyia  
 Client Geotechnique  
 Address P.O. Box 880  
 PENRITH NSW 2751

Telephone 02 4722 2700  
 Facsimile 02 4722 6161  
 Email anwar@geotech.com.au

Project **14513-2 Marsden Park**  
 Order Number (Not specified)  
 Samples 32

## 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 **SE198142 R0**  
 Date Received 25 Sep 2019  
 Date Reported 02 Oct 2019

## 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.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin and Ravee Sivasubramaniam .

## SIGNATORIES




Bennet LO  
 Senior Organic Chemist/Metals Chemis



Dong LIANG  
 Metals/Inorganics Team Leader




Huong CRAWFORD  
 Production Manager



Kamrul AHSAN  
 Senior Chemist



Ly Kim HA  
 Organic Section Head



Ravee SIVASUBRAMANIAM  
 Hygiene Team Leader

## RESULTS

Fibre Identification in soil

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE198142.002	TP1	Other	361g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.003	TP1	Other	604g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.007	TP2	Other	404g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.009	TP2	Other	479g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.011	TP3	Other	415g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.012	TP3	Other	518g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.016	TP4	Other	474g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.018	TP4	Other	518g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.020	TP5	Other	496g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.021	TP5	Other	420g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.025	TP6	Other	432g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.029	TP7	Other	406g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.033	TP8	Other	435g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.034	TP8	Other	506g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.038	TP9	Other	508g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.042	TP10	Other	425g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.046	TP11	Other	527g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.047	TP11	Other	386g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.051	TP12	Other	416g Clay	23 Sep 2019	No Asbestos Found	<0.01
SE198142.053	TP12	Other	930g Clay, Sand, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.056	TP13	Other	446g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.058	TP13	Other	917g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.061	TP14	Other	446g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.063	TP14	Other	794g Clay, Sand, Soil, Rocks	23 Sep 2019	No Asbestos Found Organic Fibres Detected	<0.01
SE198142.066	TP15	Other	392g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.070	TP16	Other	395g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.071	TP16	Other	472g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01

### RESULTS

Fibre Identification in soil

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE198142.074	TP17	Other	411g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.078	TP18	Other	369g Clay, Rocks	23 Sep 2019	No Asbestos Found	<0.01
SE198142.084	TP21	Other	424g Clay, Rocks	24 Sep 2019	No Asbestos Found	<0.01
SE198142.086	TP22	Other	409g Clay, Rocks	24 Sep 2019	No Asbestos Found	<0.01
SE198142.088	TP23	Other	769g Clay, Soil, Rocks	24 Sep 2019	No Asbestos Found	<0.01

## Gravimetric Determination of Asbestos in Soil [AN605] Tested: 1/10/2019

PARAMETER	UOM	LOR	TP1	TP1	TP2	TP2	TP3
			CLAY 0.2-0.5 23/9/2019 SE198142.002	CLAY 1.2-1.5 23/9/2019 SE198142.003	CLAY 0.2-0.5 23/9/2019 SE198142.007	CLAY 2.2-2.5 23/9/2019 SE198142.009	CLAY 0.2-0.5 23/9/2019 SE198142.011
Total Sample Weight*	g	1	<b>361</b>	<b>604</b>	<b>404</b>	<b>479</b>	<b>415</b>
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP3	TP4	TP4	TP5	TP5
			CLAY 1.2-1.5 23/9/2019 SE198142.012	CLAY 0.2-0.5 23/9/2019 SE198142.016	CLAY 2.2-2.5 23/9/2019 SE198142.018	CLAY 0.2-0.5 23/9/2019 SE198142.020	CLAY 1.2-1.5 23/9/2019 SE198142.021
Total Sample Weight*	g	1	<b>598</b>	<b>474</b>	<b>518</b>	<b>496</b>	<b>420</b>
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP6	TP7	TP8	TP8	TP9
			CLAY 0.2-0.5 23/9/2019 SE198142.025	CLAY 0.2-0.5 23/9/2019 SE198142.029	CLAY 0.2-0.5 23/9/2019 SE198142.033	CLAY 1.2-1.5 23/9/2019 SE198142.034	CLAY 0.2-0.5 23/9/2019 SE198142.038
Total Sample Weight*	g	1	<b>432</b>	<b>406</b>	<b>435</b>	<b>506</b>	<b>508</b>
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP10	TP11	TP11	TP12	TP12
			CLAY 0.2-0.5 23/9/2019 SE198142.042	CLAY 0.2-0.5 23/9/2019 SE198142.046	CLAY 1.2-1.5 23/9/2019 SE198142.047	CLAY 0.2-0.5 23/9/2019 SE198142.051	CLAY 1.8-1.9 23/9/2019 SE198142.053
Total Sample Weight*	g	1	<b>425</b>	<b>527</b>	<b>366</b>	<b>416</b>	<b>930</b>
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

## Gravimetric Determination of Asbestos in Soil [AN605] Tested: 1/10/2019 (continued)

PARAMETER	UOM	LOR	TP13	TP13	TP14	TP14	TP15
			CLAY 0.2-0.5 23/9/2019 SE198142.056	CLAY 1.9-2.0 23/9/2019 SE198142.058	CLAY 0.2-0.5 23/9/2019 SE198142.061	CLAY 1.8-2.0 23/9/2019 SE198142.063	CLAY 0.2-0.5 23/9/2019 SE198142.066
Total Sample Weight*	g	1	<b>446</b>	<b>917</b>	<b>446</b>	<b>794</b>	<b>392</b>
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP16	TP16	TP17	TP18	TP21
			CLAY 0.2-0.5 23/9/2019 SE198142.070	CLAY 1.2-1.5 23/9/2019 SE198142.071	CLAY 0.2-0.5 23/9/2019 SE198142.074	CLAY 0.2-0.5 23/9/2019 SE198142.078	CLAY 0.0-0.15 24/9/2019 SE198142.084
Total Sample Weight*	g	1	<b>395</b>	<b>472</b>	<b>411</b>	<b>369</b>	<b>424</b>
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP22	TP23
			CLAY 0.0-0.15 24/9/2019 SE198142.086	CLAY 0.0-0.15 24/9/2019 SE198142.088
Total Sample Weight*	g	1	<b>409</b>	<b>769</b>
ACM in >7mm Sample*	g	0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-

## 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 unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
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	<p>The sample can be reported "no asbestos found at the reporting limit of 0.1 g/kg" (&lt;0.01%w/w) where AN602 section 4.5 of this method has been followed, and if-</p> <ul style="list-style-type: none"> <li>(a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres);</li> <li>(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</li> <li>(c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.</li> </ul>
AN605	This technique gravimetrically determines the mass of Asbestos Containing Material retained on a 7mm Sieve and assumes that 15% of this ACM is asbestos. This calculated asbestos weight is then calculated as a percentage of the total sample weight.
AN605	This technique also gravimetrically determines the mass of Fibrous Asbestos (FA) and Asbestos Fines (AF) Containing Material retained on and passing a 2mm sieve post 7mm sieving. Assumes that FA and AF are 100% asbestos containing. This calculated asbestos weight is then calculated as a percentage of the total sample weight. This does not include free fibres which are only observed by standard trace analysis as per AN 602.
AN605	Insofar as is technically feasible, this report is consistent with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment Remediation and Management of Asbestos - Contaminated Sites in Western Australia - May 2009.

# 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.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

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 and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: [www.sgs.com.au/pv.sgsvr/en-gb/environment](http://www.sgs.com.au/pv.sgsvr/en-gb/environment).

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law .

This test report shall not be reproduced, except in full.

# GEOTECHNIQUE PTY LTD

1 LEMKO PLACE PENRITH NSW 2750

Tel: (02) 4722 2700

## CHAIN OF CUSTODY

Results Required By: Normal Turnaround  
Except pH Results Required By 2 days

Date: Wednesday, 2 October 2  
Date: Friday, 27 September 2019

Your Reference No.:

SGS EHS Alexandria Laboratory



**SE198142 COC**

Received: 25-Sep-2019

TO: SGS UNIT 16, 33 MADDOX STREET ALEXANDRIA NSW 2015 Tel: 02 8594 0400							Sampled By: JH&IC Ref No: 14513/2 Project Manager: ANWAR BARBHUYIA Location: Marsden Park																	
Location	Depth (m)	Date	Soil	Water	Material	Metals As Cd Cr Cu Pb Hg Ni Zn	pH	CEC	CL8 TRH BTEX PAH	CL10 Metals* TRH BTEX PAH	CL16 Metals* TRH BTEX PAH OC PCB	Be B Co Mn Se	Mn	Asbestos 0.001% w/w	Asbestos	BTEX	TRH & BTEX	PAH	OCP	OCP & PCB	Phenol	Cyanide	VOC	OCP & PCB
TP1	0.0-0.15	23/09/19	GP		Clay	✓	✓	✓											✓					
TP1	0.2-0.5	23/09/19	GP		Clay		✓	✓			✓			✓							✓			
TP1	1.2-1.5	23/09/19	GP		Clay		✓	✓			✓			✓							✓			
TP1	2.2-2.4	23/09/19	GP		Clay																			
TP1	2.45-2.55	23/09/19	G		Clay	✓	✓	✓																
TP2	0.0-0.15	23/09/19	GP		Clay	✓													✓					
TP2	0.2-0.5	23/09/19	GP		Clay		✓	✓			✓			✓							✓			
TP2	1.2-1.5	23/09/19	GP		Clay																			
TP2	2.2-2.5	23/09/19	GP		Clay		✓	✓			✓			✓							✓			
TP3	0.0-0.15	23/09/19	GP		Clay	✓													✓					
TP3	0.2-0.5	23/09/19	GP		Clay		✓	✓			✓			✓							✓			
TP3	1.2-1.5	23/09/19	GP		Clay		✓	✓			✓			✓							✓			
TP3	2.2-2.5	23/09/19	GP		Clay																			
TP3	2.85-2.95	23/09/19	G		Clay	✓	✓	✓																
TP4	0.0-0.15	23/09/19	GP		Clay	✓	✓	✓											✓					
TP4	0.2-0.5	23/09/19	GP		Clay		✓	✓			✓			✓							✓			
TP4	1.2-1.5	23/09/19	GP		Clay																			
TP4	2.2-2.5	23/09/19	GP		Clay		✓	✓			✓			✓							✓			



**Results Required By: Normal Turnaround**

**Except pH Results Required By 2 days**

Date: Wednesday, 2 October 2019

**Date: Friday, 27 September 2019**

**Your Reference No.:**

[illegible]

**Date: Friday, 27 September 2019**

**Your Reference No.:**

[illegible]



## CHAIN OF CUSTODY

**Results Required By: Normal Turnaround**  
**Except pH Results Required By 2 days**

Date: Wednesday, 2 October 2019

**Date: Friday, 27 September 2019**

**Your Reference No.:**

[illegible]

1 LEMKO PLACE PENRITH NSW 2750

Tel: (02) 4722 2700

## CHAIN OF CUSTODY

Results Required By: Normal Turnaround  
Except pH Results Required By 2 days

Date: Wednesday, 2 October 2019

Date: Friday, 27 September 2019

Your Reference No.:

TO: SGS UNIT 16, 33 MADDOX STREET ALEXANDRIA NSW 2015 Tel: 02 8594 0400							Sampled By: JH&IC Ref No: 14513/2 Project Manager: ANWAR BARBHUYIA Location: Marsden Park																		
Location	Depth (m)	Date	Soil	Water	Material	Metals As Cd Cr Cu Pb Hg Ni Zn	pH	CEC	CL8 TRH BTEX PAH	CL10 Metals* TRH BTEX PAH	CL16 Metals* TRH BTEX PAH OC PCB	Be B Co Mn Se	Mn	Asbestos 0.001% w/w	Asbestos	BTEX	TRH & BTEX	PAH	OCP	OCP & PCB	Phenol	Cyanide	VOC	OC OP & PCB	
TP17	0.0-0.15	23/09/19	GP		Clay	✓													✓						
TP17	0.2-0.5	23/09/19	GP		Clay		✓	✓			✓			✓								✓			
TP17	1.0-1.3	23/09/19	GP		Clay																				
TP17	1.55-1.65	23/09/19	G		Clay	✓																			
TP18	0.0-0.15	23/09/19	GP		Clay	✓	✓	✓											✓						
TP18	0.2-0.5	23/09/19	GP		Clay		✓	✓			✓			✓								✓			
TP18	1.05-1.15	23/09/19	G		Clay	✓	✓	✓																	
TP19	0.0-0.15	23/09/19	GP		Clay	✓													✓						
TP19	0.25-0.35	23/09/19	G		Clay																				
TP20	0.0-0.15	23/09/19	GP		Clay	✓	✓	✓											✓						
TP20	0.25-0.35	23/09/19	G		Clay	✓																			
TP21	0.0-0.15	24/09/19	GP		Clay		✓	✓			✓			✓								✓			
TP21	0.55-0.65	24/09/19	G		Clay	✓	✓	✓																	
TP22	0.0-0.15	24/09/19	GP		Clay		✓	✓			✓			✓								✓			
TP22	0.55-0.65	24/09/19	G		Clay	✓																			
TP23	0.0-0.15	24/09/19	GP		Clay		✓	✓			✓			✓								✓			
TP23	0.55-0.65	24/09/19	G		Clay	✓	✓	✓																	
TP24	0.0-0.15	24/09/19	GP		Clay	✓	✓	✓											✓						



## SAMPLE RECEIPT ADVICE

SE198142

### CLIENT DETAILS

Contact Anwar Barbhuyia  
Client Geotechnique  
Address P.O. Box 880  
PENRITH NSW 2751

Telephone 02 4722 2700  
Facsimile 02 4722 6161  
Email anwar@geotech.com.au

Project **14513-2 Marsden Park**  
Order Number (Not specified)  
Samples 90

### 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

Samples Received Wed 25/9/2019  
Report Due Wed 2/10/2019  
SGS Reference **SE198142**

### SUBMISSION DETAILS

This is to confirm that 90 samples were received on Wednesday 25/9/2019. Results are expected to be ready by COB Wednesday 2/10/2019. Please quote SGS reference SE198142 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	73 Clay
Date documentation received	26/9/2019@1:51pm	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	12°C	Sufficient sample for analysis	Yes
Turnaround time requested	3 Day/Standard		

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

### COMMENTS

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

## CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

## SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	pH in soil (1:5)	Total Phenolics in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOCs in Soil	Volatile Petroleum Hydrocarbons in Soil
001	TP1 0.0-0.15	28	-	-	1	-	-	-	-
002	TP1 0.2-0.5	28	26	11	1	1	10	11	7
003	TP1 1.2-1.5	28	26	11	1	1	10	11	7
005	TP1 2.45-2.55	-	-	-	1	-	-	-	-
006	TP2 0.0-0.15	28	-	-	-	-	-	-	-
007	TP2 0.2-0.5	28	26	11	1	1	10	11	7
009	TP2 2.2-2.5	28	26	11	1	1	10	11	7
010	TP3 0.0-0.15	28	-	-	-	-	-	-	-
011	TP3 0.2-0.5	28	26	11	1	1	10	11	7
012	TP3 1.2-1.5	28	26	11	1	1	10	11	7
014	TP3 2.85-2.95	-	-	-	1	-	-	-	-
015	TP4 0.0-0.15	28	-	-	1	-	-	-	-
016	TP4 0.2-0.5	28	26	11	1	1	10	11	7
018	TP4 2.2-2.5	28	26	11	1	1	10	11	7
019	TP5 0.0-0.15	28	-	-	-	-	-	-	-
020	TP5 0.2-0.5	28	26	11	1	1	10	11	7
021	TP5 1.2-1.5	28	26	11	1	1	10	11	7
023	TP5 2.65-2.75	-	-	-	1	-	-	-	-
024	TP6 0.0-0.15	28	-	-	1	-	-	-	-

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .

## CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

## SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	pH in soil (1:5)	Total Phenolics in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
025	TP6 0.2-0.5	28	26	11	1	1	10	11	7
028	TP7 0.0-0.15	28	-	-	-	-	-	-	-
029	TP7 0.2-0.5	28	26	11	1	1	10	11	7
031	TP7 2.05-2.15	-	-	-	1	-	-	-	-
032	TP8 0.0-0.15	28	-	-	1	-	-	-	-
033	TP8 0.2-0.5	28	26	11	1	1	10	11	7
034	TP8 1.2-1.5	28	26	11	1	1	10	11	7
037	TP9 0.0-0.15	28	-	-	1	-	-	-	-
038	TP9 0.2-0.5	28	26	11	1	1	10	11	7
041	TP10 0.0-0.15	28	-	-	1	-	-	-	-
042	TP10 0.2-0.5	28	26	11	1	1	10	11	7
044	TP10 2.25-2.35	-	-	-	1	-	-	-	-
045	TP11 0.0-0.15	28	-	-	-	-	-	-	-
046	TP11 0.2-0.5	28	26	11	1	1	10	11	7
047	TP11 1.2-1.5	28	26	11	1	1	10	11	7

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .

## CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

## SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	pH in soil (1:5)	Total Phenolics in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
049	TP11 1.85-1.95	-	-	-	1	-	-	-	-
050	TP12 0.0-0.15	28	-	-	1	-	-	-	-
051	TP12 0.2-0.5	28	26	11	1	1	10	11	7
053	TP12 1.8-1.9	28	26	11	1	1	10	11	7
054	TP12 1.95-2.05	-	-	-	1	-	-	-	-
055	TP13 0.0-0.15	28	-	-	-	-	-	-	-
056	TP13 0.2-0.5	28	26	11	1	1	10	11	7
058	TP13 1.9-2.0	28	26	11	1	1	10	11	7
060	TP14 0.0-0.15	28	-	-	1	-	-	-	-
061	TP14 0.2-0.5	28	26	11	1	1	10	11	7
063	TP14 1.8-2.0	28	26	11	1	1	10	11	7
064	TP14 2.05-2.15	-	-	-	1	-	-	-	-
065	TP15 0.0-0.15	28	-	-	-	-	-	-	-
066	TP15 0.2-0.5	28	26	11	1	1	10	11	7
069	TP16 0.0-0.15	28	-	-	1	-	-	-	-
070	TP16 0.2-0.5	28	26	11	1	1	10	11	7
071	TP16 1.2-1.5	28	26	11	1	1	10	11	7
072	TP16 2.05-2.15	-	-	-	1	-	-	-	-

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .



## CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

## SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	pH in soil (1:5)	Total Phenolics in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
073	TP17 0.0-0.15	28	-	-	-	-	-	-	-
074	TP17 0.2-0.5	28	26	11	1	1	10	11	7
077	TP18 0.0-0.15	28	-	-	1	-	-	-	-
078	TP18 0.2-0.5	28	26	11	1	1	10	11	7
079	TP18 1.05-1.15	-	-	-	1	-	-	-	-
080	TP19 0.0-0.15	28	-	-	-	-	-	-	-
082	TP20 0.0-0.15	28	-	-	1	-	-	-	-
084	TP21 0.0-0.15	28	26	11	1	1	10	11	7
085	TP21 0.55-0.65	-	-	-	1	-	-	-	-
086	TP22 0.0-0.15	28	26	11	1	1	10	11	7
088	TP23 0.0-0.15	28	26	11	1	1	10	11	7
089	TP23 0.55-0.65	-	-	-	1	-	-	-	-
090	TP24 0.0-0.15	28	-	-	1	-	-	-	-

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .

## CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

## SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Fibre Identification in soil	Gravimetric Determination of Asbestos in Soil	Mercury in Soil	Moisture Content	Total Recoverable Elements in Soil/Waste
001	TP1 0.0-0.15	13	-	-	1	1	7
002	TP1 0.2-0.5	13	2	9	1	1	7
003	TP1 1.2-1.5	13	2	9	1	1	7
005	TP1 2.45-2.55	13	-	-	1	1	7
006	TP2 0.0-0.15	-	-	-	1	1	7
007	TP2 0.2-0.5	13	2	9	1	1	7
009	TP2 2.2-2.5	13	2	9	1	1	7
010	TP3 0.0-0.15	-	-	-	1	1	7
011	TP3 0.2-0.5	13	2	9	1	1	7
012	TP3 1.2-1.5	13	2	9	1	1	7
014	TP3 2.85-2.95	13	-	-	1	1	7
015	TP4 0.0-0.15	13	-	-	1	1	7
016	TP4 0.2-0.5	13	2	9	1	1	7
018	TP4 2.2-2.5	13	2	9	1	1	7
019	TP5 0.0-0.15	-	-	-	1	1	7
020	TP5 0.2-0.5	13	2	9	1	1	7
021	TP5 1.2-1.5	13	2	9	1	1	7
023	TP5 2.65-2.75	13	-	-	1	1	7
024	TP6 0.0-0.15	13	-	-	1	1	7

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .

## CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

## SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Fibre Identification in soil	Gravimetric Determination of Asbestos in Soil	Mercury in Soil	Moisture Content	Total Recoverable Elements in Soil/Waste
025	TP6 0.2-0.5	13	2	9	1	1	7
027	TP6 1.55-1.65	-	-	-	1	1	7
028	TP7 0.0-0.15	-	-	-	1	1	7
029	TP7 0.2-0.5	13	2	9	1	1	7
031	TP7 2.05-2.15	13	-	-	1	1	7
032	TP8 0.0-0.15	13	-	-	1	1	7
033	TP8 0.2-0.5	13	2	9	1	1	7
034	TP8 1.2-1.5	13	2	9	1	1	7
036	TP8 2.65-2.75	-	-	-	1	1	7
037	TP9 0.0-0.15	13	-	-	1	1	7
038	TP9 0.2-0.5	13	2	9	1	1	7
040	TP9 2.25-2.35	-	-	-	1	1	7
041	TP10 0.0-0.15	13	-	-	1	1	7
042	TP10 0.2-0.5	13	2	9	1	1	7
044	TP10 2.25-2.35	13	-	-	1	1	7
045	TP11 0.0-0.15	-	-	-	1	1	7
046	TP11 0.2-0.5	13	2	9	1	1	7
047	TP11 1.2-1.5	13	2	9	1	1	7

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .

## CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

## SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Fibre Identification in soil	Gravimetric Determination of Asbestos in Soil	Mercury in Soil	Moisture Content	Total Recoverable Elements in Soil/Waste
049	TP11 1.85-1.95	13	-	-	1	1	7
050	TP12 0.0-0.15	13	-	-	1	1	7
051	TP12 0.2-0.5	13	2	9	1	1	7
053	TP12 1.8-1.9	13	2	9	1	1	7
054	TP12 1.95-2.05	13	-	-	1	1	7
055	TP13 0.0-0.15	-	-	-	1	1	7
056	TP13 0.2-0.5	13	2	9	1	1	7
058	TP13 1.9-2.0	13	2	9	1	1	7
059	TP13 2.05-2.15	-	-	-	1	1	7
060	TP14 0.0-0.15	13	-	-	1	1	7
061	TP14 0.2-0.5	13	2	9	1	1	7
063	TP14 1.8-2.0	13	2	9	1	1	7
064	TP14 2.05-2.15	13	-	-	1	1	7
065	TP15 0.0-0.15	-	-	-	1	1	7
066	TP15 0.2-0.5	13	2	9	1	1	7
068	TP15 2.05-2.15	-	-	-	1	1	7
069	TP16 0.0-0.15	13	-	-	1	1	7
070	TP16 0.2-0.5	13	2	9	1	1	7
071	TP16 1.2-1.5	13	2	9	1	1	7
072	TP16 2.05-2.15	13	-	-	1	1	7

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .

## CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

## SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Fibre Identification in soil	Gravimetric Determination of Asbestos in Soil	Mercury in Soil	Moisture Content	Total Recoverable Elements in Soil/Waste
073	TP17 0.0-0.15	-	-	-	1	1	7
074	TP17 0.2-0.5	13	2	9	1	1	7
076	TP17 1.55-1.65	-	-	-	1	1	7
077	TP18 0.0-0.15	13	-	-	1	1	7
078	TP18 0.2-0.5	13	2	9	1	1	7
079	TP18 1.05-1.15	13	-	-	1	1	7
080	TP19 0.0-0.15	-	-	-	1	1	7
082	TP20 0.0-0.15	13	-	-	1	1	7
083	TP20 0.25-0.35	-	-	-	1	1	7
084	TP21 0.0-0.15	13	2	9	1	1	7
085	TP21 0.55-0.65	13	-	-	1	1	7
086	TP22 0.0-0.15	13	2	9	1	1	7
087	TP22 0.55-0.65	-	-	-	1	1	7
088	TP23 0.0-0.15	13	2	9	1	1	7
089	TP23 0.55-0.65	13	-	-	1	1	7
090	TP24 0.0-0.15	13	-	-	1	1	7

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .

## CLIENT DETAILS

Contact **Anwar Barbhuyia**  
 Client **Geotechnique**  
 Address **P.O. Box 880  
 PENRITH NSW 2751**

Telephone **02 4722 2700**  
 Facsimile **02 4722 6161**  
 Email **anwar@geotech.com.au**

Project **14513-2 Marsden Park**  
 Order Number **(Not specified)**  
 Samples **67**

## 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 **SE198144 R0**  
 Date Received **25/9/2019**  
 Date Reported **2/10/2019**

## 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.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

## SIGNATORIES



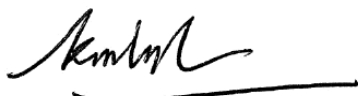
**Bennet LO**  
 Senior Organic Chemist/Metals Chemist



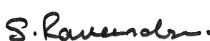
**Dong LIANG**  
 Metals/Inorganics Team Leader



**Kamrul AHSAN**  
 Senior Chemist



**Ly Kim HA**  
 Organic Section Head



**Ravee SIVASUBRAMANIAM**  
 Hygiene Team Leader



**Shane MCDERMOTT**  
 Inorganic/Metals Chemist

VOC's in Soil [AN433] Tested: 30/9/2019

PARAMETER	UOM	LOR	TP25	TP26	TP27	TP27	TP47
			CLAY 0.2-0.5 24/9/2019 SE198144.003	CLAY 0.2-0.5 24/9/2019 SE198144.006	CLAY 0.0-0.15 24/9/2019 SE198144.009	CLAY 0.5-0.8 24/9/2019 SE198144.010	CLAY 0.2-0.4 24/9/2019 SE198144.041
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	DDS2	DDS4	TS1	TS2
			CLAY - 23/9/2019 SE198144.059	CLAY - 24/9/2019 SE198144.061	SAND - 24/9/2019 SE198144.066	SAND - 24/9/2019 SE198144.067
Benzene	mg/kg	0.1	<0.1	<0.1	[92%]	[106%]
Toluene	mg/kg	0.1	<0.1	<0.1	[95%]	[139%]
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	[99%]	[94%]
m/p-xylene	mg/kg	0.2	<0.2	<0.2	[100%]	[93%]
o-xylene	mg/kg	0.1	<0.1	<0.1	[99%]	[93%]
Total Xylenes	mg/kg	0.3	<0.3	<0.3	-	-
Total BTEX	mg/kg	0.6	<0.6	<0.6	-	-
Naphthalene	mg/kg	0.1	<0.1	<0.1	-	-

## Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 30/9/2019

PARAMETER	UOM	LOR	TP25	TP26	TP27	TP27	TP47
			CLAY 0.2-0.5 24/9/2019 SE198144.003	CLAY 0.2-0.5 24/9/2019 SE198144.006	CLAY 0.0-0.15 24/9/2019 SE198144.009	CLAY 0.5-0.8 24/9/2019 SE198144.010	CLAY 0.2-0.4 24/9/2019 SE198144.041
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	DDS2	DDS4
			CLAY - 23/9/2019 SE198144.059	CLAY - 24/9/2019 SE198144.061
TRH C6-C9	mg/kg	20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25



TRH (Total Recoverable Hydrocarbons) in Soil [AN403]    Tested: 30/9/2019

PARAMETER	UOM	LOR	TP25	TP26	TP27	TP27	TP47
			CLAY 0.2-0.5 24/9/2019 SE198144.003	CLAY 0.2-0.5 24/9/2019 SE198144.006	CLAY 0.0-0.15 24/9/2019 SE198144.009	CLAY 0.5-0.8 24/9/2019 SE198144.010	CLAY 0.2-0.4 24/9/2019 SE198144.041
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	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	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 (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	DDS2	DDS4
			CLAY - 23/9/2019 SE198144.059	CLAY - 24/9/2019 SE198144.061
TRH C10-C14	mg/kg	20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110
TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 30/9/2019

PARAMETER	UOM	LOR	TP25	TP26	TP27	TP27	TP47
			CLAY 0.2-0.5 24/9/2019 SE198144.003	CLAY 0.2-0.5 24/9/2019 SE198144.006	CLAY 0.0-0.15 24/9/2019 SE198144.009	CLAY 0.5-0.8 24/9/2019 SE198144.010	CLAY 0.2-0.4 24/9/2019 SE198144.041
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 (mg/kg)	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	DDS2	DDS4
			CLAY - 23/9/2019 SE198144.059	CLAY - 24/9/2019 SE198144.061
Naphthalene	mg/kg	0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8

OC Pesticides in Soil [AN420]    Tested: 30/9/2019

PARAMETER	UOM	LOR	TP25	TP25	TP26	TP26	TP27
			CLAY 0.0-0.15 24/9/2019 SE198144.002	CLAY 0.2-0.5 24/9/2019 SE198144.003	CLAY 0.0-0.15 24/9/2019 SE198144.005	CLAY 0.2-0.5 24/9/2019 SE198144.006	CLAY 0.0-0.15 24/9/2019 SE198144.009
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 30/9/2019 (continued)

PARAMETER	UOM	LOR	TP27	TP28	TP29	TP30	TP31
			CLAY 0.5-0.8 24/9/2019 SE198144.010	CLAY 0.0-0.15 24/9/2019 SE198144.011	CLAY 0.0-0.15 24/9/2019 SE198144.013	CLAY 0.0-0.15 24/9/2019 SE198144.014	CLAY 0.0-0.15 24/9/2019 SE198144.016
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 30/9/2019    (continued)

PARAMETER	UOM	LOR	TP32	TP33	TP34	TP35	TP36
			CLAY 0.0-0.15 24/9/2019 SE198144.017	CLAY 0.0-0.15 24/9/2019 SE198144.019	CLAY 0.0-0.15 24/9/2019 SE198144.020	CLAY 0.0-0.15 24/9/2019 SE198144.022	CLAY 0.0-0.15 24/9/2019 SE198144.023
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 30/9/2019    (continued)

PARAMETER	UOM	LOR	TP37	TP38	TP39	TP40	TP41
			CLAY 0.0-0.15 24/9/2019 SE198144.025	CLAY 0.0-0.15 24/9/2019 SE198144.026	CLAY 0.0-0.15 24/9/2019 SE198144.028	CLAY 0.0-0.15 24/9/2019 SE198144.030	CLAY 0.0-0.15 24/9/2019 SE198144.031
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 30/9/2019    (continued)

PARAMETER	UOM	LOR	TP42	TP43	TP44	TP45	TP46
			CLAY 0.0-0.15 24/9/2019 SE198144.033	CLAY 0.0-0.15 24/9/2019 SE198144.034	CLAY 0.0-0.15 24/9/2019 SE198144.036	CLAY 0.0-0.15 24/9/2019 SE198144.037	CLAY 0.0-0.15 24/9/2019 SE198144.039
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 30/9/2019    (continued)

PARAMETER	UOM	LOR	TP47	TP47	TP48	TP49	TP50
			CLAY 0.0-0.15 24/9/2019 SE198144.040	CLAY 0.2-0.4 24/9/2019 SE198144.041	CLAY 0.0-0.15 24/9/2019 SE198144.043	CLAY 0.0-0.15 24/9/2019 SE198144.044	CLAY 0.0-0.15 24/9/2019 SE198144.046
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 30/9/2019    (continued)

PARAMETER	UOM	LOR	TP51	TP52	TP53	TP54	TP55
			CLAY 0.0-0.15 24/9/2019 SE198144.047	CLAY 0.0-0.15 24/9/2019 SE198144.049	CLAY 0.0-0.15 24/9/2019 SE198144.050	CLAY 0.0-0.15 24/9/2019 SE198144.052	CLAY 0.0-0.15 24/9/2019 SE198144.054
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 30/9/2019    (continued)

PARAMETER	UOM	LOR	TP56	TP57	DDS1	DDS2	DDS3
			CLAY 0.0-0.15 24/9/2019 SE198144.055	CLAY 0.0-0.15 24/9/2019 SE198144.057	CLAY - 23/9/2019 SE198144.058	CLAY - 23/9/2019 SE198144.059	CLAY - 24/9/2019 SE198144.060
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 30/9/2019    (continued)

PARAMETER	UOM	LOR	DDS4	DDS5	DDS6
			CLAY - 24/9/2019 SE198144.061	CLAY - 24/9/2019 SE198144.062	CLAY - 24/9/2019 SE198144.063
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	0.05	<0.05	<0.05	<0.05
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: 30/9/2019

PARAMETER	UOM	LOR	TP25	TP26	TP27	TP27	TP47
			CLAY 0.2-0.5 24/9/2019 SE198144.003	CLAY 0.2-0.5 24/9/2019 SE198144.006	CLAY 0.0-0.15 24/9/2019 SE198144.009	CLAY 0.5-0.8 24/9/2019 SE198144.010	CLAY 0.2-0.4 24/9/2019 SE198144.041
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	DDS2	DDS4
			CLAY - 23/9/2019 SE198144.059	CLAY - 24/9/2019 SE198144.061
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

Total Phenolics in Soil [AN289]    Tested: 30/9/2019

			TP25	TP26	TP27	TP47	DDS2
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.2-0.5	0.2-0.5	0.5-0.8	0.2-0.4	-
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	23/9/2019
PARAMETER	UOM	LOR	SE198144.003	SE198144.006	SE198144.010	SE198144.041	SE198144.059
Total Phenols	mg/kg	5	<5.0	<5.0	<5.0	<5.0	<5.0

			DDS4
			CLAY
			-
			24/9/2019
PARAMETER	UOM	LOR	SE198144.061
Total Phenols	mg/kg	5	<5.0

pH in soil (1:5) [AN101] Tested: 1/10/2019

PARAMETER	UOM	LOR	TP25	TP25	TP25	TP26	TP27
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.2-0.5	0.85-0.95	0.2-0.5	0.0-0.15
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.002	SE198144.003	SE198144.004	SE198144.006	SE198144.009
pH	pH Units	0.1	5.7	5.1	5.5	4.7	4.4

PARAMETER	UOM	LOR	TP27	TP28	TP28	TP30	TP32
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.5-0.8	0.0-0.15	0.25-0.35	0.0-0.15	0.0-0.15
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.010	SE198144.011	SE198144.012	SE198144.014	SE198144.017
pH	pH Units	0.1	4.7	5.8	5.1	5.6	5.7

PARAMETER	UOM	LOR	TP32	TP34	TP34	TP36	TP36
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.25-0.35	0.0-0.15	0.25-0.35	0.0-0.15	0.25-0.35
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.018	SE198144.020	SE198144.021	SE198144.023	SE198144.024
pH	pH Units	0.1	5.2	5.0	5.0	5.3	4.5

PARAMETER	UOM	LOR	TP38	TP38	TP39	TP40	TP42
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.25-0.35	0.25-0.35	0.0-0.15	0.0-0.15
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.026	SE198144.027	SE198144.029	SE198144.030	SE198144.033
pH	pH Units	0.1	5.7	4.3	5.0	5.4	6.1

PARAMETER	UOM	LOR	TP43	TP44	TP45	TP46	TP47
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.25-0.35	0.0-0.15	0.25-0.35	0.0-0.15	0.2-0.4
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.035	SE198144.036	SE198144.038	SE198144.039	SE198144.041
pH	pH Units	0.1	5.6	5.6	4.9	5.5	5.8

PARAMETER	UOM	LOR	TP48	TP49	TP50	TP52	TP53
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.25-0.35	0.0-0.15	0.0-0.15	0.25-0.35
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.043	SE198144.045	SE198144.046	SE198144.049	SE198144.051
pH	pH Units	0.1	5.2	4.6	5.2	5.5	4.5

PARAMETER	UOM	LOR	TP54	TP54	TP56	TP56
			CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.25-0.35	0.0-0.15	0.25-0.35
			24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.052	SE198144.053	SE198144.055	SE198144.056
pH	pH Units	0.1	5.6	4.8	5.6	5.0

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122] Tested: 30/9/2019

PARAMETER	UOM	LOR	TP25	TP25	TP25	TP26	TP27
			CLAY 0.0-0.15 24/9/2019 SE198144.002	CLAY 0.2-0.5 24/9/2019 SE198144.003	CLAY 0.85-0.95 24/9/2019 SE198144.004	CLAY 0.2-0.5 24/9/2019 SE198144.006	CLAY 0.0-0.15 24/9/2019 SE198144.009
Exchangeable Sodium, Na	mg/kg	2	280	890	59	1600	1100
Exchangeable Sodium, Na	meq/100g	0.01	1.2	3.9	0.26	7.1	4.6
Exchangeable Sodium Percentage*	%	0.1	21.1	27.2	7.6	34.9	28.5
Exchangeable Potassium, K	mg/kg	2	48	120	27	140	140
Exchangeable Potassium, K	meq/100g	0.01	0.12	0.31	0.07	0.37	0.36
Exchangeable Potassium Percentage*	%	0.1	2.2	2.2	2.0	1.8	2.2
Exchangeable Calcium, Ca	mg/kg	2	260	80	160	67	170
Exchangeable Calcium, Ca	meq/100g	0.01	1.3	0.40	0.79	0.34	0.85
Exchangeable Calcium Percentage*	%	0.1	23.0	2.8	23.3	1.7	5.2
Exchangeable Magnesium, Mg	mg/kg	2	370	1200	280	1500	1300
Exchangeable Magnesium, Mg	meq/100g	0.02	3.1	9.6	2.3	12	10
Exchangeable Magnesium Percentage*	%	0.1	53.7	67.8	67.1	61.6	64.1
Cation Exchange Capacity	meq/100g	0.02	5.7	14	3.4	20	16

PARAMETER	UOM	LOR	TP27	TP28	TP28	TP30	TP32
			CLAY 0.5-0.8 24/9/2019 SE198144.010	CLAY 0.0-0.15 24/9/2019 SE198144.011	CLAY 0.25-0.35 24/9/2019 SE198144.012	CLAY 0.0-0.15 24/9/2019 SE198144.014	CLAY 0.0-0.15 24/9/2019 SE198144.017
Exchangeable Sodium, Na	mg/kg	2	1600	180	240	81	150
Exchangeable Sodium, Na	meq/100g	0.01	7.0	0.79	1.0	0.35	0.64
Exchangeable Sodium Percentage*	%	0.1	43.9	15.8	13.8	6.6	15.9
Exchangeable Potassium, K	mg/kg	2	91	51	36	52	41
Exchangeable Potassium, K	meq/100g	0.01	0.23	0.13	0.09	0.13	0.11
Exchangeable Potassium Percentage*	%	0.1	1.5	2.6	1.2	2.5	2.6
Exchangeable Calcium, Ca	mg/kg	2	57	250	50	330	240
Exchangeable Calcium, Ca	meq/100g	0.01	0.29	1.2	0.25	1.7	1.2
Exchangeable Calcium Percentage*	%	0.1	1.8	24.7	3.4	31.2	29.6
Exchangeable Magnesium, Mg	mg/kg	2	1000	350	750	390	260
Exchangeable Magnesium, Mg	meq/100g	0.02	8.4	2.8	6.1	3.2	2.1
Exchangeable Magnesium Percentage*	%	0.1	52.9	56.9	81.6	59.7	51.9
Cation Exchange Capacity	meq/100g	0.02	16	5.0	7.5	5.3	4.0

PARAMETER	UOM	LOR	TP32	TP34	TP34	TP36	TP36
			CLAY 0.25-0.35 24/9/2019 SE198144.018	CLAY 0.0-0.15 24/9/2019 SE198144.020	CLAY 0.25-0.35 24/9/2019 SE198144.021	CLAY 0.0-0.15 24/9/2019 SE198144.023	CLAY 0.25-0.35 24/9/2019 SE198144.024
Exchangeable Sodium, Na	mg/kg	2	310	360	2300	120	2700
Exchangeable Sodium, Na	meq/100g	0.01	1.3	1.6	10	0.51	12
Exchangeable Sodium Percentage*	%	0.1	18.2	27.6	37.7	11.2	47.0
Exchangeable Potassium, K	mg/kg	2	32	41	120	51	57
Exchangeable Potassium, K	meq/100g	0.01	0.08	0.10	0.30	0.13	0.15
Exchangeable Potassium Percentage*	%	0.1	1.1	1.8	1.1	2.9	0.6
Exchangeable Calcium, Ca	mg/kg	2	25	290	36	340	12
Exchangeable Calcium, Ca	meq/100g	0.01	0.12	1.5	0.18	1.7	0.06
Exchangeable Calcium Percentage*	%	0.1	1.7	25.7	0.7	37.3	0.2
Exchangeable Magnesium, Mg	mg/kg	2	710	310	2000	270	1600
Exchangeable Magnesium, Mg	meq/100g	0.02	5.8	2.6	16	2.2	13
Exchangeable Magnesium Percentage*	%	0.1	79.0	44.9	60.5	48.6	52.1
Cation Exchange Capacity	meq/100g	0.02	7.3	5.7	27	4.6	25

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122]    Tested: 30/9/2019    (continued)

PARAMETER	UOM	LOR	TP38	TP38	TP39	TP40	TP42
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15 24/9/2019 SE198144.026	0.25-0.35 24/9/2019 SE198144.027	0.25-0.35 24/9/2019 SE198144.029	0.0-0.15 24/9/2019 SE198144.030	0.0-0.15 24/9/2019 SE198144.033
Exchangeable Sodium, Na	mg/kg	2	490	1700	710	540	120
Exchangeable Sodium, Na	meq/100g	0.01	2.1	7.3	3.1	2.3	0.53
Exchangeable Sodium Percentage*	%	0.1	31.1	48.9	47.8	35.9	10.7
Exchangeable Potassium, K	mg/kg	2	41	38	15	48	68
Exchangeable Potassium, K	meq/100g	0.01	0.11	0.10	0.04	0.12	0.17
Exchangeable Potassium Percentage*	%	0.1	1.6	0.7	0.6	1.9	3.5
Exchangeable Calcium, Ca	mg/kg	2	280	32	25	310	350
Exchangeable Calcium, Ca	meq/100g	0.01	1.4	0.16	0.12	1.5	1.8
Exchangeable Calcium Percentage*	%	0.1	20.8	1.1	1.9	23.4	35.6
Exchangeable Magnesium, Mg	mg/kg	2	390	890	390	310	300
Exchangeable Magnesium, Mg	meq/100g	0.02	3.2	7.3	3.2	2.5	2.5
Exchangeable Magnesium Percentage*	%	0.1	46.5	49.4	49.7	38.8	50.2
Cation Exchange Capacity	meq/100g	0.02	6.8	15	6.4	6.5	4.9

PARAMETER	UOM	LOR	TP43	TP44	TP45	TP46	TP47
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.25-0.35 24/9/2019 SE198144.035	0.0-0.15 24/9/2019 SE198144.036	0.25-0.35 24/9/2019 SE198144.038	0.0-0.15 24/9/2019 SE198144.039	0.2-0.4 24/9/2019 SE198144.041
Exchangeable Sodium, Na	mg/kg	2	140	180	1200	190	3700
Exchangeable Sodium, Na	meq/100g	0.01	0.60	0.79	5.0	0.81	16
Exchangeable Sodium Percentage*	%	0.1	9.0	20.1	28.8	18.2	42.2
Exchangeable Potassium, K	mg/kg	2	44	38	57	46	120
Exchangeable Potassium, K	meq/100g	0.01	0.11	0.10	0.15	0.12	0.30
Exchangeable Potassium Percentage*	%	0.1	1.7	2.4	0.8	2.7	0.8
Exchangeable Calcium, Ca	mg/kg	2	40	240	4	250	7
Exchangeable Calcium, Ca	meq/100g	0.01	0.20	1.2	0.02	1.3	0.03
Exchangeable Calcium Percentage*	%	0.1	3.0	29.9	0.1	28.0	<0.1
Exchangeable Magnesium, Mg	mg/kg	2	700	230	1500	280	2600
Exchangeable Magnesium, Mg	meq/100g	0.02	5.7	1.9	12	2.3	22
Exchangeable Magnesium Percentage*	%	0.1	86.2	47.7	70.3	51.1	56.9
Cation Exchange Capacity	meq/100g	0.02	6.7	4.0	17	4.5	38

PARAMETER	UOM	LOR	TP48	TP49	TP50	TP52	TP53
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15 24/9/2019 SE198144.043	0.25-0.35 24/9/2019 SE198144.045	0.0-0.15 24/9/2019 SE198144.046	0.0-0.15 24/9/2019 SE198144.049	0.25-0.35 24/9/2019 SE198144.051
Exchangeable Sodium, Na	mg/kg	2	170	2100	400	390	460
Exchangeable Sodium, Na	meq/100g	0.01	0.74	8.9	1.7	1.7	2.0
Exchangeable Sodium Percentage*	%	0.1	21.4	48.2	31.3	23.6	28.2
Exchangeable Potassium, K	mg/kg	2	30	69	41	58	25
Exchangeable Potassium, K	meq/100g	0.01	0.08	0.18	0.11	0.15	0.06
Exchangeable Potassium Percentage*	%	0.1	2.2	1.0	1.9	2.0	0.9
Exchangeable Calcium, Ca	mg/kg	2	210	39	250	300	2
Exchangeable Calcium, Ca	meq/100g	0.01	1.1	0.20	1.2	1.5	0.01
Exchangeable Calcium Percentage*	%	0.1	30.6	1.1	22.3	20.6	0.2
Exchangeable Magnesium, Mg	mg/kg	2	190	1100	300	470	600
Exchangeable Magnesium, Mg	meq/100g	0.02	1.6	9.2	2.5	3.9	5.0
Exchangeable Magnesium Percentage*	%	0.1	45.7	49.8	44.6	53.8	70.7
Cation Exchange Capacity	meq/100g	0.02	3.5	18	5.6	7.2	7.0



## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122]    Tested: 30/9/2019    (continued)

PARAMETER	UOM	LOR	TP54	TP54	TP56	TP56
			CLAY 0.0-0.15 24/9/2019 SE198144.052	CLAY 0.25-0.35 24/9/2019 SE198144.053	CLAY 0.0-0.15 24/9/2019 SE198144.055	CLAY 0.25-0.35 24/9/2019 SE198144.056
Exchangeable Sodium, Na	mg/kg	2	270	1300	210	910
Exchangeable Sodium, Na	meq/100g	0.01	1.2	5.6	0.91	4.0
Exchangeable Sodium Percentage*	%	0.1	20.8	34.7	21.2	27.5
Exchangeable Potassium, K	mg/kg	2	98	45	40	56
Exchangeable Potassium, K	meq/100g	0.01	0.25	0.12	0.10	0.14
Exchangeable Potassium Percentage*	%	0.1	4.5	0.7	2.4	1.0
Exchangeable Calcium, Ca	mg/kg	2	330	<2	250	5
Exchangeable Calcium, Ca	meq/100g	0.01	1.7	<0.01	1.3	0.02
Exchangeable Calcium Percentage*	%	0.1	29.7	<0.1	29.5	0.2
Exchangeable Magnesium, Mg	mg/kg	2	310	1300	250	1300
Exchangeable Magnesium, Mg	meq/100g	0.02	2.5	10	2.0	10
Exchangeable Magnesium Percentage*	%	0.1	45.1	64.5	46.8	71.4
Cation Exchange Capacity	meq/100g	0.02	5.6	16	4.3	14

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 30/9/2019

PARAMETER	UOM	LOR	TP24	TP25	TP25	TP25	TP26
			CLAY 0.25-0.35 24/9/2019 SE198144.001	CLAY 0.0-0.15 24/9/2019 SE198144.002	CLAY 0.2-0.5 24/9/2019 SE198144.003	CLAY 0.85-0.95 24/9/2019 SE198144.004	CLAY 0.0-0.15 24/9/2019 SE198144.005
Arsenic, As	mg/kg	1	2	5	6	2	4
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	21	19	13	19	16
Copper, Cu	mg/kg	0.5	1.2	5.1	10	1.7	2.9
Lead, Pb	mg/kg	1	12	15	12	9	13
Nickel, Ni	mg/kg	0.5	1.5	2.6	3.5	1.2	1.8
Zinc, Zn	mg/kg	2	5	13	17	7	7

PARAMETER	UOM	LOR	TP26	TP26	TP27	TP27	TP28
			CLAY 0.2-0.5 24/9/2019 SE198144.006	CLAY 1.85-1.95 24/9/2019 SE198144.008	CLAY 0.0-0.15 24/9/2019 SE198144.009	CLAY 0.5-0.8 24/9/2019 SE198144.010	CLAY 0.0-0.15 24/9/2019 SE198144.011
Arsenic, As	mg/kg	1	<1	3	4	6	5
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	4.1	23	8.5	12	13
Copper, Cu	mg/kg	0.5	7.3	2.0	11	11	3.6
Lead, Pb	mg/kg	1	7	11	10	12	17
Nickel, Ni	mg/kg	0.5	1.9	1.7	2.3	3.6	2.6
Zinc, Zn	mg/kg	2	10	6	13	19	11

PARAMETER	UOM	LOR	TP28	TP29	TP30	TP30	TP31
			CLAY 0.25-0.35 24/9/2019 SE198144.012	CLAY 0.0-0.15 24/9/2019 SE198144.013	CLAY 0.0-0.15 24/9/2019 SE198144.014	CLAY 0.25-0.35 24/9/2019 SE198144.015	CLAY 0.0-0.15 24/9/2019 SE198144.016
Arsenic, As	mg/kg	1	3	3	4	2	4
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	24	14	12	20	11
Copper, Cu	mg/kg	0.5	2.9	2.7	4.9	3.5	4.5
Lead, Pb	mg/kg	1	8	11	13	10	10
Nickel, Ni	mg/kg	0.5	1.8	1.5	1.6	0.6	2.0
Zinc, Zn	mg/kg	2	6	7	7	6	10

PARAMETER	UOM	LOR	TP32	TP32	TP33	TP34	TP34
			CLAY 0.0-0.15 24/9/2019 SE198144.017	CLAY 0.25-0.35 24/9/2019 SE198144.018	CLAY 0.0-0.15 24/9/2019 SE198144.019	CLAY 0.0-0.15 24/9/2019 SE198144.020	CLAY 0.25-0.35 24/9/2019 SE198144.021
Arsenic, As	mg/kg	1	5	2	4	4	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	16	22	12	11	2.3
Copper, Cu	mg/kg	0.5	3.6	2.1	3.4	4.4	4.2
Lead, Pb	mg/kg	1	13	8	13	14	2
Nickel, Ni	mg/kg	0.5	1.8	1.6	1.6	1.7	<0.5
Zinc, Zn	mg/kg	2	8	6	11	10	<2

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 30/9/2019

PARAMETER	UOM	LOR	TP35	TP36	TP36	TP37	TP38
			CLAY 0.0-0.15 24/9/2019 SE198144.022	CLAY 0.0-0.15 24/9/2019 SE198144.023	CLAY 0.25-0.35 24/9/2019 SE198144.024	CLAY 0.0-0.15 24/9/2019 SE198144.025	CLAY 0.0-0.15 24/9/2019 SE198144.026
Arsenic, As	mg/kg	1	6	4	3	4	5
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	12	9.3	3.8	12	12
Copper, Cu	mg/kg	0.5	4.8	4.5	5.3	3.1	5.1
Lead, Pb	mg/kg	1	23	12	4	11	15
Nickel, Ni	mg/kg	0.5	2.6	1.7	<0.5	1.5	2.2
Zinc, Zn	mg/kg	2	12	9	2	8	9

PARAMETER	UOM	LOR	TP38	TP39	TP39	TP40	TP41
			CLAY 0.25-0.35 24/9/2019 SE198144.027	CLAY 0.0-0.15 24/9/2019 SE198144.028	CLAY 0.25-0.35 24/9/2019 SE198144.029	CLAY 0.0-0.15 24/9/2019 SE198144.030	CLAY 0.0-0.15 24/9/2019 SE198144.031
Arsenic, As	mg/kg	1	4	3	5	5	5
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	23	13	16	17	12
Copper, Cu	mg/kg	0.5	3.9	3.7	2.2	4.2	4.1
Lead, Pb	mg/kg	1	7	12	18	14	16
Nickel, Ni	mg/kg	0.5	1.4	1.9	0.9	1.7	2.5
Zinc, Zn	mg/kg	2	4	8	5	9	10

PARAMETER	UOM	LOR	TP41	TP42	TP43	TP43	TP44
			CLAY 0.25-0.35 24/9/2019 SE198144.032	CLAY 0.0-0.15 24/9/2019 SE198144.033	CLAY 0.0-0.15 24/9/2019 SE198144.034	CLAY 0.25-0.35 24/9/2019 SE198144.035	CLAY 0.0-0.15 24/9/2019 SE198144.036
Arsenic, As	mg/kg	1	2	4	4	2	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	2.2	9.5	13	14	8.6
Copper, Cu	mg/kg	0.5	5.3	4.6	3.1	2.6	4.1
Lead, Pb	mg/kg	1	5	11	12	8	10
Nickel, Ni	mg/kg	0.5	<0.5	2.3	1.7	1.2	1.9
Zinc, Zn	mg/kg	2	2	11	8	7	6

PARAMETER	UOM	LOR	TP45	TP45	TP46	TP47	TP47
			CLAY 0.0-0.15 24/9/2019 SE198144.037	CLAY 0.25-0.35 24/9/2019 SE198144.038	CLAY 0.0-0.15 24/9/2019 SE198144.039	CLAY 0.0-0.15 24/9/2019 SE198144.040	CLAY 0.2-0.4 24/9/2019 SE198144.041
Arsenic, As	mg/kg	1	4	5	5	6	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	14	8.3	16	20	1.4
Copper, Cu	mg/kg	0.5	4.2	6.2	3.5	2.1	4.7
Lead, Pb	mg/kg	1	12	6	12	6	3
Nickel, Ni	mg/kg	0.5	1.8	<0.5	1.8	1.2	<0.5
Zinc, Zn	mg/kg	2	10	5	7	6	<2

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 30/9/2019

PARAMETER	UOM	LOR	TP47	TP48	TP49	TP49	TP50
			CLAY 0.45-0.55 24/9/2019 SE198144.042	CLAY 0.0-0.15 24/9/2019 SE198144.043	CLAY 0.0-0.15 24/9/2019 SE198144.044	CLAY 0.25-0.35 24/9/2019 SE198144.045	CLAY 0.0-0.15 24/9/2019 SE198144.046
Arsenic, As	mg/kg	1	5	3	4	2	4
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	3.1	7.8	12	3.4	12
Copper, Cu	mg/kg	0.5	7.8	3.3	5.2	4.4	3.3
Lead, Pb	mg/kg	1	6	9	14	4	10
Nickel, Ni	mg/kg	0.5	<0.5	1.6	2.9	<0.5	1.7
Zinc, Zn	mg/kg	2	4	5	10	2	8

PARAMETER	UOM	LOR	TP51	TP51	TP52	TP53	TP53
			CLAY 0.0-0.15 24/9/2019 SE198144.047	CLAY 0.25-0.35 24/9/2019 SE198144.048	CLAY 0.0-0.15 24/9/2019 SE198144.049	CLAY 0.0-0.15 24/9/2019 SE198144.050	CLAY 0.25-0.35 24/9/2019 SE198144.051
Arsenic, As	mg/kg	1	5	6	5	5	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	14	11	17	10	12
Copper, Cu	mg/kg	0.5	3.3	5.6	4.7	3.2	5.3
Lead, Pb	mg/kg	1	10	8	12	13	5
Nickel, Ni	mg/kg	0.5	1.6	<0.5	1.5	2.4	<0.5
Zinc, Zn	mg/kg	2	9	6	8	9	3

PARAMETER	UOM	LOR	TP54	TP54	TP55	TP56	TP56
			CLAY 0.0-0.15 24/9/2019 SE198144.052	CLAY 0.25-0.35 24/9/2019 SE198144.053	CLAY 0.0-0.15 24/9/2019 SE198144.054	CLAY 0.0-0.15 24/9/2019 SE198144.055	CLAY 0.25-0.35 24/9/2019 SE198144.056
Arsenic, As	mg/kg	1	5	4	6	5	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	17	8.6	18	14	7.7
Copper, Cu	mg/kg	0.5	6.5	6.8	4.6	4.0	3.8
Lead, Pb	mg/kg	1	13	4	15	13	4
Nickel, Ni	mg/kg	0.5	1.9	<0.5	2.5	1.7	<0.5
Zinc, Zn	mg/kg	2	12	4	12	7	4

PARAMETER	UOM	LOR	TP57	DDS1	DDS2	DDS3	DDS4
			CLAY 0.0-0.15 24/9/2019 SE198144.057	CLAY - 23/9/2019 SE198144.058	CLAY - 23/9/2019 SE198144.059	CLAY - 24/9/2019 SE198144.060	CLAY - 24/9/2019 SE198144.061
Arsenic, As	mg/kg	1	6	6	5	4	5
Cadmium, Cd	mg/kg	0.3	<0.3	0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	16	14	12	23	17
Copper, Cu	mg/kg	0.5	4.9	6.1	10	3.7	4.4
Lead, Pb	mg/kg	1	19	16	8	11	13
Nickel, Ni	mg/kg	0.5	2.7	3.3	2.4	1.9	3.4
Zinc, Zn	mg/kg	2	11	38	15	8	14

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 30/9/2019

PARAMETER	UOM	LOR	DDS5	DDS6
			CLAY - 24/9/2019 SE198144.062	CLAY - 24/9/2019 SE198144.063
Arsenic, As	mg/kg	1	<b>4</b>	<b>5</b>
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	<b>29</b>	<b>10</b>
Copper, Cu	mg/kg	0.5	<b>4.3</b>	<b>4.6</b>
Lead, Pb	mg/kg	1	<b>10</b>	<b>7</b>
Nickel, Ni	mg/kg	0.5	<b>1.0</b>	<0.5
Zinc, Zn	mg/kg	2	<b>8</b>	<b>5</b>

Mercury in Soil [AN312] Tested: 30/9/2019

PARAMETER	UOM	LOR	TP24	TP25	TP25	TP25	TP26
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.25-0.35	0.0-0.15	0.2-0.5	0.85-0.95	0.0-0.15
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.001	SE198144.002	SE198144.003	SE198144.004	SE198144.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP26	TP26	TP27	TP27	TP28
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.2-0.5	1.85-1.95	0.0-0.15	0.5-0.8	0.0-0.15
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.006	SE198144.008	SE198144.009	SE198144.010	SE198144.011
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP28	TP29	TP30	TP30	TP31
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.25-0.35	0.0-0.15	0.0-0.15	0.25-0.35	0.0-0.15
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.012	SE198144.013	SE198144.014	SE198144.015	SE198144.016
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP32	TP32	TP33	TP34	TP34
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.25-0.35	0.0-0.15	0.0-0.15	0.25-0.35
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.017	SE198144.018	SE198144.019	SE198144.020	SE198144.021
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP35	TP36	TP36	TP37	TP38
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.0-0.15	0.25-0.35	0.0-0.15	0.0-0.15
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.022	SE198144.023	SE198144.024	SE198144.025	SE198144.026
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP38	TP39	TP39	TP40	TP41
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.25-0.35	0.0-0.15	0.25-0.35	0.0-0.15	0.0-0.15
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.027	SE198144.028	SE198144.029	SE198144.030	SE198144.031
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP41	TP42	TP43	TP43	TP44
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.25-0.35	0.0-0.15	0.0-0.15	0.25-0.35	0.0-0.15
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.032	SE198144.033	SE198144.034	SE198144.035	SE198144.036
Mercury	mg/kg	0.05	0.08	<0.05	<0.05	<0.05	<0.05

Mercury in Soil [AN312] Tested: 30/9/2019 (continued)

PARAMETER	UOM	LOR	TP45	TP45	TP46	TP47	TP47
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.25-0.35	0.0-0.15	0.0-0.15	0.2-0.4
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.037	SE198144.038	SE198144.039	SE198144.040	SE198144.041
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP47	TP48	TP49	TP49	TP50
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.45-0.55	0.0-0.15	0.0-0.15	0.25-0.35	0.0-0.15
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.042	SE198144.043	SE198144.044	SE198144.045	SE198144.046
Mercury	mg/kg	0.05	0.08	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP51	TP51	TP52	TP53	TP53
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.25-0.35	0.0-0.15	0.0-0.15	0.25-0.35
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.047	SE198144.048	SE198144.049	SE198144.050	SE198144.051
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	0.06

PARAMETER	UOM	LOR	TP54	TP54	TP55	TP56	TP56
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.25-0.35	0.0-0.15	0.0-0.15	0.25-0.35
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.052	SE198144.053	SE198144.054	SE198144.055	SE198144.056
Mercury	mg/kg	0.05	<0.05	0.06	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP57	DDS1	DDS2	DDS3	DDS4
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	-	-	-	-
			24/9/2019	23/9/2019	23/9/2019	24/9/2019	24/9/2019
			SE198144.057	SE198144.058	SE198144.059	SE198144.060	SE198144.061
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	DDS5	DDS6
			CLAY	CLAY
			-	-
			24/9/2019	24/9/2019
			SE198144.062	SE198144.063
Mercury	mg/kg	0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 30/9/2019

PARAMETER	UOM	LOR	TP24	TP25	TP25	TP25	TP26
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.25-0.35	0.0-0.15	0.2-0.5	0.85-0.95	0.0-0.15
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.001	SE198144.002	SE198144.003	SE198144.004	SE198144.005
% Moisture	%w/w	1	8.1	18.2	11.0	9.7	14.0

PARAMETER	UOM	LOR	TP26	TP26	TP27	TP27	TP28
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.2-0.5	1.85-1.95	0.0-0.15	0.5-0.8	0.0-0.15
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.006	SE198144.008	SE198144.009	SE198144.010	SE198144.011
% Moisture	%w/w	1	18.5	17.0	13.1	15.5	15.4

PARAMETER	UOM	LOR	TP28	TP29	TP30	TP30	TP31
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.25-0.35	0.0-0.15	0.0-0.15	0.25-0.35	0.0-0.15
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.012	SE198144.013	SE198144.014	SE198144.015	SE198144.016
% Moisture	%w/w	1	14.8	16.3	16.9	15.1	19.0

PARAMETER	UOM	LOR	TP32	TP32	TP33	TP34	TP34
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.25-0.35	0.0-0.15	0.0-0.15	0.25-0.35
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.017	SE198144.018	SE198144.019	SE198144.020	SE198144.021
% Moisture	%w/w	1	16.9	12.9	17.8	12.7	18.5

PARAMETER	UOM	LOR	TP35	TP36	TP36	TP37	TP38
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.0-0.15	0.25-0.35	0.0-0.15	0.0-0.15
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.022	SE198144.023	SE198144.024	SE198144.025	SE198144.026
% Moisture	%w/w	1	17.4	17.8	24.1	17.1	13.3

PARAMETER	UOM	LOR	TP38	TP39	TP39	TP40	TP41
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.25-0.35	0.0-0.15	0.25-0.35	0.0-0.15	0.0-0.15
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.027	SE198144.028	SE198144.029	SE198144.030	SE198144.031
% Moisture	%w/w	1	21.1	18.3	12.6	15.6	17.7

PARAMETER	UOM	LOR	TP41	TP42	TP43	TP43	TP44
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.25-0.35	0.0-0.15	0.0-0.15	0.25-0.35	0.0-0.15
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.032	SE198144.033	SE198144.034	SE198144.035	SE198144.036
% Moisture	%w/w	1	12.6	14.5	6.9	9.2	16.4



Moisture Content [AN002] Tested: 30/9/2019 (continued)

PARAMETER	UOM	LOR	TP45	TP45	TP46	TP47	TP47
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.25-0.35	0.0-0.15	0.0-0.15	0.2-0.4
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.037	SE198144.038	SE198144.039	SE198144.040	SE198144.041
% Moisture	%w/w	1	14.2	20.5	14.4	18.1	28.3

PARAMETER	UOM	LOR	TP47	TP48	TP49	TP49	TP50
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.45-0.55	0.0-0.15	0.0-0.15	0.25-0.35	0.0-0.15
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.042	SE198144.043	SE198144.044	SE198144.045	SE198144.046
% Moisture	%w/w	1	15.8	15.2	17.2	17.1	13.4

PARAMETER	UOM	LOR	TP51	TP51	TP52	TP53	TP53
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.25-0.35	0.0-0.15	0.0-0.15	0.25-0.35
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.047	SE198144.048	SE198144.049	SE198144.050	SE198144.051
% Moisture	%w/w	1	7.7	17.4	12.6	13.7	16.9

PARAMETER	UOM	LOR	TP54	TP54	TP55	TP56	TP56
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	0.25-0.35	0.0-0.15	0.0-0.15	0.25-0.35
			24/9/2019	24/9/2019	24/9/2019	24/9/2019	24/9/2019
			SE198144.052	SE198144.053	SE198144.054	SE198144.055	SE198144.056
% Moisture	%w/w	1	21.7	21.9	16.0	16.2	14.4

PARAMETER	UOM	LOR	TP57	DDS1	DDS2	DDS3	DDS4
			CLAY	CLAY	CLAY	CLAY	CLAY
			0.0-0.15	-	-	-	-
			24/9/2019	23/9/2019	23/9/2019	24/9/2019	24/9/2019
			SE198144.057	SE198144.058	SE198144.059	SE198144.060	SE198144.061
% Moisture	%w/w	1	15.6	18.8	19.0	14.8	10.2

PARAMETER	UOM	LOR	DDS5	DDS6	TS1
			CLAY	CLAY	SAND
			-	-	-
			24/9/2019	24/9/2019	24/9/2019
			SE198144.062	SE198144.063	SE198144.066
% Moisture	%w/w	1	18.5	17.5	10.3



ANALYTICAL RESULTS

SE198144 R0

Fibre Identification in soil [AN602]    Tested: 1/10/2019

			TP25	TP26	TP27	TP27
			CLAY	CLAY	CLAY	CLAY
			0.2-0.5	0.2-0.5	0.0-0.15	0.5-0.8
			24/9/2019	24/9/2019	24/9/2019	24/9/2019
PARAMETER	UOM	LOR	SE198144.003	SE198144.006	SE198144.009	SE198144.010
Asbestos Detected	No unit	-	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01

## Gravimetric Determination of Asbestos in Soil [AN605] Tested: 1/10/2019

PARAMETER	UOM	LOR	TP25	TP26	TP27	TP27
			CLAY 0.2-0.5 24/9/2019 SE198144.003	CLAY 0.2-0.5 24/9/2019 SE198144.006	CLAY 0.0-0.15 24/9/2019 SE198144.009	CLAY 0.5-0.8 24/9/2019 SE198144.010
Total Sample Weight*	g	1	<b>419</b>	<b>397</b>	<b>412</b>	<b>411</b>
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-

VOCs in Water [AN433] Tested: 1/10/2019

PARAMETER	UOM	LOR	RS1	RS2
			WATER - 23/9/2019 SE198144.064	WATER - 24/9/2019 SE198144.065
Benzene	µg/L	0.5	<0.5	<0.5
Toluene	µg/L	0.5	<0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5	<0.5
m/p-xylene	µg/L	1	<1	<1
o-xylene	µg/L	0.5	<0.5	<0.5
Total Xylenes	µg/L	1.5	<1.5	<1.5
Total BTEX	µg/L	3	<3	<3
Naphthalene	µg/L	0.5	<0.5	<0.5

Volatile Petroleum Hydrocarbons in Water [AN433] Tested: 1/10/2019

PARAMETER	UOM	LOR	RS1	RS2
			WATER - 23/9/2019 SE198144.064	WATER - 24/9/2019 SE198144.065
TRH C6-C9	µg/L	40	<40	<40
Benzene (F0)	µg/L	0.5	<0.5	<0.5
TRH C6-C10	µg/L	50	<50	<50
TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50

TRH (Total Recoverable Hydrocarbons) in Water [AN403] Tested: 30/9/2019

PARAMETER	UOM	LOR	RS1	RS2
			WATER - 23/9/2019 SE198144.064	WATER - 24/9/2019 SE198144.065
TRH C10-C14	µg/L	50	<50	<50
TRH C15-C28	µg/L	200	<200	<200
TRH C29-C36	µg/L	200	<200	<200
TRH C37-C40	µg/L	200	<200	<200
TRH >C10-C16	µg/L	60	<60	<60
TRH >C16-C34 (F3)	µg/L	500	<500	<500
TRH >C34-C40 (F4)	µg/L	500	<500	<500
TRH C10-C36	µg/L	450	<450	<450
TRH C10-C40	µg/L	650	<650	<650

## PAH (Polynuclear Aromatic Hydrocarbons) in Water [AN420]    Tested: 30/9/2019

PARAMETER	UOM	LOR	RS1	RS2
			WATER - 23/9/2019 SE198144.064	WATER - 24/9/2019 SE198144.065
Naphthalene	µg/L	0.1	<0.1	<0.1
2-methylnaphthalene	µg/L	0.1	<0.1	<0.1
1-methylnaphthalene	µg/L	0.1	<0.1	<0.1
Acenaphthylene	µg/L	0.1	<0.1	<0.1
Acenaphthene	µg/L	0.1	<0.1	<0.1
Fluorene	µg/L	0.1	<0.1	<0.1
Phenanthrene	µg/L	0.1	<0.1	<0.1
Anthracene	µg/L	0.1	<0.1	<0.1
Fluoranthene	µg/L	0.1	<0.1	<0.1
Pyrene	µg/L	0.1	<0.1	<0.1
Benzo(a)anthracene	µg/L	0.1	<0.1	<0.1
Chrysene	µg/L	0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	µg/L	0.1	<0.1	<0.1
Benzo(k)fluoranthene	µg/L	0.1	<0.1	<0.1
Benzo(a)pyrene	µg/L	0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1	<0.1
Dibenzo(ah)anthracene	µg/L	0.1	<0.1	<0.1
Benzo(ghi)perylene	µg/L	0.1	<0.1	<0.1
Total PAH (18)	µg/L	1	<1	<1

Metals in Water (Dissolved) by ICPOES [AN320] Tested: 1/10/2019

PARAMETER	UOM	LOR	RS1	RS2
			WATER - 23/9/2019 SE198144.064	WATER - 24/9/2019 SE198144.065
Arsenic, As	mg/L	0.02	<0.02	<0.02
Cadmium, Cd	mg/L	0.001	<0.001	<0.001
Chromium, Cr	mg/L	0.005	<0.005	<0.005
Copper, Cu	mg/L	0.005	<0.005	<0.005
Lead, Pb	mg/L	0.02	<0.02	<0.02
Nickel, Ni	mg/L	0.005	<0.005	<0.005
Zinc, Zn	mg/L	0.01	<0.01	<0.01



Mercury (dissolved) in Water [AN311(Perth)/AN312]    Tested: 30/9/2019

			RS1	RS2
			WATER	WATER
			-	-
			23/9/2019	24/9/2019
			SE198144.064	SE198144.065
PARAMETER	UOM	LOR		
Mercury	mg/L	0.0001	<0.0001	<0.0001

## 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.
- AN020** Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
- 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.
- 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 CaCl<sub>2</sub>) is made at a ratio of 1:5 and the pH determined and reported on the extract. Reference APHA 4500-H+.
- AN122** Exchangeable Cations, CEC and ESP: Soil sample is extracted in 1M Ammonium Acetate at pH=7 (or 1M Ammonium Chloride at pH=7) with cations (Na, K, Ca & Mg) then determined by ICP OES/ICP MS and reported as Exchangeable Cations. For saline soils, these results can be corrected for water soluble cations and reported as Exchangeable cations in meq/100g or soil can be pre-treated (aqueous ethanol/aqueous glycerol) prior to extraction. Cation Exchange Capacity (CEC) is the sum of the exchangeable cations in meq/100g.
- AN122** The Exchangeable Sodium Percentage (ESP) is calculated as the exchangeable sodium divided by the CEC (all in meq/100g) times 100.  
ESP can be used to categorise the sodicity of the soil as below:
- |           |                |
|-----------|----------------|
| ESP < 6%  | non-sodic      |
| ESP 6-15% | sodic          |
| ESP > 15% | strongly sodic |
- Method is referenced to Rayment and Lyons, 2011, sections 15D3 and 15N1.-
- 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.
- AN311(Perth)/AN312** Mercury by Cold Vapour AAS in Waters: 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.
- 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
- AN320** Metals by ICP-OES: Samples are preserved with 10% nitric acid for a wide range of metals and some non-metals. This solution is measured by Inductively Coupled Plasma. Solutions are aspirated into an argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components.
- AN320** Photomultipliers or CCDs are used to measure the light intensity at specific wavelengths. This intensity is directly proportional to concentration. Corrections are required to compensate for spectral overlap between elements. Reference APHA 3120 B.
- 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 Recoverable Hydrocarbons - Silica (TRH-Si) 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 unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf). The fibres detected may or may not be asbestos fibres.
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- <ul style="list-style-type: none"> <li>(a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres):</li> <li>(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</li> <li>(c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.</li> </ul>
AN605	This technique gravimetrically determines the mass of Asbestos Containing Material retained on a 7mm Sieve and assumes that 15% of this ACM is asbestos. This calculated asbestos weight is then calculated as a percentage of the total sample weight.
AN605	This technique also gravimetrically determines the mass of Fibrous Asbestos (FA) and Asbestos Fines (AF) Containing Material retained on and passing a 2mm sieve post 7mm sieving. Assumes that FA and AF are 100% asbestos containing. This calculated asbestos weight is then calculated as a percentage of the total sample weight. This does not include free fibres which are only observed by standard trace analysis as per AN 602.
AN605	Insofar as is technically feasible, this report is consistent with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment Remediation and Management of Asbestos - Contaminated Sites in Western Australia - May 2009.

FOOTNOTES

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

Unless it is reported that sampling has been performed by SGS, the samples have been 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:

- 1 Bq is equivalent to 27 pCi
- 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 and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: [www.sgs.com.au/pv.sgsvr/en-gb/environment](http://www.sgs.com.au/pv.sgsvr/en-gb/environment).

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

This report must not be reproduced, except in full.



## STATEMENT OF QA/QC PERFORMANCE

SE198144 R0

### CLIENT DETAILS

Contact **Anwar Barbhuyia**  
Client **Geotechnique**  
Address **P.O. Box 880  
PENRITH NSW 2751**

Telephone **02 4722 2700**  
Facsimile **02 4722 6161**  
Email **anwar@geotech.com.au**

Project **14513-2 Marsden Park**  
Order Number **(Not specified)**  
Samples **67**

### 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 **SE198144 R0**  
Date Received **25 Sep 2019**  
Date Reported **02 Oct 2019**

### COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.  
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.  
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Extraction Date	VOCs in Water	1 item
	Volatile Petroleum Hydrocarbons in Water	1 item
Duplicate	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item
	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	2 items
	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item
Matrix Spike	Mercury (dissolved) in Water	1 item
	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item

### SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	64 Clay, 2 Water
Date documentation received	27/09/2019@10:03:20	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	No
Sample temperature upon receipt	14°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]JAN122

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP25	SE198144.002	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP25	SE198144.003	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP25	SE198144.004	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP26	SE198144.006	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP27	SE198144.009	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP27	SE198144.010	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP28	SE198144.011	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP28	SE198144.012	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP30	SE198144.014	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP32	SE198144.017	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP32	SE198144.018	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP34	SE198144.020	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP34	SE198144.021	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP36	SE198144.023	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP36	SE198144.024	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP38	SE198144.026	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP38	SE198144.027	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP39	SE198144.029	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP40	SE198144.030	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP42	SE198144.033	LB184227	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP43	SE198144.035	LB184228	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP44	SE198144.036	LB184228	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP45	SE198144.038	LB184228	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP46	SE198144.039	LB184228	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP47	SE198144.041	LB184228	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP48	SE198144.043	LB184228	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP49	SE198144.045	LB184228	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP50	SE198144.046	LB184228	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP52	SE198144.049	LB184228	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP53	SE198144.051	LB184228	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP54	SE198144.052	LB184228	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP54	SE198144.053	LB184228	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP56	SE198144.055	LB184228	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP56	SE198144.056	LB184228	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019

## Fibre Identification in soil

Method: ME-(AU)-[ENV]JAN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP25	SE198144.003	LB184388	24 Sep 2019	25 Sep 2019	23 Sep 2020	01 Oct 2019	23 Sep 2020	02 Oct 2019
TP26	SE198144.006	LB184388	24 Sep 2019	25 Sep 2019	23 Sep 2020	01 Oct 2019	23 Sep 2020	02 Oct 2019
TP27	SE198144.009	LB184388	24 Sep 2019	25 Sep 2019	23 Sep 2020	01 Oct 2019	23 Sep 2020	02 Oct 2019
TP27	SE198144.010	LB184388	24 Sep 2019	25 Sep 2019	23 Sep 2020	01 Oct 2019	23 Sep 2020	02 Oct 2019
TP47	SE198144.041	LB184388	24 Sep 2019	25 Sep 2019	23 Sep 2020	01 Oct 2019	23 Sep 2020	02 Oct 2019

## Gravimetric Determination of Asbestos in Soil

Method: ME-(AU)-[ENV]JAN605

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP25	SE198144.003	LB184388	24 Sep 2019	25 Sep 2019	22 Mar 2020	01 Oct 2019	22 Mar 2020	02 Oct 2019
TP26	SE198144.006	LB184388	24 Sep 2019	25 Sep 2019	22 Mar 2020	01 Oct 2019	22 Mar 2020	02 Oct 2019
TP27	SE198144.009	LB184388	24 Sep 2019	25 Sep 2019	22 Mar 2020	01 Oct 2019	22 Mar 2020	02 Oct 2019
TP27	SE198144.010	LB184388	24 Sep 2019	25 Sep 2019	22 Mar 2020	01 Oct 2019	22 Mar 2020	02 Oct 2019
TP47	SE198144.041	LB184388	24 Sep 2019	25 Sep 2019	22 Mar 2020	01 Oct 2019	22 Mar 2020	02 Oct 2019

## Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]JAN311(Perth)/JAN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS1	SE198144.064	LB184192	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	01 Oct 2019
RS2	SE198144.065	LB184192	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	01 Oct 2019

## Mercury in Soil

Method: ME-(AU)-[ENV]JAN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP24	SE198144.001	LB184288	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP25	SE198144.002	LB184288	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP25	SE198144.003	LB184288	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP25	SE198144.004	LB184288	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Mercury in Soil (continued)

Method: ME-(AU)-ENVJAN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP26	SE198144.005	LB184288	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP26	SE198144.006	LB184288	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP26	SE198144.008	LB184288	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP27	SE198144.009	LB184288	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP27	SE198144.010	LB184288	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP28	SE198144.011	LB184289	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP28	SE198144.012	LB184289	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP29	SE198144.013	LB184289	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP30	SE198144.014	LB184289	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP30	SE198144.015	LB184289	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP31	SE198144.016	LB184289	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP32	SE198144.017	LB184289	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP32	SE198144.018	LB184289	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP33	SE198144.019	LB184289	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP34	SE198144.020	LB184289	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP34	SE198144.021	LB184289	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP35	SE198144.022	LB184289	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP36	SE198144.023	LB184289	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP36	SE198144.024	LB184289	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP37	SE198144.025	LB184289	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP38	SE198144.026	LB184289	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP38	SE198144.027	LB184289	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP39	SE198144.028	LB184289	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP39	SE198144.029	LB184289	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP40	SE198144.030	LB184290	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP41	SE198144.031	LB184290	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP41	SE198144.032	LB184290	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP42	SE198144.033	LB184290	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP43	SE198144.034	LB184290	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP43	SE198144.035	LB184290	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP44	SE198144.036	LB184290	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP45	SE198144.037	LB184290	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP45	SE198144.038	LB184290	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP46	SE198144.039	LB184290	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP47	SE198144.040	LB184290	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP47	SE198144.041	LB184290	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP47	SE198144.042	LB184290	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP48	SE198144.043	LB184290	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP49	SE198144.044	LB184290	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP49	SE198144.045	LB184290	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP50	SE198144.046	LB184290	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP51	SE198144.047	LB184290	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP51	SE198144.048	LB184290	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP52	SE198144.049	LB184291	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP53	SE198144.050	LB184291	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP53	SE198144.051	LB184291	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP54	SE198144.052	LB184291	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP54	SE198144.053	LB184291	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP55	SE198144.054	LB184291	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP56	SE198144.055	LB184291	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP56	SE198144.056	LB184291	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
TP57	SE198144.057	LB184291	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
DDS1	SE198144.058	LB184291	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
DDS2	SE198144.059	LB184291	23 Sep 2019	25 Sep 2019	21 Oct 2019	30 Sep 2019	21 Oct 2019	02 Oct 2019
DDS3	SE198144.060	LB184291	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
DDS4	SE198144.061	LB184291	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
DDS5	SE198144.062	LB184291	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019
DDS6	SE198144.063	LB184291	24 Sep 2019	25 Sep 2019	22 Oct 2019	30 Sep 2019	22 Oct 2019	02 Oct 2019



SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-ENVJAN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS1	SE198144.064	LB184324	23 Sep 2019	25 Sep 2019	21 Mar 2020	01 Oct 2019	21 Mar 2020	01 Oct 2019
RS2	SE198144.065	LB184324	24 Sep 2019	25 Sep 2019	22 Mar 2020	01 Oct 2019	22 Mar 2020	01 Oct 2019

## Moisture Content

Method: ME-(AU)-ENVJAN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP24	SE198144.001	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP25	SE198144.002	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP25	SE198144.003	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP25	SE198144.004	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP26	SE198144.005	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP26	SE198144.006	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP26	SE198144.008	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP27	SE198144.009	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP27	SE198144.010	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP28	SE198144.011	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP28	SE198144.012	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP29	SE198144.013	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP30	SE198144.014	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP30	SE198144.015	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP31	SE198144.016	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP32	SE198144.017	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP32	SE198144.018	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP33	SE198144.019	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP34	SE198144.020	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP34	SE198144.021	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP35	SE198144.022	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP36	SE198144.023	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP36	SE198144.024	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP37	SE198144.025	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP38	SE198144.026	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP38	SE198144.027	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP39	SE198144.028	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP39	SE198144.029	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP40	SE198144.030	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP41	SE198144.031	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP41	SE198144.032	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP42	SE198144.033	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP43	SE198144.034	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP43	SE198144.035	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP44	SE198144.036	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP45	SE198144.037	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP45	SE198144.038	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP46	SE198144.039	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP47	SE198144.040	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP47	SE198144.041	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP47	SE198144.042	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP48	SE198144.043	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP49	SE198144.044	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP49	SE198144.045	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP50	SE198144.046	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP51	SE198144.047	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP51	SE198144.048	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP52	SE198144.049	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP53	SE198144.050	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP53	SE198144.051	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP54	SE198144.052	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP54	SE198144.053	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP55	SE198144.054	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP56	SE198144.055	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TP56	SE198144.056	LB184222	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019



SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Moisture Content (continued)

Method: ME-(AU)-ENVJAN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP57	SE198144.057	LB184224	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
DDS1	SE198144.058	LB184224	23 Sep 2019	25 Sep 2019	07 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
DDS2	SE198144.059	LB184224	23 Sep 2019	25 Sep 2019	07 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
DDS3	SE198144.060	LB184224	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
DDS4	SE198144.061	LB184224	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
DDS5	SE198144.062	LB184224	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
DDS6	SE198144.063	LB184224	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019
TS1	SE198144.066	LB184224	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	05 Oct 2019	01 Oct 2019

## OC Pesticides in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP25	SE198144.002	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP25	SE198144.003	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP26	SE198144.005	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP26	SE198144.006	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP27	SE198144.009	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP27	SE198144.010	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP28	SE198144.011	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP29	SE198144.013	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP30	SE198144.014	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP31	SE198144.016	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP32	SE198144.017	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP33	SE198144.019	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP34	SE198144.020	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP35	SE198144.022	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP36	SE198144.023	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP37	SE198144.025	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP38	SE198144.026	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP39	SE198144.028	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP40	SE198144.030	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP41	SE198144.031	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP42	SE198144.033	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP43	SE198144.034	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP44	SE198144.036	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP45	SE198144.037	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP46	SE198144.039	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP47	SE198144.040	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP47	SE198144.041	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP48	SE198144.043	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP49	SE198144.044	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP50	SE198144.046	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP51	SE198144.047	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP52	SE198144.049	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP53	SE198144.050	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP54	SE198144.052	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP55	SE198144.054	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP56	SE198144.055	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP57	SE198144.057	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
DDS1	SE198144.058	LB184221	23 Sep 2019	25 Sep 2019	07 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
DDS2	SE198144.059	LB184221	23 Sep 2019	25 Sep 2019	07 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
DDS3	SE198144.060	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
DDS4	SE198144.061	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
DDS5	SE198144.062	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
DDS6	SE198144.063	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP25	SE198144.002	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP25	SE198144.003	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP26	SE198144.005	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP26	SE198144.006	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP27	SE198144.009	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP27	SE198144.010	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP28	SE198144.011	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP29	SE198144.013	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP30	SE198144.014	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP31	SE198144.016	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP32	SE198144.017	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP33	SE198144.019	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP34	SE198144.020	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP35	SE198144.022	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP36	SE198144.023	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP37	SE198144.025	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP38	SE198144.026	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP39	SE198144.028	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP40	SE198144.030	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP41	SE198144.031	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP42	SE198144.033	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP43	SE198144.034	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP44	SE198144.036	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP45	SE198144.037	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP46	SE198144.039	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP47	SE198144.040	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP47	SE198144.041	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP48	SE198144.043	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP49	SE198144.044	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP50	SE198144.046	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP51	SE198144.047	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP52	SE198144.049	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP53	SE198144.050	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP54	SE198144.052	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP55	SE198144.054	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP56	SE198144.055	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP57	SE198144.057	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
DDS1	SE198144.058	LB184221	23 Sep 2019	25 Sep 2019	07 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
DDS2	SE198144.059	LB184221	23 Sep 2019	25 Sep 2019	07 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
DDS3	SE198144.060	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
DDS4	SE198144.061	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
DDS5	SE198144.062	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
DDS6	SE198144.063	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019

## PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS1	SE198144.064	LB184205	23 Sep 2019	25 Sep 2019	30 Sep 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
RS2	SE198144.065	LB184205	24 Sep 2019	25 Sep 2019	01 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019

## PCBs in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP25	SE198144.002	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP25	SE198144.003	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP26	SE198144.005	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP26	SE198144.006	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP27	SE198144.009	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP27	SE198144.010	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP28	SE198144.011	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP29	SE198144.013	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP30	SE198144.014	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP31	SE198144.016	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP32	SE198144.017	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP33	SE198144.019	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP34	SE198144.020	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP35	SE198144.022	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## PCBs in Soil (continued)

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP36	SE198144.023	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP37	SE198144.025	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP38	SE198144.026	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP39	SE198144.028	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP40	SE198144.030	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP41	SE198144.031	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP42	SE198144.033	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP43	SE198144.034	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP44	SE198144.036	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP45	SE198144.037	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP46	SE198144.039	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP47	SE198144.040	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP47	SE198144.041	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP48	SE198144.043	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP49	SE198144.044	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP50	SE198144.046	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP51	SE198144.047	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP52	SE198144.049	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP53	SE198144.050	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP54	SE198144.052	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP55	SE198144.054	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP56	SE198144.055	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP57	SE198144.057	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
DDS1	SE198144.058	LB184221	23 Sep 2019	25 Sep 2019	07 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
DDS2	SE198144.059	LB184221	23 Sep 2019	25 Sep 2019	07 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
DDS3	SE198144.060	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
DDS4	SE198144.061	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
DDS5	SE198144.062	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
DDS6	SE198144.063	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019

## pH in soil (1:5)

Method: ME-(AU)-ENVJAN101

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP25	SE198144.002	LB184368	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP25	SE198144.003	LB184368	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP25	SE198144.004	LB184368	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP26	SE198144.006	LB184368	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP27	SE198144.009	LB184368	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP27	SE198144.010	LB184368	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP28	SE198144.011	LB184368	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP28	SE198144.012	LB184368	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP30	SE198144.014	LB184368	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP32	SE198144.017	LB184368	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP32	SE198144.018	LB184368	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP34	SE198144.020	LB184368	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP34	SE198144.021	LB184368	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP36	SE198144.023	LB184368	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP36	SE198144.024	LB184368	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP38	SE198144.026	LB184368	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP38	SE198144.027	LB184368	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP39	SE198144.029	LB184368	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP40	SE198144.030	LB184368	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP42	SE198144.033	LB184369	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP43	SE198144.035	LB184369	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP44	SE198144.036	LB184369	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP45	SE198144.038	LB184369	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP46	SE198144.039	LB184369	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP47	SE198144.041	LB184369	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP48	SE198144.043	LB184369	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP49	SE198144.045	LB184369	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP50	SE198144.046	LB184369	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## pH in soil (1:5) (continued)

Method: ME-(AU)-ENVJAN101

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP52	SE198144.049	LB184369	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP53	SE198144.051	LB184369	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP54	SE198144.052	LB184369	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP54	SE198144.053	LB184369	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP56	SE198144.055	LB184369	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019
TP56	SE198144.056	LB184369	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	02 Oct 2019	01 Oct 2019

## Total Phenolics in Soil

Method: ME-(AU)-ENVJAN289

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP25	SE198144.003	LB184211	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	08 Oct 2019	01 Oct 2019
TP26	SE198144.006	LB184211	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	08 Oct 2019	01 Oct 2019
TP27	SE198144.010	LB184211	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	08 Oct 2019	01 Oct 2019
TP47	SE198144.041	LB184211	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	08 Oct 2019	01 Oct 2019
DDS2	SE198144.059	LB184211	23 Sep 2019	25 Sep 2019	07 Oct 2019	30 Sep 2019	07 Oct 2019	01 Oct 2019
DDS4	SE198144.061	LB184211	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	08 Oct 2019	01 Oct 2019

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-ENVJAN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP24	SE198144.001	LB184278	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	02 Oct 2019
TP25	SE198144.002	LB184278	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	02 Oct 2019
TP25	SE198144.003	LB184278	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	02 Oct 2019
TP25	SE198144.004	LB184278	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	02 Oct 2019
TP26	SE198144.005	LB184278	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	02 Oct 2019
TP26	SE198144.006	LB184278	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	02 Oct 2019
TP26	SE198144.008	LB184278	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	02 Oct 2019
TP27	SE198144.009	LB184278	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	02 Oct 2019
TP27	SE198144.010	LB184278	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	02 Oct 2019
TP28	SE198144.011	LB184279	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP28	SE198144.012	LB184279	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP29	SE198144.013	LB184279	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP30	SE198144.014	LB184279	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP30	SE198144.015	LB184279	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP31	SE198144.016	LB184279	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP32	SE198144.017	LB184279	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP32	SE198144.018	LB184279	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP33	SE198144.019	LB184279	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP34	SE198144.020	LB184279	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP34	SE198144.021	LB184279	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP35	SE198144.022	LB184279	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP36	SE198144.023	LB184279	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP36	SE198144.024	LB184279	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP37	SE198144.025	LB184279	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP38	SE198144.026	LB184279	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP38	SE198144.027	LB184279	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP39	SE198144.028	LB184279	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP39	SE198144.029	LB184279	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP40	SE198144.030	LB184280	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP41	SE198144.031	LB184280	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP41	SE198144.032	LB184280	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP42	SE198144.033	LB184280	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP43	SE198144.034	LB184280	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP43	SE198144.035	LB184280	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP44	SE198144.036	LB184280	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP45	SE198144.037	LB184280	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP45	SE198144.038	LB184280	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP46	SE198144.039	LB184280	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP47	SE198144.040	LB184280	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP47	SE198144.041	LB184280	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP47	SE198144.042	LB184280	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP48	SE198144.043	LB184280	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP49	SE198144.044	LB184280	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP49	SE198144.045	LB184280	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP50	SE198144.046	LB184280	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP51	SE198144.047	LB184280	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP51	SE198144.048	LB184280	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP52	SE198144.049	LB184281	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP53	SE198144.050	LB184281	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP53	SE198144.051	LB184281	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP54	SE198144.052	LB184281	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP54	SE198144.053	LB184281	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP55	SE198144.054	LB184281	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP56	SE198144.055	LB184281	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP56	SE198144.056	LB184281	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
TP57	SE198144.057	LB184281	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
DDS1	SE198144.058	LB184281	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	01 Oct 2019
DDS2	SE198144.059	LB184281	23 Sep 2019	25 Sep 2019	21 Mar 2020	30 Sep 2019	21 Mar 2020	01 Oct 2019
DDS3	SE198144.060	LB184281	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
DDS4	SE198144.061	LB184281	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
DDS5	SE198144.062	LB184281	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019
DDS6	SE198144.063	LB184281	24 Sep 2019	25 Sep 2019	22 Mar 2020	30 Sep 2019	22 Mar 2020	01 Oct 2019

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP25	SE198144.002	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP25	SE198144.003	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP26	SE198144.005	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP26	SE198144.006	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP27	SE198144.009	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP27	SE198144.010	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP28	SE198144.011	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP29	SE198144.013	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP30	SE198144.014	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP31	SE198144.016	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP32	SE198144.017	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP33	SE198144.019	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP34	SE198144.020	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP35	SE198144.022	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP36	SE198144.023	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP37	SE198144.025	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP38	SE198144.026	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP39	SE198144.028	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP40	SE198144.030	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP41	SE198144.031	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP42	SE198144.033	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP43	SE198144.034	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP44	SE198144.036	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP45	SE198144.037	LB184220	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP46	SE198144.039	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP47	SE198144.040	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP47	SE198144.041	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP48	SE198144.043	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP49	SE198144.044	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP50	SE198144.046	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP51	SE198144.047	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP52	SE198144.049	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP53	SE198144.050	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP54	SE198144.052	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP55	SE198144.054	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP56	SE198144.055	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TP57	SE198144.057	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
DDS1	SE198144.058	LB184221	23 Sep 2019	25 Sep 2019	07 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019



SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
DDS2	SE198144.059	LB184221	23 Sep 2019	25 Sep 2019	07 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
DDS3	SE198144.060	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
DDS4	SE198144.061	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
DDS5	SE198144.062	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
DDS6	SE198144.063	LB184221	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019

## TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS1	SE198144.064	LB184205	23 Sep 2019	25 Sep 2019	30 Sep 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
RS2	SE198144.065	LB184205	24 Sep 2019	25 Sep 2019	01 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019

## VOC's in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP25	SE198144.003	LB184266	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP26	SE198144.006	LB184266	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP27	SE198144.009	LB184266	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP27	SE198144.010	LB184266	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP47	SE198144.041	LB184266	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
DDS2	SE198144.059	LB184266	23 Sep 2019	25 Sep 2019	07 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
DDS4	SE198144.061	LB184266	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TS1	SE198144.066	LB184266	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TS2	SE198144.067	LB184266	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019

## VOCs in Water

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS1	SE198144.064	LB184344	23 Sep 2019	25 Sep 2019	30 Sep 2019	01 Oct 2019†	10 Nov 2019	02 Oct 2019
RS2	SE198144.065	LB184344	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	10 Nov 2019	02 Oct 2019

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP25	SE198144.003	LB184266	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP26	SE198144.006	LB184266	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP27	SE198144.009	LB184266	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP27	SE198144.010	LB184266	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP47	SE198144.041	LB184266	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
DDS2	SE198144.059	LB184266	23 Sep 2019	25 Sep 2019	07 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
DDS4	SE198144.061	LB184266	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TS1	SE198144.066	LB184266	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019
TS2	SE198144.067	LB184266	24 Sep 2019	25 Sep 2019	08 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019

## Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS1	SE198144.064	LB184344	23 Sep 2019	25 Sep 2019	30 Sep 2019	01 Oct 2019†	10 Nov 2019	02 Oct 2019
RS2	SE198144.065	LB184344	24 Sep 2019	25 Sep 2019	01 Oct 2019	01 Oct 2019	10 Nov 2019	02 Oct 2019

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	TP25	SE198144.002	%	60 - 130%	83
	TP25	SE198144.003	%	60 - 130%	83
	TP26	SE198144.005	%	60 - 130%	82
	TP26	SE198144.006	%	60 - 130%	85
	TP27	SE198144.009	%	60 - 130%	93
	TP27	SE198144.010	%	60 - 130%	87
	TP28	SE198144.011	%	60 - 130%	89
	TP29	SE198144.013	%	60 - 130%	84
	TP30	SE198144.014	%	60 - 130%	90
	TP31	SE198144.016	%	60 - 130%	84
	TP32	SE198144.017	%	60 - 130%	87
	TP33	SE198144.019	%	60 - 130%	93
	TP34	SE198144.020	%	60 - 130%	84
	TP35	SE198144.022	%	60 - 130%	89
	TP36	SE198144.023	%	60 - 130%	93
	TP37	SE198144.025	%	60 - 130%	81
	TP38	SE198144.026	%	60 - 130%	89
	TP39	SE198144.028	%	60 - 130%	95
	TP40	SE198144.030	%	60 - 130%	87
	TP41	SE198144.031	%	60 - 130%	89
	TP42	SE198144.033	%	60 - 130%	84
	TP43	SE198144.034	%	60 - 130%	81
	TP44	SE198144.036	%	60 - 130%	87
	TP45	SE198144.037	%	60 - 130%	87
	TP46	SE198144.039	%	60 - 130%	111
	TP47	SE198144.040	%	60 - 130%	111
	TP47	SE198144.041	%	60 - 130%	105
	TP48	SE198144.043	%	60 - 130%	97
	TP49	SE198144.044	%	60 - 130%	99
	TP50	SE198144.046	%	60 - 130%	99
	TP51	SE198144.047	%	60 - 130%	95
	TP52	SE198144.049	%	60 - 130%	95
	TP53	SE198144.050	%	60 - 130%	93
	TP54	SE198144.052	%	60 - 130%	97
	TP55	SE198144.054	%	60 - 130%	89
	TP56	SE198144.055	%	60 - 130%	97
	TP57	SE198144.057	%	60 - 130%	95
	DDS1	SE198144.058	%	60 - 130%	94
	DDS2	SE198144.059	%	60 - 130%	99
	DDS3	SE198144.060	%	60 - 130%	100
	DDS4	SE198144.061	%	60 - 130%	98
	DDS5	SE198144.062	%	60 - 130%	102
	DDS6	SE198144.063	%	60 - 130%	94

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	TP25	SE198144.003	%	70 - 130%	86
	TP26	SE198144.006	%	70 - 130%	82
	TP27	SE198144.009	%	70 - 130%	72
	TP27	SE198144.010	%	70 - 130%	88
	TP47	SE198144.041	%	70 - 130%	86
	DDS2	SE198144.059	%	70 - 130%	80
	DDS4	SE198144.061	%	70 - 130%	82
d14-p-terphenyl (Surrogate)	TP25	SE198144.003	%	70 - 130%	84
	TP26	SE198144.006	%	70 - 130%	80
	TP27	SE198144.009	%	70 - 130%	70
	TP27	SE198144.010	%	70 - 130%	84
	TP47	SE198144.041	%	70 - 130%	84
	DDS2	SE198144.059	%	70 - 130%	78
d5-nitrobenzene (Surrogate)	DDS4	SE198144.061	%	70 - 130%	80
	TP25	SE198144.003	%	70 - 130%	88

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d5-nitrobenzene (Surrogate)	TP26	SE198144.006	%	70 - 130%	84
	TP27	SE198144.009	%	70 - 130%	74
	TP27	SE198144.010	%	70 - 130%	88
	TP47	SE198144.041	%	70 - 130%	86
	DDS2	SE198144.059	%	70 - 130%	82
	DDS4	SE198144.061	%	70 - 130%	80

## PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	RS1	SE198144.064	%	40 - 130%	48
	RS2	SE198144.065	%	40 - 130%	54
d14-p-terphenyl (Surrogate)	RS1	SE198144.064	%	40 - 130%	60
	RS2	SE198144.065	%	40 - 130%	74
d5-nitrobenzene (Surrogate)	RS1	SE198144.064	%	40 - 130%	44
	RS2	SE198144.065	%	40 - 130%	46

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	TP25	SE198144.003	%	60 - 130%	83
	TP26	SE198144.006	%	60 - 130%	85
	TP27	SE198144.009	%	60 - 130%	93
	TP27	SE198144.010	%	60 - 130%	87
	TP47	SE198144.041	%	60 - 130%	105
	DDS2	SE198144.059	%	60 - 130%	99
	DDS4	SE198144.061	%	60 - 130%	98

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	TP25	SE198144.003	%	60 - 130%	88
	TP26	SE198144.006	%	60 - 130%	86
	TP27	SE198144.009	%	60 - 130%	84
	TP27	SE198144.010	%	60 - 130%	84
	TP47	SE198144.041	%	60 - 130%	76
	DDS2	SE198144.059	%	60 - 130%	80
	DDS4	SE198144.061	%	60 - 130%	80
	TS1	SE198144.066	%	60 - 130%	83
	TS2	SE198144.067	%	60 - 130%	83
d4-1,2-dichloroethane (Surrogate)	TP25	SE198144.003	%	60 - 130%	93
	TP26	SE198144.006	%	60 - 130%	88
	TP27	SE198144.009	%	60 - 130%	96
	TP27	SE198144.010	%	60 - 130%	90
	TP47	SE198144.041	%	60 - 130%	88
	DDS2	SE198144.059	%	60 - 130%	92
	DDS4	SE198144.061	%	60 - 130%	82
	TS1	SE198144.066	%	60 - 130%	85
	TS2	SE198144.067	%	60 - 130%	89
d8-toluene (Surrogate)	TP25	SE198144.003	%	60 - 130%	92
	TP26	SE198144.006	%	60 - 130%	86
	TP27	SE198144.009	%	60 - 130%	91
	TP27	SE198144.010	%	60 - 130%	88
	TP47	SE198144.041	%	60 - 130%	80
	DDS2	SE198144.059	%	60 - 130%	87
	DDS4	SE198144.061	%	60 - 130%	80
	TS1	SE198144.066	%	60 - 130%	83
	TS2	SE198144.067	%	60 - 130%	84

## VOCs in Water

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	RS1	SE198144.064	%	40 - 130%	79
	RS2	SE198144.065	%	40 - 130%	80
d4-1,2-dichloroethane (Surrogate)	RS1	SE198144.064	%	40 - 130%	113
	RS2	SE198144.065	%	40 - 130%	116
d8-toluene (Surrogate)	RS1	SE198144.064	%	40 - 130%	92



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## VOCs In Water (continued)

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	RS2	SE198144.065	%	40 - 130%	96

## Volatile Petroleum Hydrocarbons In Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	TP25	SE198144.003	%	60 - 130%	88
	TP26	SE198144.006	%	60 - 130%	86
	TP27	SE198144.009	%	60 - 130%	84
	TP27	SE198144.010	%	60 - 130%	84
	TP47	SE198144.041	%	60 - 130%	76
	DDS2	SE198144.059	%	60 - 130%	80
d4-1,2-dichloroethane (Surrogate)	DDS4	SE198144.061	%	60 - 130%	80
	TP25	SE198144.003	%	60 - 130%	93
	TP26	SE198144.006	%	60 - 130%	88
	TP27	SE198144.009	%	60 - 130%	96
	TP27	SE198144.010	%	60 - 130%	90
	TP47	SE198144.041	%	60 - 130%	88
d8-toluene (Surrogate)	DDS2	SE198144.059	%	60 - 130%	92
	DDS4	SE198144.061	%	60 - 130%	82
	TP25	SE198144.003	%	60 - 130%	92
	TP26	SE198144.006	%	60 - 130%	86
	TP27	SE198144.009	%	60 - 130%	91
	TP27	SE198144.010	%	60 - 130%	88
	TP47	SE198144.041	%	60 - 130%	80
	DDS2	SE198144.059	%	60 - 130%	87
	DDS4	SE198144.061	%	60 - 130%	80

## Volatile Petroleum Hydrocarbons In Water

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	RS1	SE198144.064	%	40 - 130%	79
	RS2	SE198144.065	%	40 - 130%	80
d4-1,2-dichloroethane (Surrogate)	RS1	SE198144.064	%	60 - 130%	113
	RS2	SE198144.065	%	60 - 130%	116
d8-toluene (Surrogate)	RS1	SE198144.064	%	40 - 130%	92
	RS2	SE198144.065	%	40 - 130%	96

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

Sample Number	Parameter	Units	LOR	Result
LB184227.001	Exchangeable Sodium, Na	mg/kg	2	0
	Exchangeable Potassium, K	mg/kg	2	0
	Exchangeable Calcium, Ca	mg/kg	2	0
	Exchangeable Magnesium, Mg	mg/kg	2	0
LB184228.001	Exchangeable Sodium, Na	mg/kg	2	0
	Exchangeable Potassium, K	mg/kg	2	0
	Exchangeable Calcium, Ca	mg/kg	2	0
	Exchangeable Magnesium, Mg	mg/kg	2	0

## Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Sample Number	Parameter	Units	LOR	Result
LB184192.001	Mercury	mg/L	0.0001	<0.0001

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB184288.001	Mercury	mg/kg	0.05	<0.05
LB184289.001	Mercury	mg/kg	0.05	<0.05
LB184290.001	Mercury	mg/kg	0.05	<0.05
LB184291.001	Mercury	mg/kg	0.05	<0.05

## Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320

Sample Number	Parameter	Units	LOR	Result
LB184324.001	Arsenic, As	mg/L	0.02	<0.02
	Cadmium, Cd	mg/L	0.001	<0.001
	Chromium, Cr	mg/L	0.005	<0.005
	Copper, Cu	mg/L	0.005	<0.005
	Lead, Pb	mg/L	0.02	<0.02
	Nickel, Ni	mg/L	0.005	<0.005
	Zinc, Zn	mg/L	0.01	<0.01

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB184220.001	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Alpha BHC	mg/kg	0.1	<0.1
	Lindane	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	<0.2
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.05	<0.05
	Endrin	mg/kg	0.2	<0.2
	Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	Endrin Aldehyde	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Endrin Ketone	mg/kg	0.1	<0.1
	Isodrin	mg/kg	0.1	<0.1
	Mirex	mg/kg	0.1	<0.1
LB184221.001	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	88
	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Alpha BHC	mg/kg	0.1	<0.1
	Lindane	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## OC Pesticides in Soil (continued)

Method: ME-(AU)-JENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB184221.001	Beta BHC	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	<0.2
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.05	<0.05
	Endrin	mg/kg	0.2	<0.2
	Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	Endrin Aldehyde	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Endrin Ketone	mg/kg	0.1	<0.1
	Isodrin	mg/kg	0.1	<0.1
	Mirex	mg/kg	0.1	<0.1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	93

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-JENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB184220.001	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(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
	Total PAH (18)	mg/kg	0.8	<0.8
Surrogates	d5-nitrobenzene (Surrogate)	%	-	80
	2-fluorobiphenyl (Surrogate)	%	-	80
	d14-p-terphenyl (Surrogate)	%	-	82
LB184221.001	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(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
	Total PAH (18)	mg/kg	0.8	<0.8
Surrogates	d5-nitrobenzene (Surrogate)	%	-	90
	2-fluorobiphenyl (Surrogate)	%	-	92

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB184221.001	Surrogates	d14-p-terphenyl (Surrogate)	%	-
				96

## PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB184205.001	Naphthalene	µg/L	0.1	<0.1
	2-methylnaphthalene	µg/L	0.1	<0.1
	1-methylnaphthalene	µg/L	0.1	<0.1
	Acenaphthylene	µg/L	0.1	<0.1
	Acenaphthene	µg/L	0.1	<0.1
	Fluorene	µg/L	0.1	<0.1
	Phenanthrene	µg/L	0.1	<0.1
	Anthracene	µg/L	0.1	<0.1
	Fluoranthene	µg/L	0.1	<0.1
	Pyrene	µg/L	0.1	<0.1
	Benzo(a)anthracene	µg/L	0.1	<0.1
	Chrysene	µg/L	0.1	<0.1
	Benzo(a)pyrene	µg/L	0.1	<0.1
	Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1
	Dibenzo(ah)anthracene	µg/L	0.1	<0.1
	Benzo(ghi)perylene	µg/L	0.1	<0.1
Surrogates	d5-nitrobenzene (Surrogate)	%	-	98
	2-fluorobiphenyl (Surrogate)	%	-	94
	d14-p-terphenyl (Surrogate)	%	-	122

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB184220.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2
	Arochlor 1254	mg/kg	0.2	<0.2
	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1	<1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	88
LB184221.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2
	Arochlor 1254	mg/kg	0.2	<0.2
	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1	<1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	93

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR	Result
LB184211.001	Total Phenols	mg/kg	5	<5.0

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB184278.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB184278.001	Zinc, Zn	mg/kg	2	<2
LB184279.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2
LB184280.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2
LB184281.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB184220.001	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-C36 Total	mg/kg	110	<110
LB184221.001	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-C36 Total	mg/kg	110	<110

## TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB184205.001	TRH C10-C14	µg/L	50	<50
	TRH C15-C28	µg/L	200	<200
	TRH C29-C36	µg/L	200	<200
	TRH C37-C40	µg/L	200	<200

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB184266.001	Monocyclic Aromatic Hydrocarbons	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
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	86
		d8-toluene (Surrogate)	%	-	85
		Bromofluorobenzene (Surrogate)	%	-	83
	Totals	Total BTEX	mg/kg	0.6	<0.6

## VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB184344.001	Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	0.5	<0.5
		Toluene	µg/L	0.5	<0.5
		Ethylbenzene	µg/L	0.5	<0.5
		m/p-xylene	µg/L	1	<1
		o-xylene	µg/L	0.5	<0.5

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## VOCs in Water (continued)

Method: ME-(AU)-ENVJAN433

Sample Number	Parameter	Units	LOR	Result
LB184344.001	Polycyclic VOCs	Naphthalene	µg/L	0.5
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-
		d8-toluene (Surrogate)	%	-
		Bromofluorobenzene (Surrogate)	%	-

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Sample Number	Parameter	Units	LOR	Result
LB184266.001	TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-

## Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-ENVJAN433

Sample Number	Parameter	Units	LOR	Result
LB184344.001	TRH C6-C9	µg/L	40	<40
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-
		d8-toluene (Surrogate)	%	-
		Bromofluorobenzene (Surrogate)	%	-

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Porth)/AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198144.065	LB184192.024	Mercury	µg/L	0.0001	<0.0001	<0.0001	200	0

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198021.010	LB184288.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE198092.004	LB184291.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE198144.010	LB184288.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE198144.020	LB184289.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE198144.029	LB184289.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE198144.039	LB184290.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE198144.048	LB184290.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE198144.058	LB184291.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

## Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198228.034	LB184324.014	Arsenic, As	mg/L	0.02	0.0076288	0.0028127	200	0
		Cadmium, Cd	mg/L	0.001	-9.99003E-	3.56815E-005	200	0
		Chromium, Cr	mg/L	0.005	-0.000475669	-0.000201494	200	0
		Copper, Cu	mg/L	0.005	0.000657608	0.000826918	200	0
		Lead, Pb	mg/L	0.02	0.000816845	-0.00103213	200	0
		Nickel, Ni	mg/L	0.005	4.30197E-005	-0.000872588	200	0
		Zinc, Zn	mg/L	0.01	0.00289823	0.00170185	200	0

## Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198144.011	LB184222.011	% Moisture	%w/w	1	15.4	13.6	37	13
SE198144.021	LB184222.022	% Moisture	%w/w	1	18.5	18.6	35	0
SE198144.031	LB184222.033	% Moisture	%w/w	1	17.7	16.7	36	5
SE198144.037	LB184222.040	% Moisture	%w/w	1	14.2	15.2	37	7
SE198144.047	LB184224.011	% Moisture	%w/w	1	7.7	9.3	42	18
SE198144.057	LB184224.022	% Moisture	%w/w	1	15.6	15.8	36	1
SE198170.001	LB184224.031	% Moisture	%w/w	1	24.6	24.3	34	1

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198144.016	LB184220.034	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.05	<0.05	<0.05	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## OC Pesticides in Soil (continued)

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %		
SE198144.016	LB184220.034	Isodrin	mg/kg	0.1	<0.1	<0.1	200	0		
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0		
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.13	30	3	
SE198144.037	LB184220.035	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0		
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0		
		Lindane	mg/kg	0.1	<0.1	<0.1	200	0		
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0		
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0		
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0		
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0		
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0		
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0		
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0		
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0		
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0		
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0		
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0		
		Dieldrin	mg/kg	0.05	<0.05	<0.05	200	0		
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0		
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0		
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0		
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0		
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0		
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0		
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0		
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0		
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0		
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0		
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0		
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0		
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.13	30	2	
		SE198144.052	LB184221.028	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
				Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
Lindane	mg/kg			0.1	<0.1	<0.1	200	0		
Heptachlor	mg/kg			0.1	<0.1	<0.1	200	0		
Aldrin	mg/kg			0.1	<0.1	<0.1	200	0		
Beta BHC	mg/kg			0.1	<0.1	<0.1	200	0		
Delta BHC	mg/kg			0.1	<0.1	<0.1	200	0		
Heptachlor epoxide	mg/kg			0.1	<0.1	<0.1	200	0		
o,p'-DDE	mg/kg			0.1	<0.1	<0.1	200	0		
Alpha Endosulfan	mg/kg			0.2	<0.2	<0.2	200	0		
Gamma Chlordane	mg/kg			0.1	<0.1	<0.1	200	0		
Alpha Chlordane	mg/kg			0.1	<0.1	<0.1	200	0		
trans-Nonachlor	mg/kg			0.1	<0.1	<0.1	200	0		
p,p'-DDE	mg/kg			0.1	<0.1	<0.1	200	0		
Dieldrin	mg/kg			0.05	<0.05	<0.05	200	0		
Endrin	mg/kg			0.2	<0.2	<0.2	200	0		
o,p'-DDD	mg/kg			0.1	<0.1	<0.1	200	0		
o,p'-DDT	mg/kg			0.1	<0.1	<0.1	200	0		
Beta Endosulfan	mg/kg			0.2	<0.2	<0.2	200	0		
p,p'-DDD	mg/kg			0.1	<0.1	<0.1	200	0		
p,p'-DDT	mg/kg			0.1	<0.1	<0.1	200	0		
Endosulfan sulphate	mg/kg			0.1	<0.1	<0.1	200	0		
Endrin Aldehyde	mg/kg			0.1	<0.1	<0.1	200	0		
Methoxychlor	mg/kg			0.1	<0.1	<0.1	200	0		
Endrin Ketone	mg/kg			0.1	<0.1	<0.1	200	0		
Isodrin	mg/kg			0.1	<0.1	<0.1	200	0		
Mirex	mg/kg			0.1	<0.1	<0.1	200	0		
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)			mg/kg	-	0.15	0.15	30	1	



Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## pH in soil (1:5)

Method: ME-(AU)-[ENV]JAN101

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198144.010	LB184368.025	pH	pH Units	0.1	4.7	4.9	32	4
SE198144.029	LB184368.026	pH	pH Units	0.1	5.0	5.0	32	0
SE198144.046	LB184369.021	pH	pH Units	0.1	5.2	5.1	32	3
SE198144.056	LB184369.020	pH	pH Units	0.1	5.0	4.9	32	1

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]JAN289

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198144.003	LB184211.004	Total Phenols	mg/kg	5	<5.0	<5.0	80	17

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]JAN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198021.010	LB184278.014	Arsenic, As	mg/kg	1	2	6	56	102 @
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	3.6	3.7	44	2
		Copper, Cu	mg/kg	0.5	140	140	30	2
		Nickel, Ni	mg/kg	0.5	6.6	7.8	37	17
		Lead, Pb	mg/kg	1	4	5	53	9
		Zinc, Zn	mg/kg	2	26	29	37	11
SE198092.004	LB184281.024	Arsenic, As	mg/kg	1	1	<1	153	24
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	0.9	0.7	93	35
		Copper, Cu	mg/kg	0.5	0.6	<0.5	154	20
		Nickel, Ni	mg/kg	0.5	1.2	<0.5	91	85
		Lead, Pb	mg/kg	1	2	<1	98	70
		Zinc, Zn	mg/kg	2	10	2.9	61	112 @
SE198144.010	LB184278.024	Arsenic, As	mg/kg	1	6	4	49	39
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	12	11	34	8
		Copper, Cu	mg/kg	0.5	11	8.9	35	24
		Nickel, Ni	mg/kg	0.5	3.6	2.7	46	28
		Lead, Pb	mg/kg	1	12	12	38	0
		Zinc, Zn	mg/kg	2	19	18	41	8
SE198144.020	LB184279.014	Arsenic, As	mg/kg	1	4	3	59	37
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	11	7.8	35	35 @
		Copper, Cu	mg/kg	0.5	4.4	3.1	43	34
		Nickel, Ni	mg/kg	0.5	1.7	1.5	62	15
		Lead, Pb	mg/kg	1	14	9	39	42 @
		Zinc, Zn	mg/kg	2	10	7	54	37
SE198144.029	LB184279.024	Arsenic, As	mg/kg	1	5	6	48	13
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	16	18	33	13
		Copper, Cu	mg/kg	0.5	2.2	2.3	52	3
		Nickel, Ni	mg/kg	0.5	0.9	1.2	77	28
		Lead, Pb	mg/kg	1	18	18	36	2
		Zinc, Zn	mg/kg	2	5	5	70	16
SE198144.039	LB184280.014	Arsenic, As	mg/kg	1	5	4	52	15
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	16	14	33	13
		Copper, Cu	mg/kg	0.5	3.5	4.0	43	13
		Nickel, Ni	mg/kg	0.5	1.8	1.7	59	2
		Lead, Pb	mg/kg	1	12	12	38	4
		Zinc, Zn	mg/kg	2	7	8	56	8
SE198144.048	LB184280.024	Arsenic, As	mg/kg	1	6	7	46	9
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	11	12	34	6
		Copper, Cu	mg/kg	0.5	5.6	6.6	38	15
		Nickel, Ni	mg/kg	0.5	<0.5	0.5	127	9
		Lead, Pb	mg/kg	1	8	9	42	9

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198144.048	LB184280.024	Zinc, Zn	mg/kg	2	6	7	61	9
SE198144.058	LB184281.014	Arsenic, As	mg/kg	1	6	6	47	6
		Cadmium, Cd	mg/kg	0.3	0.3	<0.3	141	2
		Chromium, Cr	mg/kg	0.5	14	13	34	5
		Copper, Cu	mg/kg	0.5	6.1	6.6	38	9
		Nickel, Ni	mg/kg	0.5	3.3	3.4	45	1
		Lead, Pb	mg/kg	1	16	16	36	1
		Zinc, Zn	mg/kg	2	38	40	35	5

## TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198044.001	LB184205.024	TRH C10-C14	µg/L	50	<50	0	200	0
		TRH C15-C28	µg/L	200	<200	0	200	0
		TRH C29-C36	µg/L	200	<200	0	200	0
		TRH C37-C40	µg/L	200	<200	0	200	0
		TRH C10-C36	µg/L	450	<450	0	200	0
		TRH C10-C40	µg/L	650	<650	0	200	0
		TRH F Bands	µg/L	60	<60	0	200	0
		TRH >C16-C34 (F3)	µg/L	500	<500	0	200	0
		TRH >C34-C40 (F4)	µg/L	500	<500	0	200	0

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198143.033	LB184266.022	Monocyclic	Benzene	mg/kg	0.1	0.0017688791	0	200	0
			Aromatic	Toluene	mg/kg	0.1	0	0	200
			Ethylbenzene	mg/kg	0.1	0	0	200	0
			m/p-xylene	mg/kg	0.2	0	0	200	0
			o-xylene	mg/kg	0.1	0	0	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	0	0	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.8397607805	9.1539	50	3
			d8-toluene (Surrogate)	mg/kg	-	8.7740477924	8.8792	50	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.9383631512	8.6049	50	8
		Totals	Total Xylenes	mg/kg	0.3	0	0	200	0
			Total BTEX	mg/kg	0.6	0.0017688791	0	200	0
		SE198144.061	LB184266.024	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1
Aromatic	Toluene				mg/kg	0.1	<0.1	<0.1	200
	Ethylbenzene			mg/kg	0.1	<0.1	<0.1	200	0
	m/p-xylene			mg/kg	0.2	<0.2	<0.2	200	0
	o-xylene			mg/kg	0.1	<0.1	<0.1	200	0
Polycyclic	Naphthalene			mg/kg	0.1	<0.1	<0.1	200	0
Surrogates	d4-1,2-dichloroethane (Surrogate)			mg/kg	-	8.2	8.2	50	0
	d8-toluene (Surrogate)			mg/kg	-	8.0	8.1	50	1
	Bromofluorobenzene (Surrogate)			mg/kg	-	8.0	7.9	50	2
Totals	Total Xylenes			mg/kg	0.3	<0.3	<0.3	200	0
	Total BTEX			mg/kg	0.6	<0.6	<0.6	200	0

## VOCs in Water

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198192.002	LB184344.026	Monocyclic	Benzene	µg/L	0.5	<0.5	0.0583071888	200	0
		Aromatic	Toluene	µg/L	0.5	<0.5	0.0392294446	200	0
			Ethylbenzene	µg/L	0.5	<0.5	0.0080209600	200	0
			m/p-xylene	µg/L	1	<1	0.0156928153	200	0
			o-xylene	µg/L	0.5	<0.5	0.0042232432	200	0
	Polycyclic	Naphthalene	µg/L	0.5	<0.5	0.0499275357	200	0	
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	11.1	11.7292744981	30	5	
		d8-toluene (Surrogate)	µg/L	-	9.0	9.5280422499	30	6	
		Bromofluorobenzene (Surrogate)	µg/L	-	7.6	7.8282138517	30	2	

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate	Parameter	Units	LOR
----------	-----------	-----------	-------	-----

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Volatile Petroleum Hydrocarbons in Soil (continued)

Method: ME-(AU)-ENVJAN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198143.033	LB184266.023	TRH C6-C10	mg/kg	25	0.0219	0	200	0
		TRH C6-C9	mg/kg	20	0.0110991495	0	200	0
		Surrogates						
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.83976078059.1538571596		30	3
		d8-toluene (Surrogate)	mg/kg	-	8.77404779248.8791982575		30	1
		Bromofluorobenzene (Surrogate)	mg/kg	-	7.93836315128.6049223904		30	8
		VPH F Bands						
		Benzene (F0)	mg/kg	0.1	0.0017688791	0	200	0
SE198144.061	LB184266.024	TRH C6-C10 minus BTEX (F1)	mg/kg	25	0.0201311208	0	200	0
		TRH C6-C10	mg/kg	25	<25	<25	200	0
		TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates						
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.2	8.2	30	0
		d8-toluene (Surrogate)	mg/kg	-	8.0	8.1	30	1
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.0	7.9	30	2
		VPH F Bands						
		Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
		TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

## Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-ENVJAN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198192.002	LB184344.026	TRH C6-C10	µg/L	50	<50	0	200	0
		TRH C6-C9	µg/L	40	<40	0	200	0
		Surrogates						
		d4-1,2-dichloroethane (Surrogate)	µg/L	-	11.1	11.7292744981	30	5
		d8-toluene (Surrogate)	µg/L	-	9.0	9.5280422499	30	6
		Bromofluorobenzene (Surrogate)	µg/L	-	7.6	7.8282138517	30	2
		VPH F Bands						
		Benzene (F0)	µg/L	0.5	<0.5	0.0583071888	200	0
		TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	-0.1254736522	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

#### Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184227.002	Exchangeable Sodium, Na	mg/kg	2	NA	72.68	80 - 120	103
	Exchangeable Potassium, K	mg/kg	2	NA	238.12	80 - 120	90
	Exchangeable Calcium, Ca	mg/kg	2	NA	692	80 - 120	94
	Exchangeable Magnesium, Mg	mg/kg	2	NA	134.2	80 - 120	108
LB184228.002	Exchangeable Sodium, Na	mg/kg	2	NA	72.68	80 - 120	101
	Exchangeable Potassium, K	mg/kg	2	NA	238.12	80 - 120	90
	Exchangeable Calcium, Ca	mg/kg	2	NA	692	80 - 120	93
	Exchangeable Magnesium, Mg	mg/kg	2	NA	134.2	80 - 120	108

#### Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184288.002	Mercury	mg/kg	0.05	0.19	0.2	70 - 130	95
LB184289.002	Mercury	mg/kg	0.05	0.21	0.2	70 - 130	106
LB184290.002	Mercury	mg/kg	0.05	0.19	0.2	70 - 130	93
LB184291.002	Mercury	mg/kg	0.05	0.21	0.2	70 - 130	103

#### Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184324.002	Arsenic, As	mg/L	0.02	0.52	0.5	80 - 120	104
	Cadmium, Cd	mg/L	0.001	0.47	0.5	80 - 120	95
	Chromium, Cr	mg/L	0.005	0.49	0.5	80 - 120	98
	Copper, Cu	mg/L	0.005	0.49	0.5	80 - 120	97
	Lead, Pb	mg/L	0.02	0.49	0.5	80 - 120	98
	Nickel, Ni	mg/L	0.005	0.48	0.5	80 - 120	97
	Zinc, Zn	mg/L	0.01	0.48	0.5	80 - 120	96

#### OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184220.002	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	90
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	91
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	86
	Dieldrin	mg/kg	0.05	0.18	0.2	60 - 140	90
	Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	85
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	82
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	-	0.12	0.15	40 - 130	81
LB184221.002	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	105
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	104
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	95
	Dieldrin	mg/kg	0.05	0.17	0.2	60 - 140	87
	Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	90
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	83
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	-	0.15	0.15	40 - 130	99

#### PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184220.002	Naphthalene	mg/kg	0.1	4.4	4	60 - 140	109
	Acenaphthylene	mg/kg	0.1	4.6	4	60 - 140	114
	Acenaphthene	mg/kg	0.1	4.5	4	60 - 140	113
	Phenanthrene	mg/kg	0.1	4.6	4	60 - 140	114
	Anthracene	mg/kg	0.1	4.4	4	60 - 140	109
	Fluoranthene	mg/kg	0.1	4.2	4	60 - 140	106
	Pyrene	mg/kg	0.1	4.5	4	60 - 140	113
	Benzo(a)pyrene	mg/kg	0.1	5.0	4	60 - 140	125
	Surrogates	d5-nitrobenzene (Surrogate)	-	0.5	0.5	40 - 130	100
		2-fluorobiphenyl (Surrogate)	-	0.5	0.5	40 - 130	94
LB184221.002		d14-p-terphenyl (Surrogate)	-	0.5	0.5	40 - 130	90
	Naphthalene	mg/kg	0.1	4.2	4	60 - 140	105
	Acenaphthylene	mg/kg	0.1	4.4	4	60 - 140	110
	Acenaphthene	mg/kg	0.1	4.0	4	60 - 140	100
	Phenanthrene	mg/kg	0.1	4.4	4	60 - 140	110
	Anthracene	mg/kg	0.1	4.3	4	60 - 140	107
	Fluoranthene	mg/kg	0.1	4.0	4	60 - 140	101
	Pyrene	mg/kg	0.1	4.3	4	60 - 140	108

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

**PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)**
**Method: ME-(AU)-[ENV]AN420**

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184221.002	Benzo(a)pyrene	mg/kg	0.1	4.7	4	60 - 140	118
	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	90
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	88
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	86

**PAH (Polynuclear Aromatic Hydrocarbons) in Water**
**Method: ME-(AU)-[ENV]AN420**

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184205.002	Naphthalene	µg/L	0.1	53	40	60 - 140	133
	Acenaphthylene	µg/L	0.1	54	40	60 - 140	136
	Acenaphthene	µg/L	0.1	52	40	60 - 140	131
	Phenanthrene	µg/L	0.1	52	40	60 - 140	129
	Anthracene	µg/L	0.1	50	40	60 - 140	126
	Fluoranthene	µg/L	0.1	53	40	60 - 140	134
	Pyrene	µg/L	0.1	50	40	60 - 140	124
	Benzo(a)pyrene	µg/L	0.1	49	40	60 - 140	124
	d5-nitrobenzene (Surrogate)	µg/L	-	0.5	0.5	40 - 130	96
	2-fluorobiphenyl (Surrogate)	µg/L	-	0.4	0.5	40 - 130	88
	d14-p-terphenyl (Surrogate)	µg/L	-	0.6	0.5	40 - 130	120

**PCBs in Soil**
**Method: ME-(AU)-[ENV]AN420**

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184220.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	108
LB184221.002	Arochlor 1260	mg/kg	0.2	0.3	0.4	60 - 140	75

**pH in soil (1:5)**
**Method: ME-(AU)-[ENV]AN101**

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184368.003	pH	pH Units	0.1	7.4	7.415	98 - 102	99
LB184369.003	pH	pH Units	0.1	7.4	7.415	98 - 102	99

**Total Phenolics in Soil**
**Method: ME-(AU)-[ENV]AN289**

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184211.002	Total Phenols	mg/kg	5	<5.0	2.5	70 - 130	93

**Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES**
**Method: ME-(AU)-[ENV]AN040/AN320**

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184278.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	110
	Cadmium, Cd	mg/kg	0.3	4.3	4.62	80 - 120	92
	Chromium, Cr	mg/kg	0.5	35	38.31	80 - 120	93
	Copper, Cu	mg/kg	0.5	320	290	80 - 120	110
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	101
	Lead, Pb	mg/kg	1	93	89.9	80 - 120	104
	Zinc, Zn	mg/kg	2	280	273	80 - 120	102
LB184279.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	110
	Cadmium, Cd	mg/kg	0.3	4.2	4.62	80 - 120	90
	Chromium, Cr	mg/kg	0.5	34	38.31	80 - 120	88
	Copper, Cu	mg/kg	0.5	320	290	80 - 120	109
	Nickel, Ni	mg/kg	0.5	180	187	80 - 120	98
	Lead, Pb	mg/kg	1	94	89.9	80 - 120	105
	Zinc, Zn	mg/kg	2	280	273	80 - 120	102
LB184280.002	Arsenic, As	mg/kg	1	340	318.22	80 - 120	106
	Cadmium, Cd	mg/kg	0.3	4.3	4.62	80 - 120	93
	Chromium, Cr	mg/kg	0.5	37	38.31	80 - 120	97
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	107
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	100
	Lead, Pb	mg/kg	1	91	89.9	80 - 120	101
	Zinc, Zn	mg/kg	2	270	273	80 - 120	100
LB184281.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	110
	Cadmium, Cd	mg/kg	0.3	4.2	4.62	80 - 120	90
	Chromium, Cr	mg/kg	0.5	39	38.31	80 - 120	101

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

**Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)**
**Method: ME-(AU)-[ENV]AN040/AN320**

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184281.002	Copper, Cu	mg/kg	0.5	320	290	80 - 120	109
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	103
	Lead, Pb	mg/kg	1	93	89.9	80 - 120	104
	Zinc, Zn	mg/kg	2	280	273	80 - 120	104

**TRH (Total Recoverable Hydrocarbons) in Soil**
**Method: ME-(AU)-[ENV]AN403**

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184220.002	TRH C10-C14	mg/kg	20	40	40	60 - 140	100
	TRH C15-C28	mg/kg	45	<45	40	60 - 140	90
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	75
	TRH F Bands	mg/kg	25	39	40	60 - 140	98
	TRH >C10-C16	mg/kg	90	<90	40	60 - 140	80
	TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	80
LB184221.002	TRH C10-C14	mg/kg	20	44	40	60 - 140	110
	TRH C15-C28	mg/kg	45	<45	40	60 - 140	110
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	85
	TRH F Bands	mg/kg	25	43	40	60 - 140	108
	TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	108
	TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	85

**TRH (Total Recoverable Hydrocarbons) in Water**
**Method: ME-(AU)-[ENV]AN403**

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184205.002	TRH C10-C14	µg/L	50	1200	1200	60 - 140	101
	TRH C15-C28	µg/L	200	1400	1200	60 - 140	114
	TRH C29-C36	µg/L	200	1500	1200	60 - 140	123
	TRH F Bands	µg/L	60	1300	1200	60 - 140	106
	TRH >C16-C34 (F3)	µg/L	500	1500	1200	60 - 140	128
	TRH >C34-C40 (F4)	µg/L	500	710	600	60 - 140	118

**VOC's in Soil**
**Method: ME-(AU)-[ENV]AN433**

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184266.002	Monocyclic	Benzene	mg/kg	0.1	5.4	5	60 - 140	108
	Aromatic	Toluene	mg/kg	0.1	3.6	5	60 - 140	72
		Ethylbenzene	mg/kg	0.1	4.7	5	60 - 140	94
		m/p-xylene	mg/kg	0.2	10	10	60 - 140	104
	o-xylene	mg/kg	0.1	5.2	5	60 - 140	103	
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	10	70 - 130	92
		d8-toluene (Surrogate)	mg/kg	-	8.8	10	70 - 130	88
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.0	10	70 - 130	90

**VOCs in Water**
**Method: ME-(AU)-[ENV]AN433**

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184344.002	Monocyclic	Benzene	µg/L	0.5	56	45.45	60 - 140	124
	Aromatic	Toluene	µg/L	0.5	43	45.45	60 - 140	94
		Ethylbenzene	µg/L	0.5	59	45.45	60 - 140	129
		m/p-xylene	µg/L	1	110	90.9	60 - 140	125
	Surrogates	o-xylene	µg/L	0.5	57	45.45	60 - 140	126
		d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.3	10	60 - 140	103
		d8-toluene (Surrogate)	µg/L	-	7.6	10	60 - 140	76
		Bromofluorobenzene (Surrogate)	µg/L	-	9.8	10	60 - 140	98

**Volatile Petroleum Hydrocarbons in Soil**
**Method: ME-(AU)-[ENV]AN433**

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB184266.002	TRH C6-C10	mg/kg	25	93	92.5	60 - 140	100	
	TRH C6-C9	mg/kg	20	83	80	60 - 140	103	
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	10	70 - 130	92
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.0	10	70 - 130	90
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	63	62.5	60 - 140	101

**Volatile Petroleum Hydrocarbons in Water**
**Method: ME-(AU)-[ENV]AN433**

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184344.002	TRH C6-C10	µg/L	50	1000	946.63	60 - 140	108
	TRH C6-C9	µg/L	40	890	818.71	60 - 140	108
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.3	10	60 - 140

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## Volatile Petroleum Hydrocarbons in Water (continued)

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184344.002	Surrogates	d8-toluene (Surrogate)	µg/L	-	7.6	10	60 - 140
		Bromofluorobenzene (Surrogate)	µg/L	-	9.8	10	60 - 140
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	700	639.67	60 - 140

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-(ENV)QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Mercury (dissolved) in Water

Method: ME-(AU)-(ENV)AN311(Porth)/AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198035.001	LB184192.004	Mercury	mg/L	0.0001	4.5	4.0	0.008	5938 <span style="color: red;">Ⓢ</span>

## Mercury in Soil

Method: ME-(AU)-(ENV)AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198021.001	LB184288.004	Mercury	mg/kg	0.05	0.20	<0.05	0.2	97
SE198144.011	LB184289.004	Mercury	mg/kg	0.05	0.21	<0.05	0.2	98
SE198144.030	LB184290.004	Mercury	mg/kg	0.05	0.18	<0.05	0.2	83
SE198144.049	LB184291.004	Mercury	mg/kg	0.05	0.21	<0.05	0.2	96

## OC Pesticides in Soil

Method: ME-(AU)-(ENV)AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198144.002	LB184220.004	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Lindane	mg/kg	0.1	<0.1	<0.1	-	-
		Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	90
		Aldrin	mg/kg	0.1	0.2	<0.1	0.2	91
		Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	87
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
		Dieldrin	mg/kg	0.05	0.18	<0.05	0.2	90
		Endrin	mg/kg	0.2	<0.2	<0.2	0.2	85
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	-	-
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	78
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	-	-
		Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
		Mirex	mg/kg	0.1	<0.1	<0.1	-	-
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.12	0.12	-	79
SE198144.039	LB184221.004	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Lindane	mg/kg	0.1	<0.1	<0.1	-	-
		Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	115
		Aldrin	mg/kg	0.1	0.2	<0.1	0.2	115
		Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	105
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
		Dieldrin	mg/kg	0.05	0.20	<0.05	0.2	99
		Endrin	mg/kg	0.2	0.2	<0.2	0.2	103
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	-	-
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-



Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198144.039	LB184221.004	p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	92
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	-	-
		Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
		Mirex	mg/kg	0.1	<0.1	<0.1	-	-
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.17	-	107

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198144.061	LB184211.010	Total Phenols	mg/kg	5	<5.0	<5.0	2.5	73

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198021.001	LB184278.004	Arsenic, As	mg/kg	1	49	4	50	91
		Cadmium, Cd	mg/kg	0.3	44	<0.3	50	88
		Chromium, Cr	mg/kg	0.5	50	8.3	50	83
		Copper, Cu	mg/kg	0.5	94	48	50	93
		Nickel, Ni	mg/kg	0.5	54	15	50	77
		Lead, Pb	mg/kg	1	51	16	50	70 @
		Zinc, Zn	mg/kg	2	65	29	50	72
SE198144.030	LB184280.004	Arsenic, As	mg/kg	1	55	5	50	100
		Cadmium, Cd	mg/kg	0.3	46	<0.3	50	91
		Chromium, Cr	mg/kg	0.5	66	17	50	97
		Copper, Cu	mg/kg	0.5	52	4.2	50	95
		Nickel, Ni	mg/kg	0.5	50	1.7	50	96
		Lead, Pb	mg/kg	1	60	14	50	93
		Zinc, Zn	mg/kg	2	56	9	50	93
SE198144.049	LB184281.004	Arsenic, As	mg/kg	1	52	5	50	94
		Cadmium, Cd	mg/kg	0.3	45	<0.3	50	89
		Chromium, Cr	mg/kg	0.5	63	17	50	92
		Copper, Cu	mg/kg	0.5	50	4.7	50	91
		Nickel, Ni	mg/kg	0.5	48	1.5	50	94
		Lead, Pb	mg/kg	1	57	12	50	90
		Zinc, Zn	mg/kg	2	54	8	50	92

## TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198044.002	LB184205.025	TRH C10-C14	µg/L	50	1200	<50	1200	102
		TRH C15-C28	µg/L	200	1400	<200	1200	113
		TRH C29-C36	µg/L	200	1400	<200	1200	115
		TRH C37-C40	µg/L	200	<200	<200	-	-
		TRH C10-C36	µg/L	450	4000	<450	-	-
		TRH C10-C40	µg/L	650	4000	<650	-	-
	TRH F Bands	TRH >C10-C16	µg/L	60	1300	<60	1200	110
		TRH >C16-C34 (F3)	µg/L	500	1400	<500	1200	121
		TRH >C34-C40 (F4)	µg/L	500	660	<500	600	110

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198143.010	LB184266.004	Monocyclic	Benzene	mg/kg	0.1	0.00237520480	5	95
		Aromatic	Toluene	mg/kg	0.1	0.00617688903	5	96
			Ethylbenzene	mg/kg	0.1	0.00854121328	5	96
			m/p-xylene	mg/kg	0.2	0.01337508152	10	96
			o-xylene	mg/kg	0.1	0.00755107129	5	97
		Polycyclic	Naphthalene	mg/kg	0.1	0.04101674693	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.37301080702	10	92
			d8-toluene (Surrogate)	mg/kg	-	9.4	8.11784494540	94
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.5	8.25142558908	95

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198143.010	LB184266.004	Totals	Total Xylenes	mg/kg	0.3	14	0.02092615281	-
			Total BTEX	mg/kg	0.6	29	0.03801945994	-

## VOCs in Water

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198044.001	LB184344.023	Monocyclic	Benzene	µg/L	0.5	50	<0.5	45.45
		Aromatic	Toluene	µg/L	0.5	50	<0.5	45.45
			Ethylbenzene	µg/L	0.5	46	<0.5	45.45
			m/p-xylene	µg/L	1	92	<1	90.9
			o-xylene	µg/L	0.5	46	<0.5	45.45
		Polycyclic	Naphthalene	µg/L	0.5	43	<0.5	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.7	10.4	-
			d8-toluene (Surrogate)	µg/L	-	9.8	7.9	-
			Bromofluorobenzene (Surrogate)	µg/L	-	10.1	8.0	-

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198143.010	LB184266.004	TRH C6-C10	mg/kg	25	85	0.4966	92.5	91
		TRH C6-C9	mg/kg	20	74	0.19128830984	80	92
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	8.37301080702	10
			d8-toluene (Surrogate)	mg/kg	-	9.4	8.11784494540	10
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.5	8.25142558908	-
		VPH F	Benzene (F0)	mg/kg	0.1	4.8	0.00237520480	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	56	0.45858054005	62.5

## Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198044.001	LB184344.023	TRH C6-C10	µg/L	50	980	<50	946.63	104
		TRH C6-C9	µg/L	40	870	<40	818.71	107
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.7	10.4	-
			d8-toluene (Surrogate)	µg/L	-	9.8	7.9	-
			Bromofluorobenzene (Surrogate)	µg/L	-	10.1	8.0	-
		VPH F	Benzene (F0)	µg/L	0.5	50	<0.5	-
		Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	700	<50	639.67

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here : [https://www.sgs.com.au/~media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022\\_QA\\_QC\\_Plan.pdf](https://www.sgs.com.au/~media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022_QA_QC_Plan.pdf)

- \* NATA accreditation does not cover the performance of this service .
  - \*\* Indicative data, theoretical holding time exceeded.
  - Sample not analysed for this analyte.
  - IS Insufficient sample for analysis.
  - LNR Sample listed, but not received.
  - LOR Limit of reporting.
  - QFH QC result is above the upper tolerance.
  - QFL QC result is below the lower tolerance.
- 
- ① At least 2 of 3 surrogates are within acceptance criteria.
  - ② RPD failed acceptance criteria due to sample heterogeneity.
  - ③ Results less than 5 times LOR preclude acceptance criteria for RPD.
  - ④ Recovery failed acceptance criteria due to matrix interference.
  - ⑤ Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
  - ⑥ LOR was raised due to sample matrix interference.
  - ⑦ LOR was raised due to dilution of significantly high concentration of analyte in sample.
  - ⑧ Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
  - ⑨ Recovery failed acceptance criteria due to sample heterogeneity.
  - ⑩ LOR was raised due to high conductivity of the sample (required dilution).
  - † Refer to Analytical Report comments for further information.

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law .

This test report shall not be reproduced, except in full.

## CLIENT DETAILS

Contact Anwar Barbhuyia  
 Client Geotechnique  
 Address P.O. Box 880  
 PENRITH NSW 2751

Telephone 02 4722 2700  
 Facsimile 02 4722 6161  
 Email anwar@geotech.com.au

Project **14513-2 Marsden Park**  
 Order Number (Not specified)  
 Samples 4

## 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 **SE198144 R0**  
 Date Received 25 Sep 2019  
 Date Reported 02 Oct 2019

## 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.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

## SIGNATORIES



Bennet LO  
 Senior Organic Chemist/Metals Chemis



Dong LIANG  
 Metals/Inorganics Team Leader



Kamrul AHSAN  
 Senior Chemist



Ly Kim HA  
 Organic Section Head



Ravee SIVASUBRAMANIAM  
 Hygiene Team Leader



Shane MCDERMOTT  
 Inorganic/Metals Chemist

### RESULTS

Fibre Identification in soil

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE198144.003	TP25	Other	419g Clay, Rocks	24 Sep 2019	No Asbestos Found	<0.01
SE198144.006	TP26	Other	397g Clay, Rocks	24 Sep 2019	No Asbestos Found	<0.01
SE198144.009	TP27	Other	412g Clay, Rocks	24 Sep 2019	No Asbestos Found	<0.01
SE198144.010	TP27	Other	411g Clay, Rocks	24 Sep 2019	No Asbestos Found	<0.01

### Gravimetric Determination of Asbestos in Soil [AN605] Tested: 1/10/2019

PARAMETER	UOM	LOR	TP25	TP26	TP27	TP27
			CLAY 0.2-0.5 24/9/2019 SE198144.003	CLAY 0.2-0.5 24/9/2019 SE198144.006	CLAY 0.0-0.15 24/9/2019 SE198144.009	CLAY 0.5-0.8 24/9/2019 SE198144.010
Total Sample Weight*	g	1	<b>419</b>	<b>397</b>	<b>412</b>	<b>411</b>
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-

## 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 unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
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	<p>The sample can be reported "no asbestos found at the reporting limit of 0.1 g/kg" (&lt;0.01%w/w) where AN602 section 4.5 of this method has been followed, and if-</p> <ul style="list-style-type: none"> <li>(a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres);</li> <li>(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</li> <li>(c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.</li> </ul>
AN605	This technique gravimetrically determines the mass of Asbestos Containing Material retained on a 7mm Sieve and assumes that 15% of this ACM is asbestos. This calculated asbestos weight is then calculated as a percentage of the total sample weight.
AN605	This technique also gravimetrically determines the mass of Fibrous Asbestos (FA) and Asbestos Fines (AF) Containing Material retained on and passing a 2mm sieve post 7mm sieving. Assumes that FA and AF are 100% asbestos containing. This calculated asbestos weight is then calculated as a percentage of the total sample weight. This does not include free fibres which are only observed by standard trace analysis as per AN 602.
AN605	Insofar as is technically feasible, this report is consistent with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment Remediation and Management of Asbestos - Contaminated Sites in Western Australia - May 2009.



# 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.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

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 and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: [www.sgs.com.au/pv.sgsvr/en-gb/environment](http://www.sgs.com.au/pv.sgsvr/en-gb/environment).

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law .

This test report shall not be reproduced, except in full.

# GEOTECHNIQUE PTY LTD

1 LEMKO PLACE PENRITH NSW 2750

Tel: (02) 4722 2700

SGS EHS Alexandria Laboratory



**SE198144 COC**

Received: 25-Sep-2019

## CHAIN OF CUSTODY

**Results Required By: Normal Turnaround**  
**Except pH Results Required By 2 days**

**Date: Wednesday, 2 October 2019**

**Date: Friday, 27 September 2019**

**Your Reference No.:**

TO: SGS UNIT 16, 33 MADDOX STREET ALEXANDRIA NSW 2015 Tel: 02 8594 0400							Sampled By: JH&IC Ref No: 14513/2 Project Manager: ANWAR BARBHUYIA Location: Marsden Park																		
Location	Depth (m)	Date	Soil	Water	Material	Metals As Cd Cr Cu Pb Hg Ni Zn	pH	CEC	CL8 TRH BTEX PAH	CL10 Metals* TRH BTEX PAH	CL16 Metals* TRH BTEX PAH OC PCB	Be B Co Mn Se	Mn	Asbestos 0.001% w/w	Asbestos	BTEX	TRH & BTEX	PAH	OCP	OCP & PCB	Phenol	Cyanide	VOC	OCP & PCB	
TP24	0.25-0.35	24/09/19	G		Clay	✓																			
TP25	0.0-0.15	24/09/19	GP		Clay	✓	✓	✓												✓					
TP25	0.2-0.5	24/09/19	G		Clay		✓	✓			✓			✓								✓			
TP25	0.85-0.95	24/09/19	GP		Clay	✓	✓	✓																	
TP26	0.0-0.15	24/09/19	GP		Clay	✓														✓					
TP26	0.2-0.5	24/09/19	GP		Clay		✓	✓			✓			✓								✓			
TP26	1.2-1.5	24/09/19	GP		Clay																				
TP26	1.85-1.95	24/09/19	G		Clay	✓																			
TP27	0.0-0.15	24/09/19	GP		Clay		✓	✓			✓			✓											
TP27	0.5-0.8	24/09/19	GP		Clay		✓	✓			✓			✓								✓			
TP27	1.05-1.15	24/09/19	G		Clay																				
TP28	0.0-0.15	24/09/19	GP		Clay	✓	✓	✓												✓					
TP28	0.25-0.35	24/09/19	G		Clay	✓	✓	✓																	
TP29	0.0-0.15	24/09/19	GP		Clay	✓														✓					
TP29	0.25-0.35	24/09/19	G		Clay																				
TP30	0.0-0.15	24/09/19	GP		Clay	✓	✓	✓												✓					
TP30	0.25-0.35	24/09/19	G		Clay	✓																			
TP31	0.0-0.15	24/09/19	GP		Clay	✓														✓					

1 LEMKO PLACE PENRITH NSW 2750

Tel: (02) 4722 2700

## CHAIN OF CUSTODY

Results Required By: Normal Turnaround  
Except pH Results Required By 2 days

Date: Wednesday, 2 October 2019

Date: Friday, 27 September 2019

Your Reference No.:

TO: SGS UNIT 16, 33 MADDOX STREET ALEXANDRIA NSW 2015 Tel: 02 8594 0400							Sampled By: JH&IC Ref No: 14513/2 Project Manager: ANWAR BARBHUYIA Location: Marsden Park																	
Location	Depth (m)	Date	Soil	Water	Material	Metals As Cd Cr Cu Pb Hg Ni Zn	pH	CEC	CL8 TRH BTEX PAH	CL10 Metals* TRH BTEX PAH	CL16 Metals* TRH BTEX PAH OC PCB	Be B Co Mn Se	Mn	Asbestos 0.001% w/w	Asbestos	BTEX	TRH & BTEX	PAH	OCP	OCP & PCB	Phenol	Cyanide	VOC	OC OP & PC
TP31	0.25-0.35	24/09/19	G		Clay																			
TP32	0.0-0.15	24/09/19	GP		Clay	✓	✓	✓												✓				
TP32	0.25-0.35	24/09/19	G		Clay	✓	✓	✓																
TP33	0.0-0.15	24/09/19	GP		Clay	✓														✓				
TP33	0.25-0.35	24/09/19	G		Clay																			
TP34	0.0-0.15	24/09/19	GP		Clay	✓	✓	✓												✓				
TP34	0.25-0.35	24/09/19	G		Clay	✓	✓	✓																
TP35	0.0-0.15	24/09/19	GP		Clay	✓														✓				
TP35	0.25-0.35	24/09/19	G		Clay																			
TP36	0.0-0.15	24/09/19	GP		Clay	✓	✓	✓												✓				
TP36	0.25-0.35	24/09/19	G		Clay	✓	✓	✓																
TP37	0.0-0.15	24/09/19	GP		Clay	✓														✓				
TP37	0.25-0.35	24/09/19	G		Clay																			
TP38	0.0-0.15	24/09/19	GP		Clay	✓	✓	✓												✓				
TP38	0.25-0.35	24/09/19	G		Clay	✓	✓	✓																
TP39	0.0-0.15	24/09/19	GP		Clay	✓														✓				
TP39	0.25-0.35	24/09/19	G		Clay	✓	✓	✓																
TP40	0.0-0.15	24/09/19	GP		Clay	✓	✓	✓												✓				



Tel: (02) 4722 2700

**Results Required By: Normal Turnaround**  
**Except pH Results Required By 2 days**

**Date: Friday, 27 September 2019**

**Your Reference No.:**

[illegible]

Tel: (02) 4722 2700

**Results Required By: Normal Turnaround**  
**Except pH Results Required By 2 days**

Date: Friday, 27 September 2019

[illegible]

# GEOTECHNIQUE PTY LTD

1 LEMKO PLACE PENRITH NSW 2750

Tel: (02) 4722 2700

## CHAIN OF CUSTODY

Results Required By: Normal Turnaround  
Except pH Results Required By 2 days

Date: Wednesday, 2 October 2019

Date: Friday, 27 September 2019

Your Reference No.:

TO: SGS UNIT 16, 33 MADDOX STREET ALEXANDRIA NSW 2015 Tel: 02 8594 0400							Sampled By: JH&IC		Ref No: 14513/2		Project Manager: ANWAR BARBHUYIA													
							Location: Marsden Park																	
Location	Depth (m)	Date	Soil	Water	Material	Metals As Cd Cr Cu Pb Hg Ni Zn	pH	CEC	CL8 TRH BTEX PAH	CL10 Metals* TRH BTEX PAH	CL16 Metals* TRH BTEX PAH OC PCB	Be B Co Mn Se	Mn	Asbestos 0.001% w/w	Asbestos	BTEX	TRH & BTEX	PAH	OCP	OCP & PCB	Phenol	Cyanide	VOC	OCP OPP & PCB
DDS1		23/09/19	G		Clay	✓													✓					
DDS2		23/09/19	G		Clay						✓										✓			
DDS3		24/09/19	G		Clay	✓													✓					
DDS4		24/09/19	G		Clay						✓										✓			
DDS5		24/09/19	G		Clay	✓													✓					
DDS6		24/09/19	G		Clay	✓													✓					
RS1		23/09/19		WG/Vial						✓														
RS2		24/09/19		WG/Vial						✓														
TS1					Sand												✓							
TS2					Sand												✓							
Relinquished by							Received by																	
Name		Signature		Date			Name		Signature		Date													
ANWAR BARBHUYIA		AB		25/09/19			Anwar Barbhuyia		[Signature]		25/9/19 @ 2pm													
WG: Water sample (glass bottle)			G		Soil sample (glass jar)			FCP		Fibro Cement Piece (plastic bag)			*: As,Cd,Cr,Cu,Pb,Hg,Ni & Zn (8 metals)											
WP: Water sample (plastic bottle)			P		Soil sample (plastic bag)			✓		Test required														





## SAMPLE RECEIPT ADVICE

SE198144

### CLIENT DETAILS

Contact Anwar Barbhuyia  
Client Geotechnique  
Address P.O. Box 880  
PENRITH NSW 2751

Telephone 02 4722 2700  
Facsimile 02 4722 6161  
Email anwar@geotech.com.au

Project **14513-2 Marsden Park**  
Order Number (Not specified)  
Samples 67

### 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

Samples Received Wed 25/9/2019  
Report Due Wed 2/10/2019  
SGS Reference **SE198144**

### SUBMISSION DETAILS

This is to confirm that 67 samples were received on Wednesday 25/9/2019. Results are expected to be ready by COB Wednesday 2/10/2019. Please quote SGS reference SE198144 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	64 Clay, 2 Water
Date documentation received	27/09/2019@10:03am	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	<b>No</b>
Sample temperature upon receipt	14°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

### COMMENTS

14 soil samples have been placed on hold as no tests have been assigned for them by the client. These samples will not be processed.

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

## CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

## SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	pH in soil (1:5)	Total Phenolics in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOCs in Soil	Volatile Petroleum Hydrocarbons in Soil
002	TP25 0.0-0.15	28	-	-	1	-	-	-	-
003	TP25 0.2-0.5	28	26	11	1	1	10	11	7
004	TP25 0.85-0.95	-	-	-	1	-	-	-	-
005	TP26 0.0-0.15	28	-	-	-	-	-	-	-
006	TP26 0.2-0.5	28	26	11	1	1	10	11	7
009	TP27 0.0-0.15	28	26	11	1	-	10	11	7
010	TP27 0.5-0.8	28	26	11	1	1	10	11	7
011	TP28 0.0-0.15	28	-	-	1	-	-	-	-
012	TP28 0.25-0.35	-	-	-	1	-	-	-	-
013	TP29 0.0-0.15	28	-	-	-	-	-	-	-
014	TP30 0.0-0.15	28	-	-	1	-	-	-	-
016	TP31 0.0-0.15	28	-	-	-	-	-	-	-
017	TP32 0.0-0.15	28	-	-	1	-	-	-	-
018	TP32 0.25-0.35	-	-	-	1	-	-	-	-
019	TP33 0.0-0.15	28	-	-	-	-	-	-	-
020	TP34 0.0-0.15	28	-	-	1	-	-	-	-
021	TP34 0.25-0.35	-	-	-	1	-	-	-	-
022	TP35 0.0-0.15	28	-	-	-	-	-	-	-
023	TP36 0.0-0.15	28	-	-	1	-	-	-	-
024	TP36 0.25-0.35	-	-	-	1	-	-	-	-

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .



## CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

## SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	pH in soil (1:5)	Total Phenolics in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOCs in Soil	Volatile Petroleum Hydrocarbons in Soil
025	TP37 0.0-0.15	28	-	-	-	-	-	-	-
026	TP38 0.0-0.15	28	-	-	1	-	-	-	-
027	TP38 0.25-0.35	-	-	-	1	-	-	-	-
028	TP39 0.0-0.15	28	-	-	-	-	-	-	-
029	TP39 0.25-0.35	-	-	-	1	-	-	-	-
030	TP40 0.0-0.15	28	-	-	1	-	-	-	-
031	TP41 0.0-0.15	28	-	-	-	-	-	-	-
033	TP42 0.0-0.15	28	-	-	1	-	-	-	-
034	TP43 0.0-0.15	28	-	-	-	-	-	-	-
035	TP43 0.25-0.35	-	-	-	1	-	-	-	-
036	TP44 0.0-0.15	28	-	-	1	-	-	-	-
037	TP45 0.0-0.15	28	-	-	-	-	-	-	-
038	TP45 0.25-0.35	-	-	-	1	-	-	-	-
039	TP46 0.0-0.15	28	-	-	1	-	-	-	-
040	TP47 0.0-0.15	28	-	-	-	-	-	-	-
041	TP47 0.2-0.4	28	26	11	1	1	10	11	7
043	TP48 0.0-0.15	28	-	-	1	-	-	-	-
044	TP49 0.0-0.15	28	-	-	-	-	-	-	-
045	TP49 0.25-0.35	-	-	-	1	-	-	-	-
046	TP50 0.0-0.15	28	-	-	1	-	-	-	-
047	TP51 0.0-0.15	28	-	-	-	-	-	-	-

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .

## CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

## SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	pH in soil (1:5)	Total Phenolics in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
049	TP52 0.0-0.15	28	-	-	1	-	-	-	-
050	TP53 0.0-0.15	28	-	-	-	-	-	-	-
051	TP53 0.25-0.35	-	-	-	1	-	-	-	-
052	TP54 0.0-0.15	28	-	-	1	-	-	-	-
053	TP54 0.25-0.35	-	-	-	1	-	-	-	-
054	TP55 0.0-0.15	28	-	-	-	-	-	-	-
055	TP56 0.0-0.15	28	-	-	1	-	-	-	-
056	TP56 0.25-0.35	-	-	-	1	-	-	-	-
057	TP57 0.0-0.15	28	-	-	-	-	-	-	-
058	DDS1	28	-	-	-	-	-	-	-
059	DDS2	28	26	11	-	1	10	11	7
060	DDS3	28	-	-	-	-	-	-	-
061	DDS4	28	26	11	-	1	10	11	7
062	DDS5	28	-	-	-	-	-	-	-
063	DDS6	28	-	-	-	-	-	-	-
066	TS1	-	-	-	-	-	-	8	-
067	TS2	-	-	-	-	-	-	8	-

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document. The numbers shown in the table indicate the number of results requested in each package. Please indicate as soon as possible should your request differ from these details. Testing as per this table shall commence immediately unless the client intervenes with a correction.

## CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

## SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Fibre Identification in soil	Gravimetric Determination of Asbestos in Soil	Mercury in Soil	Moisture Content	Total Recoverable Elements in Soil/Waste
001	TP24 0.25-0.35	-	-	-	1	1	7
002	TP25 0.0-0.15	13	-	-	1	1	7
003	TP25 0.2-0.5	13	2	9	1	1	7
004	TP25 0.85-0.95	13	-	-	1	1	7
005	TP26 0.0-0.15	-	-	-	1	1	7
006	TP26 0.2-0.5	13	2	9	1	1	7
008	TP26 1.85-1.95	-	-	-	1	1	7
009	TP27 0.0-0.15	13	2	9	1	1	7
010	TP27 0.5-0.8	13	2	9	1	1	7
011	TP28 0.0-0.15	13	-	-	1	1	7
012	TP28 0.25-0.35	13	-	-	1	1	7
013	TP29 0.0-0.15	-	-	-	1	1	7
014	TP30 0.0-0.15	13	-	-	1	1	7
015	TP30 0.25-0.35	-	-	-	1	1	7
016	TP31 0.0-0.15	-	-	-	1	1	7
017	TP32 0.0-0.15	13	-	-	1	1	7
018	TP32 0.25-0.35	13	-	-	1	1	7
019	TP33 0.0-0.15	-	-	-	1	1	7
020	TP34 0.0-0.15	13	-	-	1	1	7
021	TP34 0.25-0.35	13	-	-	1	1	7
022	TP35 0.0-0.15	-	-	-	1	1	7
023	TP36 0.0-0.15	13	-	-	1	1	7
024	TP36 0.25-0.35	13	-	-	1	1	7

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .

## CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

## SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Mercury in Soil	Moisture Content	Total Recoverable Elements in Soil/Waste
025	TP37 0.0-0.15	-	1	1	7
026	TP38 0.0-0.15	13	1	1	7
027	TP38 0.25-0.35	13	1	1	7
028	TP39 0.0-0.15	-	1	1	7
029	TP39 0.25-0.35	13	1	1	7
030	TP40 0.0-0.15	13	1	1	7
031	TP41 0.0-0.15	-	1	1	7
032	TP41 0.25-0.35	-	1	1	7
033	TP42 0.0-0.15	13	1	1	7
034	TP43 0.0-0.15	-	1	1	7
035	TP43 0.25-0.35	13	1	1	7
036	TP44 0.0-0.15	13	1	1	7
037	TP45 0.0-0.15	-	1	1	7
038	TP45 0.25-0.35	13	1	1	7
039	TP46 0.0-0.15	13	1	1	7
040	TP47 0.0-0.15	-	1	1	7
041	TP47 0.2-0.4	13	1	1	7
042	TP47 0.45-0.55	-	1	1	7
043	TP48 0.0-0.15	13	1	1	7
044	TP49 0.0-0.15	-	1	1	7
045	TP49 0.25-0.35	13	1	1	7
046	TP50 0.0-0.15	13	1	1	7
047	TP51 0.0-0.15	-	1	1	7
048	TP51 0.25-0.35	-	1	1	7

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .

## CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

## SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Mercury in Soil	Moisture Content	Total Recoverable Elements in Soil/Waste
049	TP52 0.0-0.15	13	1	1	7
050	TP53 0.0-0.15	-	1	1	7
051	TP53 0.25-0.35	13	1	1	7
052	TP54 0.0-0.15	13	1	1	7
053	TP54 0.25-0.35	13	1	1	7
054	TP55 0.0-0.15	-	1	1	7
055	TP56 0.0-0.15	13	1	1	7
056	TP56 0.25-0.35	13	1	1	7
057	TP57 0.0-0.15	-	1	1	7
058	DDS1	-	1	1	7
059	DDS2	-	1	1	7
060	DDS3	-	1	1	7
061	DDS4	-	1	1	7
062	DDS5	-	1	1	7
063	DDS6	-	1	1	7
066	TS1	-	-	1	-

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .



## SAMPLE RECEIPT ADVICE

SE198144

### CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

### SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water	Metals in Water (Dissolved) by ICPOES	PAH (Polynuclear Aromatic Hydrocarbons) in Water	TRH (Total Recoverable Hydrocarbons) in Water	VOCs in Water	Volatile Petroleum Hydrocarbons in Water
064	RS1	1	7	22	9	11	7
065	RS2	1	7	22	9	11	7

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.  
The numbers shown in the table indicate the number of results requested in each package.  
Please indicate as soon as possible should your request differ from these details .  
Testing as per this table shall commence immediately unless the client intervenes with a correction .

## CLIENT DETAILS

Contact **Anwar Barbhuiya**  
 Client **Geotechnique**  
 Address **P.O. Box 880  
 PENRITH NSW 2751**

Telephone **02 4722 2700**  
 Facsimile **02 4722 6161**  
 Email **anwar@geotech.com.au**

Project **14513-2 Marsden Park**  
 Order Number **(Not specified)**  
 Samples **35**

## 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 **SE198143 R1**  
 Date Received **26/9/2019**  
 Date Reported **10/10/2019**

## COMMENTS

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

This report cancels and supersedes the report No.SE198143 R0 dated 10/10/19 issued by SGS Environment, Health and Safety due to the inclusion of 8HM results for sample #33 as per COC.

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

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

## SIGNATORIES



**Bennet LO**  
 Senior Organic Chemist/Metals Chemist



**Dong LIANG**  
 Metals/Inorganics Team Leader



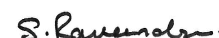
**Huong CRAWFORD**  
 Production Manager



**Kamrul AHSAN**  
 Senior Chemist



**Ly Kim HA**  
 Organic Section Head



**Ravee SIVASUBRAMANIAM**  
 Hygiene Team Leader

VOC's in Soil [AN433] Tested: 30/9/2019

PARAMETER	UOM	LOR	TP63	TP64	TP72	TP73	DDS8
			SOIL 0.2-0.4 25/9/2019 SE198143.010	SOIL 0.2-0.4 25/9/2019 SE198143.013	SOIL 0.2-0.5 25/9/2019 SE198143.027	SOIL 0.2-0.5 25/9/2019 SE198143.030	SOIL - 25/9/2019 SE198143.033
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	TS3
			SOIL - 25/9/2019 SE198143.035
Benzene	mg/kg	0.1	[107%]
Toluene	mg/kg	0.1	[107%]
Ethylbenzene	mg/kg	0.1	[101%]
m/p-xylene	mg/kg	0.2	[100%]
o-xylene	mg/kg	0.1	[100%]
Total Xylenes	mg/kg	0.3	-
Total BTEX	mg/kg	0.6	-
Naphthalene	mg/kg	0.1	-



## Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 30/9/2019

PARAMETER	UOM	LOR	TP63	TP64	TP72	TP73	DDS8
			SOIL 0.2-0.4 25/9/2019 SE198143.010	SOIL 0.2-0.4 25/9/2019 SE198143.013	SOIL 0.2-0.5 25/9/2019 SE198143.027	SOIL 0.2-0.5 25/9/2019 SE198143.030	SOIL - 25/9/2019 SE198143.033
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

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 27/9/2019

PARAMETER	UOM	LOR	TP63	TP64	TP72	TP73	DDS8
			SOIL 0.2-0.4 25/9/2019 SE198143.010	SOIL 0.2-0.4 25/9/2019 SE198143.013	SOIL 0.2-0.5 25/9/2019 SE198143.027	SOIL 0.2-0.5 25/9/2019 SE198143.030	SOIL - 25/9/2019 SE198143.033
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	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	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 (F bands)	mg/kg	210	<210	<210	<210	<210	<210

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 27/9/2019

PARAMETER	UOM	LOR	TP63	TP64	TP72	TP73	DDS8
			SOIL 0.2-0.4 25/9/2019 SE198143.010	SOIL 0.2-0.4 25/9/2019 SE198143.013	SOIL 0.2-0.5 25/9/2019 SE198143.027	SOIL 0.2-0.5 25/9/2019 SE198143.030	SOIL - 25/9/2019 SE198143.033
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 (mg/kg)	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

OC Pesticides in Soil [AN420]    Tested: 27/9/2019

PARAMETER	UOM	LOR	TP58	TP59	TP60	TP61	TP62
			SOIL 0.0-0.15 25/9/2019 SE198143.001	SOIL 0.0-0.15 25/9/2019 SE198143.003	SOIL 0.0-0.15 25/9/2019 SE198143.004	SOIL 0.0-0.15 25/9/2019 SE198143.006	SOIL 0.0-0.15 25/9/2019 SE198143.007
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 27/9/2019    (continued)

PARAMETER	UOM	LOR	TP63	TP63	TP64	TP64	TP65
			SOIL 0.0-0.15 25/9/2019 SE198143.009	SOIL 0.2-0.4 25/9/2019 SE198143.010	SOIL 0.0-0.15 25/9/2019 SE198143.012	SOIL 0.2-0.4 25/9/2019 SE198143.013	SOIL 0.0-0.15 25/9/2019 SE198143.015
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 27/9/2019    (continued)

PARAMETER	UOM	LOR	TP66	TP67	TP68	TP69	TP70
			SOIL 0.0-0.15 25/9/2019 SE198143.017	SOIL 0.0-0.15 25/9/2019 SE198143.018	SOIL 0.0-0.15 25/9/2019 SE198143.020	SOIL 0.0-0.15 25/9/2019 SE198143.021	SOIL 0.0-0.15 25/9/2019 SE198143.023
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 27/9/2019    (continued)

PARAMETER	UOM	LOR	TP71	TP72	TP72	TP73	TP73
			SOIL 0.0-0.15 25/9/2019 SE198143.024	SOIL 0.0-0.15 25/9/2019 SE198143.026	SOIL 0.2-0.5 25/9/2019 SE198143.027	SOIL 0.0-0.15 25/9/2019 SE198143.029	SOIL 0.2-0.5 25/9/2019 SE198143.030
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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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: 27/9/2019    (continued)

			DDS7
			SOIL
			-
			25/9/2019
			SE198143.032
PARAMETER	UOM	LOR	
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1
Lindane	mg/kg	0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1
Aldrin	mg/kg	0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1
Dieldrin	mg/kg	0.05	<0.05
Endrin	mg/kg	0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1
Isodrin	mg/kg	0.1	<0.1
Mirex	mg/kg	0.1	<0.1



PCBs in Soil [AN420] Tested: 27/9/2019

PARAMETER	UOM	LOR	TP63	TP64	TP72	TP73
			SOIL 0.2-0.4 25/9/2019 SE198143.010	SOIL 0.2-0.4 25/9/2019 SE198143.013	SOIL 0.2-0.5 25/9/2019 SE198143.027	SOIL 0.2-0.5 25/9/2019 SE198143.030
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1

Total Phenolics in Soil [AN289]    Tested: 3/10/2019

			TP63	TP64	TP72	TP73	DDS8
			SOIL	SOIL	SOIL	SOIL	SOIL
			0.2-0.4	0.2-0.4	0.2-0.5	0.2-0.5	-
			25/9/2019	25/9/2019	25/9/2019	25/9/2019	25/9/2019
PARAMETER	UOM	LOR	SE198143.010	SE198143.013	SE198143.027	SE198143.030	SE198143.033
Total Phenols	mg/kg	5	<5.0	<5.0	<5.0	<5.0	<5.0

pH in soil (1:5) [AN101] Tested: 27/9/2019

PARAMETER	UOM	LOR	TP58	TP58	TP60	TP60	TP62
			SOIL	SOIL	SOIL	SOIL	SOIL
			0.0-0.15	0.25-0.35	0.0-0.15	0.25-0.35	0.0-0.15
			25/9/2019	25/9/2019	25/9/2019	25/9/2019	25/9/2019
			SE198143.001	SE198143.002	SE198143.004	SE198143.005	SE198143.007
pH	pH Units	0.1	5.7	5.0	5.3	4.2	4.9

PARAMETER	UOM	LOR	TP62	TP63	TP64	TP64	TP65
			SOIL	SOIL	SOIL	SOIL	SOIL
			0.35-0.45	0.2-0.4	0.0-0.15	0.2-0.4	0.25-0.35
			25/9/2019	25/9/2019	25/9/2019	25/9/2019	25/9/2019
			SE198143.008	SE198143.010	SE198143.012	SE198143.013	SE198143.016
pH	pH Units	0.1	4.8	5.4	5.7	4.7	4.6

PARAMETER	UOM	LOR	TP66	TP67	TP68	TP70	TP72
			SOIL	SOIL	SOIL	SOIL	SOIL
			0.0-0.15	0.25-0.35	0.0-0.15	0.0-0.15	0.0-0.15
			25/9/2019	25/9/2019	25/9/2019	25/9/2019	25/9/2019
			SE198143.017	SE198143.019	SE198143.020	SE198143.023	SE198143.026
pH	pH Units	0.1	5.6	5.4	5.9	5.4	5.2

PARAMETER	UOM	LOR	TP72	TP73	TP73
			SOIL	SOIL	SOIL
			0.2-0.5	0.2-0.5	0.75-0.85
			25/9/2019	25/9/2019	25/9/2019
			SE198143.027	SE198143.030	SE198143.031
pH	pH Units	0.1	4.8	4.5	5.1

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122] Tested: 30/9/2019

PARAMETER	UOM	LOR	TP58	TP58	TP60	TP60	TP62
			SOIL 0.0-0.15 25/9/2019 SE198143.001	SOIL 0.25-0.35 25/9/2019 SE198143.002	SOIL 0.0-0.15 25/9/2019 SE198143.004	SOIL 0.25-0.35 25/9/2019 SE198143.005	SOIL 0.0-0.15 25/9/2019 SE198143.007
Exchangeable Sodium, Na	mg/kg	2	150	1400	610	1500	790
Exchangeable Sodium, Na	meq/100g	0.01	0.66	6.0	2.6	6.6	3.4
Exchangeable Sodium Percentage*	%	0.1	15.4	40.6	45.4	43.9	44.3
Exchangeable Potassium, K	mg/kg	2	62	84	35	53	39
Exchangeable Potassium, K	meq/100g	0.01	0.16	0.21	0.09	0.13	0.10
Exchangeable Potassium Percentage*	%	0.1	3.7	1.4	1.5	0.9	1.3
Exchangeable Calcium, Ca	mg/kg	2	290	16	210	130	150
Exchangeable Calcium, Ca	meq/100g	0.01	1.5	0.08	1.1	0.63	0.76
Exchangeable Calcium Percentage*	%	0.1	34.2	0.5	18.2	4.2	9.9
Exchangeable Magnesium, Mg	mg/kg	2	240	1000	250	940	420
Exchangeable Magnesium, Mg	meq/100g	0.02	2.0	8.5	2.0	7.7	3.4
Exchangeable Magnesium Percentage*	%	0.1	46.7	57.4	34.9	51.1	44.5
Cation Exchange Capacity	meq/100g	0.02	4.3	15	5.8	15	7.7

PARAMETER	UOM	LOR	TP62	TP63	TP64	TP64	TP65
			SOIL 0.35-0.45 25/9/2019 SE198143.008	SOIL 0.2-0.4 25/9/2019 SE198143.010	SOIL 0.0-0.15 25/9/2019 SE198143.012	SOIL 0.2-0.4 25/9/2019 SE198143.013	SOIL 0.25-0.35 25/9/2019 SE198143.016
Exchangeable Sodium, Na	mg/kg	2	2600	2400	110	2300	1300
Exchangeable Sodium, Na	meq/100g	0.01	11	11	0.47	9.8	5.7
Exchangeable Sodium Percentage*	%	0.1	43.0	32.1	12.8	34.9	40.8
Exchangeable Potassium, K	mg/kg	2	140	110	72	84	35
Exchangeable Potassium, K	meq/100g	0.01	0.37	0.28	0.19	0.21	0.09
Exchangeable Potassium Percentage*	%	0.1	1.4	0.8	5.0	0.8	0.6
Exchangeable Calcium, Ca	mg/kg	2	4	6	320	20	2
Exchangeable Calcium, Ca	meq/100g	0.01	0.02	0.03	1.6	0.10	0.01
Exchangeable Calcium Percentage*	%	0.1	<0.1	<0.1	43.8	0.4	<0.1
Exchangeable Magnesium, Mg	mg/kg	2	1800	2700	170	2200	990
Exchangeable Magnesium, Mg	meq/100g	0.02	14	22	1.4	18	8.1
Exchangeable Magnesium Percentage*	%	0.1	55.5	67.0	38.4	64.0	58.5
Cation Exchange Capacity	meq/100g	0.02	26	33	3.7	28	14

PARAMETER	UOM	LOR	TP66	TP67	TP68	TP70	TP72
			SOIL 0.0-0.15 25/9/2019 SE198143.017	SOIL 0.25-0.35 25/9/2019 SE198143.019	SOIL 0.0-0.15 25/9/2019 SE198143.020	SOIL 0.0-0.15 25/9/2019 SE198143.023	SOIL 0.0-0.15 25/9/2019 SE198143.026
Exchangeable Sodium, Na	mg/kg	2	330	1600	230	170	330
Exchangeable Sodium, Na	meq/100g	0.01	1.4	6.9	1.0	0.74	1.4
Exchangeable Sodium Percentage*	%	0.1	36.6	33.0	19.7	18.7	32.6
Exchangeable Potassium, K	mg/kg	2	35	120	48	66	47
Exchangeable Potassium, K	meq/100g	0.01	0.09	0.30	0.12	0.17	0.12
Exchangeable Potassium Percentage*	%	0.1	2.3	1.4	2.4	4.3	2.8
Exchangeable Calcium, Ca	mg/kg	2	250	25	230	260	280
Exchangeable Calcium, Ca	meq/100g	0.01	1.2	0.13	1.1	1.3	1.4
Exchangeable Calcium Percentage*	%	0.1	31.6	0.6	21.7	33.1	31.9
Exchangeable Magnesium, Mg	mg/kg	2	140	1700	380	210	170
Exchangeable Magnesium, Mg	meq/100g	0.02	1.2	14	2.9	1.7	1.4
Exchangeable Magnesium Percentage*	%	0.1	29.6	64.9	56.2	43.9	32.7
Cation Exchange Capacity	meq/100g	0.02	3.9	21	5.2	4.0	4.4

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122]    Tested: 30/9/2019    (continued)

PARAMETER	UOM	LOR	TP72	TP73	TP73
			SOIL 0.2-0.5 25/9/2019 SE198143.027	SOIL 0.2-0.5 25/9/2019 SE198143.030	SOIL 075.0.85 25/9/2019 SE198143.031
Exchangeable Sodium, Na	mg/kg	2	1800	1400	1300
Exchangeable Sodium, Na	meq/100g	0.01	7.9	6.3	5.6
Exchangeable Sodium Percentage*	%	0.1	39.1	36.3	42.7
Exchangeable Potassium, K	mg/kg	2	65	52	35
Exchangeable Potassium, K	meq/100g	0.01	0.17	0.13	0.09
Exchangeable Potassium Percentage*	%	0.1	0.8	0.8	0.7
Exchangeable Calcium, Ca	mg/kg	2	120	44	4
Exchangeable Calcium, Ca	meq/100g	0.01	0.60	0.22	0.02
Exchangeable Calcium Percentage*	%	0.1	3.0	1.3	0.1
Exchangeable Magnesium, Mg	mg/kg	2	1400	1300	900
Exchangeable Magnesium, Mg	meq/100g	0.02	11	11	7.4
Exchangeable Magnesium Percentage*	%	0.1	57.1	61.7	56.5
Cation Exchange Capacity	meq/100g	0.02	20	17	13

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 1/10/2019

PARAMETER	UOM	LOR	TP58	TP58	TP59	TP60	TP60
			SOIL 0.0-0.15 25/9/2019 SE198143.001	SOIL 0.25-0.35 25/9/2019 SE198143.002	SOIL 0.0-0.15 25/9/2019 SE198143.003	SOIL 0.0-0.15 25/9/2019 SE198143.004	SOIL 0.25-0.35 25/9/2019 SE198143.005
Arsenic, As	mg/kg	1	3	2	3	4	5
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	12	2.8	9.7	18	15
Copper, Cu	mg/kg	0.5	2.5	3.8	3.1	2.0	3.1
Lead, Pb	mg/kg	1	14	4	13	14	15
Nickel, Ni	mg/kg	0.5	2.2	0.8	1.7	1.4	<0.5
Zinc, Zn	mg/kg	2	9	4	7	7	6

PARAMETER	UOM	LOR	TP61	TP62	TP62	TP63	TP63
			SOIL 0.0-0.15 25/9/2019 SE198143.006	SOIL 0.0-0.15 25/9/2019 SE198143.007	SOIL 0.35-0.45 25/9/2019 SE198143.008	SOIL 0.0-0.15 25/9/2019 SE198143.009	SOIL 0.2-0.4 25/9/2019 SE198143.010
Arsenic, As	mg/kg	1	5	5	7	4	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	16	22	4.7	13	2.2
Copper, Cu	mg/kg	0.5	5.1	1.7	15	2.6	6.2
Lead, Pb	mg/kg	1	19	15	10	12	3
Nickel, Ni	mg/kg	0.5	3.2	1.4	0.5	1.6	<0.5
Zinc, Zn	mg/kg	2	11	8	6	7	<2

PARAMETER	UOM	LOR	TP63	TP64	TP64	TP64	TP65
			SOIL 0.45-0.55 25/9/2019 SE198143.011	SOIL 0.0-0.15 25/9/2019 SE198143.012	SOIL 0.2-0.4 25/9/2019 SE198143.013	SOIL 0.45-0.55 25/9/2019 SE198143.014	SOIL 0.0-0.15 25/9/2019 SE198143.015
Arsenic, As	mg/kg	1	3	3	9	5	5
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	2.7	14	11	4.0	15
Copper, Cu	mg/kg	0.5	8.2	2.2	12	11	2.3
Lead, Pb	mg/kg	1	6	10	10	6	15
Nickel, Ni	mg/kg	0.5	<0.5	1.7	<0.5	<0.5	1.9
Zinc, Zn	mg/kg	2	3	9	7	5	9

PARAMETER	UOM	LOR	TP65	TP66	TP67	TP67	TP68
			SOIL 0.25-0.35 25/9/2019 SE198143.016	SOIL 0.0-0.15 25/9/2019 SE198143.017	SOIL 0.0-0.15 25/9/2019 SE198143.018	SOIL 0.25-0.35 25/9/2019 SE198143.019	SOIL 0.0-0.15 25/9/2019 SE198143.020
Arsenic, As	mg/kg	1	3	8	5	2	5
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	9.2	23	16	2.8	13
Copper, Cu	mg/kg	0.5	1.9	1.4	4.1	4.3	3.6
Lead, Pb	mg/kg	1	5	14	26	4	15
Nickel, Ni	mg/kg	0.5	<0.5	2.2	2.9	<0.5	2.2
Zinc, Zn	mg/kg	2	2	12	11	<2	10

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320]    Tested: 1/10/2019

PARAMETER	UOM	LOR	TP69	TP69	TP70	TP71	TP71
			SOIL 0.0-0.15 25/9/2019 SE198143.021	SOIL 0.25-0.35 25/9/2019 SE198143.022	SOIL 0.0-0.15 25/9/2019 SE198143.023	SOIL 0.0-0.15 25/9/2019 SE198143.024	SOIL 0.25-0.35 25/9/2019 SE198143.025
Arsenic, As	mg/kg	1	<b>3</b>	<1	<b>3</b>	<b>4</b>	<b>6</b>
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	<b>7.8</b>	<b>3.0</b>	<b>11</b>	<b>13</b>	<b>10</b>
Copper, Cu	mg/kg	0.5	<b>5.9</b>	<b>4.8</b>	<b>2.9</b>	<b>1.7</b>	<b>6.6</b>
Lead, Pb	mg/kg	1	<b>6</b>	<b>3</b>	<b>11</b>	<b>18</b>	<b>5</b>
Nickel, Ni	mg/kg	0.5	<b>1.7</b>	<0.5	<b>1.6</b>	<b>1.4</b>	<0.5
Zinc, Zn	mg/kg	2	<b>7</b>	<2	<b>7</b>	<b>7</b>	<b>4</b>

PARAMETER	UOM	LOR	TP72	TP72	TP72	TP73	TP73
			SOIL 0.0-0.15 25/9/2019 SE198143.026	SOIL 0.2-0.5 25/9/2019 SE198143.027	SOIL 0.65-0.75 25/9/2019 SE198143.028	SOIL 0.0-0.15 25/9/2019 SE198143.029	SOIL 0.2-0.5 25/9/2019 SE198143.030
Arsenic, As	mg/kg	1	<b>4</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>5</b>
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	<b>20</b>	<b>7.5</b>	<b>7.7</b>	<b>13</b>	<b>18</b>
Copper, Cu	mg/kg	0.5	<b>0.8</b>	<b>3.9</b>	<b>3.2</b>	<b>2.6</b>	<b>1.1</b>
Lead, Pb	mg/kg	1	<b>13</b>	<b>7</b>	<b>5</b>	<b>12</b>	<b>8</b>
Nickel, Ni	mg/kg	0.5	<b>1.4</b>	<b>0.6</b>	<b>0.6</b>	<b>1.7</b>	<b>0.6</b>
Zinc, Zn	mg/kg	2	<b>8</b>	<b>3</b>	<b>2</b>	<b>9</b>	<b>4</b>

PARAMETER	UOM	LOR	TP73	DDS7	DDS8
			SOIL 075.0.85 25/9/2019 SE198143.031	SOIL - 25/9/2019 SE198143.032	SOIL - 25/9/2019 SE198143.033
Arsenic, As	mg/kg	1	<b>1</b>	<b>3</b>	<b>4</b>
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	<b>3.7</b>	<b>9.5</b>	<b>15</b>
Copper, Cu	mg/kg	0.5	<b>3.3</b>	<b>3.0</b>	<b>1.5</b>
Lead, Pb	mg/kg	1	<b>2</b>	<b>10</b>	<b>9</b>
Nickel, Ni	mg/kg	0.5	<b>0.6</b>	<b>1.7</b>	<b>1.2</b>
Zinc, Zn	mg/kg	2	<2	<b>8</b>	<b>6</b>

Mercury in Soil [AN312] Tested: 1/10/2019

PARAMETER	UOM	LOR	TP58	TP58	TP59	TP60	TP60
			SOIL	SOIL	SOIL	SOIL	SOIL
			0.0-0.15	0.25-0.35	0.0-0.15	0.0-0.15	0.25-0.35
			25/9/2019	25/9/2019	25/9/2019	25/9/2019	25/9/2019
			SE198143.001	SE198143.002	SE198143.003	SE198143.004	SE198143.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP61	TP62	TP62	TP63	TP63
			SOIL	SOIL	SOIL	SOIL	SOIL
			0.0-0.15	0.0-0.15	0.35-0.45	0.0-0.15	0.2-0.4
			25/9/2019	25/9/2019	25/9/2019	25/9/2019	25/9/2019
			SE198143.006	SE198143.007	SE198143.008	SE198143.009	SE198143.010
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP63	TP64	TP64	TP64	TP65
			SOIL	SOIL	SOIL	SOIL	SOIL
			0.45-0.55	0.0-0.15	0.2-0.4	0.45-0.55	0.0-0.15
			25/9/2019	25/9/2019	25/9/2019	25/9/2019	25/9/2019
			SE198143.011	SE198143.012	SE198143.013	SE198143.014	SE198143.015
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP65	TP66	TP67	TP67	TP68
			SOIL	SOIL	SOIL	SOIL	SOIL
			0.25-0.35	0.0-0.15	0.0-0.15	0.25-0.35	0.0-0.15
			25/9/2019	25/9/2019	25/9/2019	25/9/2019	25/9/2019
			SE198143.016	SE198143.017	SE198143.018	SE198143.019	SE198143.020
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP69	TP69	TP70	TP71	TP71
			SOIL	SOIL	SOIL	SOIL	SOIL
			0.0-0.15	0.25-0.35	0.0-0.15	0.0-0.15	0.25-0.35
			25/9/2019	25/9/2019	25/9/2019	25/9/2019	25/9/2019
			SE198143.021	SE198143.022	SE198143.023	SE198143.024	SE198143.025
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP72	TP72	TP72	TP73	TP73
			SOIL	SOIL	SOIL	SOIL	SOIL
			0.0-0.15	0.2-0.5	0.65-0.75	0.0-0.15	0.2-0.5
			25/9/2019	25/9/2019	25/9/2019	25/9/2019	25/9/2019
			SE198143.026	SE198143.027	SE198143.028	SE198143.029	SE198143.030
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP73	DDS7	DDS8
			SOIL	SOIL	SOIL
			075.0.85	-	-
			25/9/2019	25/9/2019	25/9/2019
			SE198143.031	SE198143.032	SE198143.033
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05



Moisture Content [AN002] Tested: 27/9/2019

PARAMETER	UOM	LOR	TP58	TP58	TP59	TP60	TP60
			SOIL	SOIL	SOIL	SOIL	SOIL
			0.0-0.15	0.25-0.35	0.0-0.15	0.0-0.15	0.25-0.35
			25/9/2019	25/9/2019	25/9/2019	25/9/2019	25/9/2019
			SE198143.001	SE198143.002	SE198143.003	SE198143.004	SE198143.005
% Moisture	%w/w	1	12.1	11.4	17.3	14.5	13.7

PARAMETER	UOM	LOR	TP61	TP62	TP62	TP63	TP63
			SOIL	SOIL	SOIL	SOIL	SOIL
			0.0-0.15	0.0-0.15	0.35-0.45	0.0-0.15	0.2-0.4
			25/9/2019	25/9/2019	25/9/2019	25/9/2019	25/9/2019
			SE198143.006	SE198143.007	SE198143.008	SE198143.009	SE198143.010
% Moisture	%w/w	1	20.3	11.8	17.7	12.0	27.4

PARAMETER	UOM	LOR	TP63	TP64	TP64	TP64	TP65
			SOIL	SOIL	SOIL	SOIL	SOIL
			0.45-0.55	0.0-0.15	0.2-0.4	0.45-0.55	0.0-0.15
			25/9/2019	25/9/2019	25/9/2019	25/9/2019	25/9/2019
			SE198143.011	SE198143.012	SE198143.013	SE198143.014	SE198143.015
% Moisture	%w/w	1	19.2	9.0	22.7	21.0	5.4

PARAMETER	UOM	LOR	TP65	TP66	TP67	TP67	TP68
			SOIL	SOIL	SOIL	SOIL	SOIL
			0.25-0.35	0.0-0.15	0.0-0.15	0.25-0.35	0.0-0.15
			25/9/2019	25/9/2019	25/9/2019	25/9/2019	25/9/2019
			SE198143.016	SE198143.017	SE198143.018	SE198143.019	SE198143.020
% Moisture	%w/w	1	14.2	9.4	16.3	9.4	16.0

PARAMETER	UOM	LOR	TP69	TP69	TP70	TP71	TP71
			SOIL	SOIL	SOIL	SOIL	SOIL
			0.0-0.15	0.25-0.35	0.0-0.15	0.0-0.15	0.25-0.35
			25/9/2019	25/9/2019	25/9/2019	25/9/2019	25/9/2019
			SE198143.021	SE198143.022	SE198143.023	SE198143.024	SE198143.025
% Moisture	%w/w	1	14.9	14.9	11.8	10.7	7.7

PARAMETER	UOM	LOR	TP72	TP72	TP72	TP73	TP73
			SOIL	SOIL	SOIL	SOIL	SOIL
			0.0-0.15	0.2-0.5	0.65-0.75	0.0-0.15	0.2-0.5
			25/9/2019	25/9/2019	25/9/2019	25/9/2019	25/9/2019
			SE198143.026	SE198143.027	SE198143.028	SE198143.029	SE198143.030
% Moisture	%w/w	1	9.4	15.6	15.0	6.9	17.6

PARAMETER	UOM	LOR	TP73	DDS7	DDS8
			SOIL	SOIL	SOIL
			075.0.85	-	-
			25/9/2019	25/9/2019	25/9/2019
			SE198143.031	SE198143.032	SE198143.033
% Moisture	%w/w	1	12.4	15.8	5.8

Fibre Identification in soil [AN602]    Tested: 2/10/2019

PARAMETER	UOM	LOR	TP63	TP64	TP72	TP73
			SOIL	SOIL	SOIL	SOIL
			0.2-0.4	0.2-0.4	0.2-0.5	0.2-0.5
			25/9/2019	25/9/2019	25/9/2019	25/9/2019
			SE198143.010	SE198143.013	SE198143.027	SE198143.030
Asbestos Detected	No unit	-	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01

## Gravimetric Determination of Asbestos in Soil [AN605] Tested: 2/10/2019

PARAMETER	UOM	LOR	TP63	TP64	TP72	TP73
			SOIL 0.2-0.4 25/9/2019 SE198143.010	SOIL 0.2-0.4 25/9/2019 SE198143.013	SOIL 0.2-0.5 25/9/2019 SE198143.027	SOIL 0.2-0.5 25/9/2019 SE198143.030
Total Sample Weight*	g	1	<b>352</b>	<b>311</b>	<b>325</b>	<b>465</b>
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-

VOCs in Water [AN433]    Tested: 1/10/2019

			RS3
			WATER
			-
			25/9/2019
			SE198143.034
PARAMETER	UOM	LOR	
Benzene	µg/L	0.5	<0.5
Toluene	µg/L	0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5
m/p-xylene	µg/L	1	<1
o-xylene	µg/L	0.5	<0.5
Total Xylenes	µg/L	1.5	<1.5
Total BTEX	µg/L	3	<3
Naphthalene	µg/L	0.5	<0.5

Volatile Petroleum Hydrocarbons in Water [AN433] Tested: 1/10/2019

			RS3
			WATER
			-
			25/9/2019
PARAMETER	UOM	LOR	SE198143.034
TRH C6-C9	µg/L	40	<40
Benzene (F0)	µg/L	0.5	<0.5
TRH C6-C10	µg/L	50	<50
TRH C6-C10 minus BTEX (F1)	µg/L	50	<50

TRH (Total Recoverable Hydrocarbons) in Water [AN403]    Tested: 1/10/2019

			RS3
			WATER
			-
			25/9/2019
			SE198143.034
PARAMETER	UOM	LOR	
TRH C10-C14	µg/L	50	<50
TRH C15-C28	µg/L	200	<200
TRH C29-C36	µg/L	200	<200
TRH C37-C40	µg/L	200	<200
TRH >C10-C16	µg/L	60	<60
TRH >C16-C34 (F3)	µg/L	500	<500
TRH >C34-C40 (F4)	µg/L	500	<500
TRH C10-C36	µg/L	450	<450
TRH C10-C40	µg/L	650	<650

## PAH (Polynuclear Aromatic Hydrocarbons) in Water [AN420] Tested: 1/10/2019

			RS3
			WATER
			-
			25/9/2019
			SE198143.034
PARAMETER	UOM	LOR	
Naphthalene	µg/L	0.1	<0.1
2-methylnaphthalene	µg/L	0.1	<0.1
1-methylnaphthalene	µg/L	0.1	<0.1
Acenaphthylene	µg/L	0.1	<0.1
Acenaphthene	µg/L	0.1	<0.1
Fluorene	µg/L	0.1	<0.1
Phenanthrene	µg/L	0.1	<0.1
Anthracene	µg/L	0.1	<0.1
Fluoranthene	µg/L	0.1	<0.1
Pyrene	µg/L	0.1	<0.1
Benzo(a)anthracene	µg/L	0.1	<0.1
Chrysene	µg/L	0.1	<0.1
Benzo(b&j)fluoranthene	µg/L	0.1	<0.1
Benzo(k)fluoranthene	µg/L	0.1	<0.1
Benzo(a)pyrene	µg/L	0.1	<0.1
Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1
Dibenzo(ah)anthracene	µg/L	0.1	<0.1
Benzo(ghi)perylene	µg/L	0.1	<0.1
Total PAH (18)	µg/L	1	<1

Metals in Water (Dissolved) by ICPOES [AN320] Tested: 1/10/2019

			RS3
			WATER
			-
			25/9/2019
			SE198143.034
PARAMETER	UOM	LOR	
Arsenic, As	mg/L	0.02	<0.02
Cadmium, Cd	mg/L	0.001	<0.001
Chromium, Cr	mg/L	0.005	<0.005
Copper, Cu	mg/L	0.005	<0.005
Lead, Pb	mg/L	0.02	<0.02
Nickel, Ni	mg/L	0.005	<0.005
Zinc, Zn	mg/L	0.01	<0.01





## ANALYTICAL RESULTS

SE198143 R1

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 30/9/2019

			RS3
			WATER
			-
			25/9/2019
PARAMETER	UOM	LOR	SE198143.034
Mercury	mg/L	0.0001	<0.0001

## 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.
- AN020** Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
- 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.
- 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 CaCl<sub>2</sub>) is made at a ratio of 1:5 and the pH determined and reported on the extract. Reference APHA 4500-H+.
- AN122** Exchangeable Cations, CEC and ESP: Soil sample is extracted in 1M Ammonium Acetate at pH=7 (or 1M Ammonium Chloride at pH=7) with cations (Na, K, Ca & Mg) then determined by ICP OES/ICP MS and reported as Exchangeable Cations. For saline soils, these results can be corrected for water soluble cations and reported as Exchangeable cations in meq/100g or soil can be pre-treated (aqueous ethanol/aqueous glycerol) prior to extraction. Cation Exchange Capacity (CEC) is the sum of the exchangeable cations in meq/100g.
- AN122** The Exchangeable Sodium Percentage (ESP) is calculated as the exchangeable sodium divided by the CEC (all in meq/100g) times 100.  
ESP can be used to categorise the sodicity of the soil as below:
- |           |                |
|-----------|----------------|
| ESP < 6%  | non-sodic      |
| ESP 6-15% | sodic          |
| ESP > 15% | strongly sodic |
- Method is referenced to Rayment and Lyons, 2011, sections 15D3 and 15N1.-
- 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.
- AN311(Perth)/AN312** Mercury by Cold Vapour AAS in Waters: 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.
- 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
- AN320** Metals by ICP-OES: Samples are preserved with 10% nitric acid for a wide range of metals and some non-metals. This solution is measured by Inductively Coupled Plasma. Solutions are aspirated into an argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components.
- AN320** Photomultipliers or CCDs are used to measure the light intensity at specific wavelengths. This intensity is directly proportional to concentration. Corrections are required to compensate for spectral overlap between elements. Reference APHA 3120 B.
- 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 Recoverable Hydrocarbons - Silica (TRH-Si) 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 unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
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- <ul style="list-style-type: none"> <li>(a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres):</li> <li>(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</li> <li>(c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.</li> </ul>
AN605	This technique gravimetrically determines the mass of Asbestos Containing Material retained on a 7mm Sieve and assumes that 15% of this ACM is asbestos. This calculated asbestos weight is then calculated as a percentage of the total sample weight.
AN605	This technique also gravimetrically determines the mass of Fibrous Asbestos (FA) and Asbestos Fines (AF) Containing Material retained on and passing a 2mm sieve post 7mm sieving. Assumes that FA and AF are 100% asbestos containing. This calculated asbestos weight is then calculated as a percentage of the total sample weight. This does not include free fibres which are only observed by standard trace analysis as per AN 602.
AN605	Insofar as is technically feasible, this report is consistent with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment Remediation and Management of Asbestos - Contaminated Sites in Western Australia - May 2009.

## FOOTNOTES

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

Unless it is reported that sampling has been performed by SGS, the samples have been 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:

- 1 Bq is equivalent to 27 pCi
- 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 and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: [www.sgs.com.au/pv.sgsvr/en-gb/environment](http://www.sgs.com.au/pv.sgsvr/en-gb/environment).

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

This report must not be reproduced, except in full.



## STATEMENT OF QA/QC PERFORMANCE

SE198143 R1

### CLIENT DETAILS

Contact Anwar Barbhuyia  
Client Geotechnique  
Address P.O. Box 880  
PENRITH NSW 2751

Telephone 02 4722 2700  
Facsimile 02 4722 6161  
Email anwar@geotech.com.au

Project **14513-2 Marsden Park**  
Order Number (Not specified)  
Samples 35

### 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 **SE198143 R1**  
Date Received 26 Sep 2019  
Date Reported 10 Oct 2019

### COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.  
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.  
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Analysis Date	pH in soil (1:5)	18 items
---------------	------------------	----------

### SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	34 Soil, 1 Water
Date documentation received	26/9/2019@2:09pm	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	12°C	Sufficient sample for analysis	Yes
Turnaround time requested	2 Day/Standard		

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP58	SE198143.001	LB184232	25 Sep 2019	26 Sep 2019	23 Oct 2019	30 Sep 2019	23 Oct 2019	03 Oct 2019
TP58	SE198143.002	LB184232	25 Sep 2019	26 Sep 2019	23 Oct 2019	30 Sep 2019	23 Oct 2019	03 Oct 2019
TP60	SE198143.004	LB184232	25 Sep 2019	26 Sep 2019	23 Oct 2019	30 Sep 2019	23 Oct 2019	03 Oct 2019
TP60	SE198143.005	LB184232	25 Sep 2019	26 Sep 2019	23 Oct 2019	30 Sep 2019	23 Oct 2019	03 Oct 2019
TP62	SE198143.007	LB184232	25 Sep 2019	26 Sep 2019	23 Oct 2019	30 Sep 2019	23 Oct 2019	03 Oct 2019
TP62	SE198143.008	LB184232	25 Sep 2019	26 Sep 2019	23 Oct 2019	30 Sep 2019	23 Oct 2019	03 Oct 2019
TP63	SE198143.010	LB184232	25 Sep 2019	26 Sep 2019	23 Oct 2019	30 Sep 2019	23 Oct 2019	03 Oct 2019
TP64	SE198143.012	LB184232	25 Sep 2019	26 Sep 2019	23 Oct 2019	30 Sep 2019	23 Oct 2019	03 Oct 2019
TP64	SE198143.013	LB184232	25 Sep 2019	26 Sep 2019	23 Oct 2019	30 Sep 2019	23 Oct 2019	03 Oct 2019
TP65	SE198143.016	LB184232	25 Sep 2019	26 Sep 2019	23 Oct 2019	30 Sep 2019	23 Oct 2019	03 Oct 2019
TP66	SE198143.017	LB184232	25 Sep 2019	26 Sep 2019	23 Oct 2019	30 Sep 2019	23 Oct 2019	03 Oct 2019
TP67	SE198143.019	LB184232	25 Sep 2019	26 Sep 2019	23 Oct 2019	30 Sep 2019	23 Oct 2019	03 Oct 2019
TP68	SE198143.020	LB184232	25 Sep 2019	26 Sep 2019	23 Oct 2019	30 Sep 2019	23 Oct 2019	03 Oct 2019
TP70	SE198143.023	LB184232	25 Sep 2019	26 Sep 2019	23 Oct 2019	30 Sep 2019	23 Oct 2019	03 Oct 2019
TP72	SE198143.026	LB184232	25 Sep 2019	26 Sep 2019	23 Oct 2019	30 Sep 2019	23 Oct 2019	03 Oct 2019
TP72	SE198143.027	LB184232	25 Sep 2019	26 Sep 2019	23 Oct 2019	30 Sep 2019	23 Oct 2019	03 Oct 2019
TP73	SE198143.030	LB184232	25 Sep 2019	26 Sep 2019	23 Oct 2019	30 Sep 2019	23 Oct 2019	03 Oct 2019
TP73	SE198143.031	LB184232	25 Sep 2019	26 Sep 2019	23 Oct 2019	30 Sep 2019	23 Oct 2019	03 Oct 2019

## Fibre Identification in soil

Method: ME-(AU)-[ENV]AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP63	SE198143.010	LB184516	25 Sep 2019	26 Sep 2019	24 Sep 2020	02 Oct 2019	24 Sep 2020	03 Oct 2019
TP64	SE198143.013	LB184516	25 Sep 2019	26 Sep 2019	24 Sep 2020	02 Oct 2019	24 Sep 2020	03 Oct 2019
TP72	SE198143.027	LB184516	25 Sep 2019	26 Sep 2019	24 Sep 2020	02 Oct 2019	24 Sep 2020	03 Oct 2019
TP73	SE198143.030	LB184516	25 Sep 2019	26 Sep 2019	24 Sep 2020	02 Oct 2019	24 Sep 2020	03 Oct 2019

## Gravimetric Determination of Asbestos in Soil

Method: ME-(AU)-[ENV]AN605

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP63	SE198143.010	LB184516	25 Sep 2019	26 Sep 2019	23 Mar 2020	02 Oct 2019	23 Mar 2020	03 Oct 2019
TP64	SE198143.013	LB184516	25 Sep 2019	26 Sep 2019	23 Mar 2020	02 Oct 2019	23 Mar 2020	03 Oct 2019
TP72	SE198143.027	LB184516	25 Sep 2019	26 Sep 2019	23 Mar 2020	02 Oct 2019	23 Mar 2020	03 Oct 2019
TP73	SE198143.030	LB184516	25 Sep 2019	26 Sep 2019	23 Mar 2020	02 Oct 2019	23 Mar 2020	03 Oct 2019

## Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS3	SE198143.034	LB184193	25 Sep 2019	26 Sep 2019	23 Oct 2019	30 Sep 2019	23 Oct 2019	01 Oct 2019

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP58	SE198143.001	LB184400	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP58	SE198143.002	LB184400	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP59	SE198143.003	LB184400	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP60	SE198143.004	LB184400	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP60	SE198143.005	LB184400	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP61	SE198143.006	LB184400	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP62	SE198143.007	LB184400	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP62	SE198143.008	LB184400	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP63	SE198143.009	LB184400	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP63	SE198143.010	LB184400	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP63	SE198143.011	LB184400	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP64	SE198143.012	LB184400	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP64	SE198143.013	LB184400	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP64	SE198143.014	LB184400	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP65	SE198143.015	LB184400	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP65	SE198143.016	LB184400	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP66	SE198143.017	LB184400	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP67	SE198143.018	LB184400	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP67	SE198143.019	LB184400	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP68	SE198143.020	LB184401	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP69	SE198143.021	LB184401	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP69	SE198143.022	LB184401	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Mercury in Soil (continued)

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP70	SE198143.023	LB184401	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP71	SE198143.024	LB184401	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP71	SE198143.025	LB184401	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP72	SE198143.026	LB184401	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP72	SE198143.027	LB184401	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP72	SE198143.028	LB184401	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP73	SE198143.029	LB184401	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP73	SE198143.030	LB184401	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
TP73	SE198143.031	LB184401	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
DDS7	SE198143.032	LB184401	25 Sep 2019	26 Sep 2019	23 Oct 2019	01 Oct 2019	23 Oct 2019	03 Oct 2019
DDS8	SE198143.033	LB185035	25 Sep 2019	26 Sep 2019	23 Oct 2019	10 Oct 2019	23 Oct 2019	10 Oct 2019

## Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS3	SE198143.034	LB184324	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	01 Oct 2019

## Moisture Content

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP58	SE198143.001	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP58	SE198143.002	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP59	SE198143.003	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP60	SE198143.004	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP60	SE198143.005	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP61	SE198143.006	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP62	SE198143.007	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP62	SE198143.008	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP63	SE198143.009	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP63	SE198143.010	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP63	SE198143.011	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP64	SE198143.012	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP64	SE198143.013	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP64	SE198143.014	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP65	SE198143.015	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP65	SE198143.016	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP66	SE198143.017	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP67	SE198143.018	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP67	SE198143.019	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP68	SE198143.020	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP69	SE198143.021	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP69	SE198143.022	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP70	SE198143.023	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP71	SE198143.024	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP71	SE198143.025	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP72	SE198143.026	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP72	SE198143.027	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP72	SE198143.028	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP73	SE198143.029	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP73	SE198143.030	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
TP73	SE198143.031	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
DDS7	SE198143.032	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019
DDS8	SE198143.033	LB184139	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	02 Oct 2019	02 Oct 2019

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN402

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP58	SE198143.001	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP59	SE198143.003	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP60	SE198143.004	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP61	SE198143.006	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP62	SE198143.007	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP63	SE198143.009	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019



SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP63	SE198143.010	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP64	SE198143.012	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP64	SE198143.013	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP65	SE198143.015	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP66	SE198143.017	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP67	SE198143.018	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP68	SE198143.020	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP69	SE198143.021	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP70	SE198143.023	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP71	SE198143.024	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP72	SE198143.026	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP72	SE198143.027	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP73	SE198143.029	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP73	SE198143.030	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
DDS7	SE198143.032	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
DDS8	SE198143.033	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP58	SE198143.001	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
TP59	SE198143.003	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
TP60	SE198143.004	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
TP61	SE198143.006	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
TP62	SE198143.007	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
TP63	SE198143.009	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
TP63	SE198143.010	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
TP64	SE198143.012	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
TP64	SE198143.013	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
TP65	SE198143.015	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
TP66	SE198143.017	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
TP67	SE198143.018	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
TP68	SE198143.020	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
TP69	SE198143.021	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
TP70	SE198143.023	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
TP71	SE198143.024	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
TP72	SE198143.026	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
TP72	SE198143.027	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
TP73	SE198143.029	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
TP73	SE198143.030	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
DDS7	SE198143.032	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019
DDS8	SE198143.033	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	03 Oct 2019

## PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS3	SE198143.034	LB184345	25 Sep 2019	26 Sep 2019	02 Oct 2019	01 Oct 2019	10 Nov 2019	03 Oct 2019

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP58	SE198143.001	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP59	SE198143.003	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP60	SE198143.004	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP61	SE198143.006	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP62	SE198143.007	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP63	SE198143.009	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP63	SE198143.010	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP64	SE198143.012	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP64	SE198143.013	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP65	SE198143.015	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP66	SE198143.017	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP67	SE198143.018	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019



SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## PCBs in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP68	SE198143.020	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP69	SE198143.021	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP70	SE198143.023	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP71	SE198143.024	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP72	SE198143.026	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP72	SE198143.027	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP73	SE198143.029	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
TP73	SE198143.030	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
DDS7	SE198143.032	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019
DDS8	SE198143.033	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	08 Oct 2019

## pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP58	SE198143.001	LB184154	25 Sep 2019	26 Sep 2019	02 Oct 2019	27 Sep 2019	28 Sep 2019	30 Sep 2019†
TP58	SE198143.002	LB184154	25 Sep 2019	26 Sep 2019	02 Oct 2019	27 Sep 2019	28 Sep 2019	30 Sep 2019†
TP60	SE198143.004	LB184154	25 Sep 2019	26 Sep 2019	02 Oct 2019	27 Sep 2019	28 Sep 2019	30 Sep 2019†
TP60	SE198143.005	LB184154	25 Sep 2019	26 Sep 2019	02 Oct 2019	27 Sep 2019	28 Sep 2019	30 Sep 2019†
TP62	SE198143.007	LB184154	25 Sep 2019	26 Sep 2019	02 Oct 2019	27 Sep 2019	28 Sep 2019	30 Sep 2019†
TP62	SE198143.008	LB184154	25 Sep 2019	26 Sep 2019	02 Oct 2019	27 Sep 2019	28 Sep 2019	30 Sep 2019†
TP63	SE198143.010	LB184154	25 Sep 2019	26 Sep 2019	02 Oct 2019	27 Sep 2019	28 Sep 2019	30 Sep 2019†
TP64	SE198143.012	LB184154	25 Sep 2019	26 Sep 2019	02 Oct 2019	27 Sep 2019	28 Sep 2019	30 Sep 2019†
TP64	SE198143.013	LB184154	25 Sep 2019	26 Sep 2019	02 Oct 2019	27 Sep 2019	28 Sep 2019	30 Sep 2019†
TP65	SE198143.016	LB184154	25 Sep 2019	26 Sep 2019	02 Oct 2019	27 Sep 2019	28 Sep 2019	30 Sep 2019†
TP66	SE198143.017	LB184154	25 Sep 2019	26 Sep 2019	02 Oct 2019	27 Sep 2019	28 Sep 2019	30 Sep 2019†
TP67	SE198143.019	LB184154	25 Sep 2019	26 Sep 2019	02 Oct 2019	27 Sep 2019	28 Sep 2019	30 Sep 2019†
TP68	SE198143.020	LB184154	25 Sep 2019	26 Sep 2019	02 Oct 2019	27 Sep 2019	28 Sep 2019	30 Sep 2019†
TP70	SE198143.023	LB184154	25 Sep 2019	26 Sep 2019	02 Oct 2019	27 Sep 2019	28 Sep 2019	30 Sep 2019†
TP72	SE198143.026	LB184154	25 Sep 2019	26 Sep 2019	02 Oct 2019	27 Sep 2019	28 Sep 2019	30 Sep 2019†
TP72	SE198143.027	LB184154	25 Sep 2019	26 Sep 2019	02 Oct 2019	27 Sep 2019	28 Sep 2019	30 Sep 2019†
TP73	SE198143.030	LB184154	25 Sep 2019	26 Sep 2019	02 Oct 2019	27 Sep 2019	28 Sep 2019	30 Sep 2019†
TP73	SE198143.031	LB184154	25 Sep 2019	26 Sep 2019	02 Oct 2019	27 Sep 2019	28 Sep 2019	30 Sep 2019†

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP63	SE198143.010	LB184591	25 Sep 2019	26 Sep 2019	09 Oct 2019	03 Oct 2019	09 Oct 2019	03 Oct 2019
TP64	SE198143.013	LB184591	25 Sep 2019	26 Sep 2019	09 Oct 2019	03 Oct 2019	09 Oct 2019	03 Oct 2019
TP72	SE198143.027	LB184591	25 Sep 2019	26 Sep 2019	09 Oct 2019	03 Oct 2019	09 Oct 2019	03 Oct 2019
TP73	SE198143.030	LB184591	25 Sep 2019	26 Sep 2019	09 Oct 2019	03 Oct 2019	09 Oct 2019	03 Oct 2019
DDS8	SE198143.033	LB184591	25 Sep 2019	26 Sep 2019	09 Oct 2019	03 Oct 2019	09 Oct 2019	03 Oct 2019

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP58	SE198143.001	LB184394	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP58	SE198143.002	LB184394	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP59	SE198143.003	LB184394	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP60	SE198143.004	LB184394	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP60	SE198143.005	LB184394	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP61	SE198143.006	LB184394	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP62	SE198143.007	LB184394	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP62	SE198143.008	LB184394	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP63	SE198143.009	LB184394	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP63	SE198143.010	LB184394	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP63	SE198143.011	LB184394	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP64	SE198143.012	LB184394	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP64	SE198143.013	LB184394	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP64	SE198143.014	LB184394	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP65	SE198143.015	LB184394	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP65	SE198143.016	LB184394	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP66	SE198143.017	LB184394	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP67	SE198143.018	LB184394	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP67	SE198143.019	LB184394	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP68	SE198143.020	LB184395	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP69	SE198143.021	LB184395	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP69	SE198143.022	LB184395	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP70	SE198143.023	LB184395	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP71	SE198143.024	LB184395	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP71	SE198143.025	LB184395	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP72	SE198143.026	LB184395	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP72	SE198143.027	LB184395	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP72	SE198143.028	LB184395	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP73	SE198143.029	LB184395	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP73	SE198143.030	LB184395	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
TP73	SE198143.031	LB184395	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
DDS7	SE198143.032	LB184395	25 Sep 2019	26 Sep 2019	23 Mar 2020	01 Oct 2019	23 Mar 2020	03 Oct 2019
DDS8	SE198143.033	LB185034	25 Sep 2019	26 Sep 2019	23 Mar 2020	10 Oct 2019	23 Mar 2020	10 Oct 2019

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP58	SE198143.001	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP59	SE198143.003	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP60	SE198143.004	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP61	SE198143.006	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP62	SE198143.007	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP63	SE198143.009	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP63	SE198143.010	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP64	SE198143.012	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP64	SE198143.013	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP65	SE198143.015	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP66	SE198143.017	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP67	SE198143.018	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP68	SE198143.020	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP69	SE198143.021	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP70	SE198143.023	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP71	SE198143.024	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP72	SE198143.026	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP72	SE198143.027	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP73	SE198143.029	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
TP73	SE198143.030	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
DDS7	SE198143.032	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019
DDS8	SE198143.033	LB184137	25 Sep 2019	26 Sep 2019	09 Oct 2019	27 Sep 2019	06 Nov 2019	02 Oct 2019

## TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS3	SE198143.034	LB184345	25 Sep 2019	26 Sep 2019	02 Oct 2019	01 Oct 2019	10 Nov 2019	03 Oct 2019

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP63	SE198143.010	LB184266	25 Sep 2019	26 Sep 2019	09 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP64	SE198143.013	LB184266	25 Sep 2019	26 Sep 2019	09 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP72	SE198143.027	LB184266	25 Sep 2019	26 Sep 2019	09 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP73	SE198143.030	LB184266	25 Sep 2019	26 Sep 2019	09 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
DDS8	SE198143.033	LB184266	25 Sep 2019	26 Sep 2019	09 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TS3	SE198143.035	LB184266	25 Sep 2019	26 Sep 2019	09 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019

## VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS3	SE198143.034	LB184371	25 Sep 2019	26 Sep 2019	02 Oct 2019	01 Oct 2019	10 Nov 2019	02 Oct 2019

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref
-------------	------------	--------

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

## Volatile Petroleum Hydrocarbons in Soil (continued)

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP63	SE198143.010	LB184266	25 Sep 2019	26 Sep 2019	09 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP64	SE198143.013	LB184266	25 Sep 2019	26 Sep 2019	09 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP72	SE198143.027	LB184266	25 Sep 2019	26 Sep 2019	09 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TP73	SE198143.030	LB184266	25 Sep 2019	26 Sep 2019	09 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
DDS8	SE198143.033	LB184266	25 Sep 2019	26 Sep 2019	09 Oct 2019	30 Sep 2019	09 Nov 2019	01 Oct 2019
TS3	SE198143.035	LB184266	25 Sep 2019	26 Sep 2019	09 Oct 2019	30 Sep 2019	09 Nov 2019	02 Oct 2019

## Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS3	SE198143.034	LB184371	25 Sep 2019	26 Sep 2019	02 Oct 2019	01 Oct 2019	10 Nov 2019	02 Oct 2019

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	TP58	SE198143.001	%	60 - 130%	90
	TP59	SE198143.003	%	60 - 130%	89
	TP60	SE198143.004	%	60 - 130%	98
	TP61	SE198143.006	%	60 - 130%	89
	TP62	SE198143.007	%	60 - 130%	76
	TP63	SE198143.009	%	60 - 130%	85
	TP63	SE198143.010	%	60 - 130%	89
	TP64	SE198143.012	%	60 - 130%	87
	TP64	SE198143.013	%	60 - 130%	89
	TP65	SE198143.015	%	60 - 130%	86
	TP66	SE198143.017	%	60 - 130%	79
	TP67	SE198143.018	%	60 - 130%	90
	TP68	SE198143.020	%	60 - 130%	87
	TP69	SE198143.021	%	60 - 130%	87
	TP70	SE198143.023	%	60 - 130%	85
	TP71	SE198143.024	%	60 - 130%	87
	TP72	SE198143.026	%	60 - 130%	88
	TP72	SE198143.027	%	60 - 130%	89
	TP73	SE198143.029	%	60 - 130%	84
	TP73	SE198143.030	%	60 - 130%	94
	DDS7	SE198143.032	%	60 - 130%	90

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	TP63	SE198143.010	%	70 - 130%	72
	TP64	SE198143.013	%	70 - 130%	80
	TP72	SE198143.027	%	70 - 130%	76
	TP73	SE198143.030	%	70 - 130%	80
	DDS8	SE198143.033	%	70 - 130%	80
d14-p-terphenyl (Surrogate)	TP63	SE198143.010	%	70 - 130%	86
	TP64	SE198143.013	%	70 - 130%	96
	TP72	SE198143.027	%	70 - 130%	90
	TP73	SE198143.030	%	70 - 130%	96
	DDS8	SE198143.033	%	70 - 130%	92
d5-nitrobenzene (Surrogate)	TP63	SE198143.010	%	70 - 130%	84
	TP64	SE198143.013	%	70 - 130%	92
	TP72	SE198143.027	%	70 - 130%	88
	TP73	SE198143.030	%	70 - 130%	92
	DDS8	SE198143.033	%	70 - 130%	88

## PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	RS3	SE198143.034	%	40 - 130%	48
d14-p-terphenyl (Surrogate)	RS3	SE198143.034	%	40 - 130%	74
d5-nitrobenzene (Surrogate)	RS3	SE198143.034	%	40 - 130%	42

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	TP63	SE198143.010	%	60 - 130%	89
	TP64	SE198143.013	%	60 - 130%	89
	TP72	SE198143.027	%	60 - 130%	89
	TP73	SE198143.030	%	60 - 130%	94

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	TP63	SE198143.010	%	60 - 130%	83
	TP64	SE198143.013	%	60 - 130%	84
	TP72	SE198143.027	%	60 - 130%	83
	TP73	SE198143.030	%	60 - 130%	83
	DDS8	SE198143.033	%	60 - 130%	79
	TS3	SE198143.035	%	60 - 130%	82
d4-1,2-dichloroethane (Surrogate)	TP63	SE198143.010	%	60 - 130%	84
	TP64	SE198143.013	%	60 - 130%	81

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d4-1,2-dichloroethane (Surrogate)	TP72	SE198143.027	%	60 - 130%	85
	TP73	SE198143.030	%	60 - 130%	83
	DDS8	SE198143.033	%	60 - 130%	88
	TS3	SE198143.035	%	60 - 130%	85
d8-toluene (Surrogate)	TP63	SE198143.010	%	60 - 130%	81
	TP64	SE198143.013	%	60 - 130%	83
	TP72	SE198143.027	%	60 - 130%	87
	TP73	SE198143.030	%	60 - 130%	81
	DDS8	SE198143.033	%	60 - 130%	88
	TS3	SE198143.035	%	60 - 130%	85

## VOCs in Water

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	RS3	SE198143.034	%	40 - 130%	80
d4-1,2-dichloroethane (Surrogate)	RS3	SE198143.034	%	40 - 130%	110
d8-toluene (Surrogate)	RS3	SE198143.034	%	40 - 130%	95

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	TP63	SE198143.010	%	60 - 130%	83
	TP64	SE198143.013	%	60 - 130%	84
	TP72	SE198143.027	%	60 - 130%	83
	TP73	SE198143.030	%	60 - 130%	83
	DDS8	SE198143.033	%	60 - 130%	79
d4-1,2-dichloroethane (Surrogate)	TP63	SE198143.010	%	60 - 130%	84
	TP64	SE198143.013	%	60 - 130%	81
	TP72	SE198143.027	%	60 - 130%	85
	TP73	SE198143.030	%	60 - 130%	83
	DDS8	SE198143.033	%	60 - 130%	88
d8-toluene (Surrogate)	TP63	SE198143.010	%	60 - 130%	81
	TP64	SE198143.013	%	60 - 130%	83
	TP72	SE198143.027	%	60 - 130%	87
	TP73	SE198143.030	%	60 - 130%	81
	DDS8	SE198143.033	%	60 - 130%	88

## Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	RS3	SE198143.034	%	40 - 130%	80
d4-1,2-dichloroethane (Surrogate)	RS3	SE198143.034	%	60 - 130%	110
d8-toluene (Surrogate)	RS3	SE198143.034	%	40 - 130%	95

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-(ENV)AN122

Sample Number	Parameter	Units	LOR	Result
LB184232.001	Exchangeable Sodium, Na	mg/kg	2	0
	Exchangeable Potassium, K	mg/kg	2	0
	Exchangeable Calcium, Ca	mg/kg	2	0
	Exchangeable Magnesium, Mg	mg/kg	2	0

## Mercury (dissolved) in Water

Method: ME-(AU)-(ENV)AN311(Perth)/AN312

Sample Number	Parameter	Units	LOR	Result
LB184193.001	Mercury	mg/L	0.0001	<0.0001

## Mercury in Soil

Method: ME-(AU)-(ENV)AN312

Sample Number	Parameter	Units	LOR	Result
LB184400.001	Mercury	mg/kg	0.05	<0.05
LB184401.001	Mercury	mg/kg	0.05	<0.05
LB185035.001	Mercury	mg/kg	0.05	NVL

## Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-(ENV)AN320

Sample Number	Parameter	Units	LOR	Result
LB184324.001	Arsenic, As	mg/L	0.02	<0.02
	Cadmium, Cd	mg/L	0.001	<0.001
	Chromium, Cr	mg/L	0.005	<0.005
	Copper, Cu	mg/L	0.005	<0.005
	Lead, Pb	mg/L	0.02	<0.02
	Nickel, Ni	mg/L	0.005	<0.005
	Zinc, Zn	mg/L	0.01	<0.01

## OC Pesticides in Soil

Method: ME-(AU)-(ENV)AN420

Sample Number	Parameter	Units	LOR	Result
LB184137.001	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Alpha BHC	mg/kg	0.1	<0.1
	Lindane	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	<0.2
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.05	<0.05
	Endrin	mg/kg	0.2	<0.2
	Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	Endrin Aldehyde	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Endrin Ketone	mg/kg	0.1	<0.1
	Isodrin	mg/kg	0.1	<0.1
	Mirex	mg/kg	0.1	<0.1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	80

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-(ENV)AN420

Sample Number	Parameter	Units	LOR	Result
LB184137.001	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

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB184137.001	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(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
	Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates			
	d5-nitrobenzene (Surrogate)	%	-	92
	2-fluorobiphenyl (Surrogate)	%	-	84
	d14-p-terphenyl (Surrogate)	%	-	90

## PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB184345.001	Naphthalene	µg/L	0.1	<0.1
	2-methylnaphthalene	µg/L	0.1	<0.1
	1-methylnaphthalene	µg/L	0.1	<0.1
	Acenaphthylene	µg/L	0.1	<0.1
	Acenaphthene	µg/L	0.1	<0.1
	Fluorene	µg/L	0.1	<0.1
	Phenanthrene	µg/L	0.1	<0.1
	Anthracene	µg/L	0.1	<0.1
	Fluoranthene	µg/L	0.1	<0.1
	Pyrene	µg/L	0.1	<0.1
	Benzo(a)anthracene	µg/L	0.1	<0.1
	Chrysene	µg/L	0.1	<0.1
	Benzo(a)pyrene	µg/L	0.1	<0.1
	Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1
	Dibenzo(ah)anthracene	µg/L	0.1	<0.1
	Benzo(ghi)perylene	µg/L	0.1	<0.1
	Surrogates			
	d5-nitrobenzene (Surrogate)	%	-	62
	2-fluorobiphenyl (Surrogate)	%	-	64
	d14-p-terphenyl (Surrogate)	%	-	72

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB184137.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2
	Arochlor 1254	mg/kg	0.2	<0.2
	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates			
	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	80

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR	Result
LB184591.001	Total Phenols	mg/kg	5	<5.0

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB184394.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB184394.001	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2
LB184395.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2
LB185034.001	Arsenic, As	mg/kg	1	-0.0904166666666667
	Cadmium, Cd	mg/kg	0.3	-0.0104166666666667
	Chromium, Cr	mg/kg	0.5	-0.005
	Copper, Cu	mg/kg	0.5	0.0466666666666667
	Nickel, Ni	mg/kg	0.5	0.0225
	Lead, Pb	mg/kg	1	0.0695833333333333
	Zinc, Zn	mg/kg	2	-0.2066666666666667

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB184137.001	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-C36 Total	mg/kg	110	<110

## TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB184345.001	TRH C10-C14	µg/L	50	<50
	TRH C15-C28	µg/L	200	<200
	TRH C29-C36	µg/L	200	<200
	TRH C37-C40	µg/L	200	<200

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB184266.001	Monocyclic Aromatic Hydrocarbons	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
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	86
		d8-toluene (Surrogate)	%	-	85
		Bromofluorobenzene (Surrogate)	%	-	83
	Totals	Total BTEX	mg/kg	0.6	<0.6

## VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB184371.001	Monocyclic Aromatic	Benzene	µg/L	0.5	<0.5
		Hydrocarbons	Toluene	µg/L	0.5
		Ethylbenzene	µg/L	0.5	<0.5
		m/p-xylene	µg/L	1	<1
		o-xylene	µg/L	0.5	<0.5
	Polycyclic VOCs	Naphthalene	µg/L	0.5	<0.5
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	110
		d8-toluene (Surrogate)	%	-	98
		Bromofluorobenzene (Surrogate)	%	-	79

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result
LB184266.001	TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-



Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result
LB184371.001	TRH C6-C9	µg/L	40	<40
	Surrogates			
	d4-1,2-dichloroethane (Surrogate)	%	-	110
	d8-toluene (Surrogate)	%	-	98
	Bromofluorobenzene (Surrogate)	%	-	79

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198149.006	LB184193.014	Mercury	µg/L	0.0001	<0.0001	<0.0001	200	199
SE198178.004	LB184193.020	Mercury	µg/L	0.0001	<0.0001	0.0000	200	57

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198143.010	LB184400.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE198143.019	LB184400.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE198143.029	LB184401.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE198234.005	LB184401.023	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

## Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198228.034	LB184324.014	Arsenic, As	mg/L	0.02	<0.02	<0.02	200	0
		Cadmium, Cd	mg/L	0.001	<0.001	<0.001	200	0
		Chromium, Cr	mg/L	0.005	<0.005	<0.005	200	0
		Copper, Cu	mg/L	0.005	<0.005	<0.005	200	0
		Lead, Pb	mg/L	0.02	<0.02	<0.02	200	0
		Nickel, Ni	mg/L	0.005	<0.005	<0.005	200	0
		Zinc, Zn	mg/L	0.01	<0.01	<0.01	200	0

## Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198143.020	LB184139.022	% Moisture	%w/w	1	16.0	16.9	36	5
SE198143.030	LB184139.033	% Moisture	%w/w	1	17.6	17.9	36	1

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198143.015	LB184137.032	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.05	<0.05	<0.05	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates						
		Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.12	30	10
SE198143.032	LB184137.033	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]JAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198143.032	LB184137.033	Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.05	<0.05	<0.05	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.14	30	2

## pH in soil (1:5)

Method: ME-(AU)-[ENV]JAN101

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198143.016	LB184154.014	pH	pH Units	0.1	4.6	4.6	32	0
SE198143.031	LB184154.023	pH	pH Units	0.1	5.1	5.0	32	1

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]JAN289

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198143.010	LB184591.004	Total Phenols	mg/kg	5	<5.0	<5.0	200	0

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]JAN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198143.010	LB184394.014	Arsenic, As	mg/kg	1	2	2	79	21
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	2.2	1.5	57	35
		Copper, Cu	mg/kg	0.5	6.2	5.6	38	11
		Nickel, Ni	mg/kg	0.5	<0.5	<0.5	200	0
		Lead, Pb	mg/kg	1	3	2	65	24
		Zinc, Zn	mg/kg	2	<2	<2	179	0
SE198143.019	LB184394.024	Arsenic, As	mg/kg	1	2	<1	107	63
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	2.8	1.9	51	39
		Copper, Cu	mg/kg	0.5	4.3	3.4	43	23
		Nickel, Ni	mg/kg	0.5	<0.5	<0.5	183	0
		Lead, Pb	mg/kg	1	4	3	56	34
		Zinc, Zn	mg/kg	2	<2	<2	152	0
SE198143.029	LB184395.014	Arsenic, As	mg/kg	1	4	4	56	7
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	13	13	34	1
		Copper, Cu	mg/kg	0.5	2.6	2.8	49	9
		Nickel, Ni	mg/kg	0.5	1.7	1.7	60	3
		Lead, Pb	mg/kg	1	12	13	38	5
		Zinc, Zn	mg/kg	2	9	9	53	1
SE198234.005	LB184395.023	Arsenic, As	mg/kg	1	9	9	41	3
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

#### Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198234.005	LB184395.023	Chromium, Cr	mg/kg	0.5	14	15	33	11
		Copper, Cu	mg/kg	0.5	10	11	35	8
		Nickel, Ni	mg/kg	0.5	2.6	3.0	48	13
		Lead, Pb	mg/kg	1	66	63	32	5
		Zinc, Zn	mg/kg	2	50	51	34	1

#### TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198149.007	LB184345.025	TRH C10-C14	µg/L	50	57	72	108	23
		TRH C15-C28	µg/L	200	240	255	111	7
		TRH C29-C36	µg/L	200	<200	0	200	0
		TRH C37-C40	µg/L	200	<200	0	200	0
		TRH C10-C36	µg/L	450	<450	327	175	0
		TRH C10-C40	µg/L	650	<650	327	200	0
		TRH F Bands	µg/L	60	79	92	100	15
		TRH >C16-C34 (F3)	µg/L	500	<500	0	200	0
		TRH >C34-C40 (F4)	µg/L	500	<500	0	200	0

#### VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198143.033	LB184266.022	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.8	9.2	50	3
			d8-toluene (Surrogate)	mg/kg	-	8.8	8.9	50	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.9	8.6	50	8
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE198144.061	LB184266.024	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.2	8.2	50	0
			d8-toluene (Surrogate)	mg/kg	-	8.0	8.1	50	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.0	7.9	50	2
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0

#### VOCs in Water

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE198143.034	LB184371.030	Monocyclic	Benzene	µg/L	0.5	<0.5	<0.5	200	0	
			Aromatic	Toluene	µg/L	0.5	<0.5	<0.5	200	0
			Ethylbenzene	µg/L	0.5	<0.5	<0.5	200	0	
			m/p-xylene	µg/L	1	<1	<1	200	0	
			o-xylene	µg/L	0.5	<0.5	<0.5	200	0	
			Polycyclic	Naphthalene	µg/L	0.5	<0.5	<0.5	200	0
			Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	11.0	12.0	30	9
		d8-toluene (Surrogate)		µg/L	-	9.5	9.8	30	3	
		Bromofluorobenzene (Surrogate)		µg/L	-	8.0	7.9	30	1	
SE198149.005	LB184371.031	Monocyclic	Benzene	µg/L	0.5	<0.5	0.5928851929	123	17	
			Aromatic	Toluene	µg/L	0.5	<0.5	0.0609576576	200	0
			Ethylbenzene	µg/L	0.5	<0.5	0.4917173128	200	0	
			m/p-xylene	µg/L	1	<1	0.4908798357	200	0	
			o-xylene	µg/L	0.5	<0.5	0.4590742543	200	0	
			Polycyclic	Naphthalene	µg/L	0.5	<0.5	0	200	0
			Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.6	9.8622012889	30	7
		d8-toluene (Surrogate)		µg/L	-	9.8	8.5059347794	30	14	

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## VOCs in Water (continued)

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198149.005	LB184371.031	Surrogates	Bromofluorobenzene (Surrogate)	µg/L	-	10.7	9.9300496973	30	7

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE198143.033	LB184266.023	TRH C6-C10	mg/kg	25	<25	<25	200	0	
		TRH C6-C9	mg/kg	20	<20	<20	200	0	
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.8	9.2	30	3
			d8-toluene (Surrogate)	mg/kg	-	8.8	8.9	30	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.9	8.6	30	8
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE198144.061	LB184266.024	TRH C6-C10	mg/kg	25	<25	<25	200	0	
		TRH C6-C9	mg/kg	20	<20	<20	200	0	
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.2	8.2	30	0
			d8-toluene (Surrogate)	mg/kg	-	8.0	8.1	30	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.0	7.9	30	2
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

## Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE198143.034	LB184371.028	TRH C6-C10	µg/L	50	<50	<50	200	0	
		TRH C6-C9	µg/L	40	<40	<40	200	0	
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	11.0	12.0	30	9
			d8-toluene (Surrogate)	µg/L	-	9.5	9.8	30	3
			Bromofluorobenzene (Surrogate)	µg/L	-	8.0	7.9	30	1
		VPH F Bands	Benzene (F0)	µg/L	0.5	<0.5	<0.5	200	0
			TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50	200	0
		SE198149.005	LB184371.029	TRH C6-C10	µg/L	50	<50	11.6572079462	200
TRH C6-C9	µg/L			40	<40	9.1887496665	200	0	
Surrogates	d4-1,2-dichloroethane (Surrogate)			µg/L	-	10.6	9.8622012889	30	7
	d8-toluene (Surrogate)			µg/L	-	9.8	8.5059347794	30	14
	Bromofluorobenzene (Surrogate)			µg/L	-	10.7	9.9300496973	30	7
VPH F Bands	Benzene (F0)			µg/L	0.5	<0.5	0.5928851929	123	17
	TRH C6-C10 minus BTEX (F1)			µg/L	50	<50	9.5616936926	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

#### Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184232.002	Exchangeable Sodium, Na	mg/kg	2	NA	72.68	80 - 120	114
	Exchangeable Potassium, K	mg/kg	2	NA	238.12	80 - 120	100
	Exchangeable Calcium, Ca	mg/kg	2	NA	692	80 - 120	106
	Exchangeable Magnesium, Mg	mg/kg	2	NA	134.2	80 - 120	104

#### Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184400.002	Mercury	mg/kg	0.05	0.20	0.2	70 - 130	101
LB184401.002	Mercury	mg/kg	0.05	0.19	0.2	70 - 130	96

#### Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184324.002	Arsenic, As	mg/L	0.02	0.52	0.5	80 - 120	104
	Cadmium, Cd	mg/L	0.001	0.47	0.5	80 - 120	95
	Chromium, Cr	mg/L	0.005	0.49	0.5	80 - 120	98
	Copper, Cu	mg/L	0.005	0.49	0.5	80 - 120	97
	Lead, Pb	mg/L	0.02	0.49	0.5	80 - 120	98
	Nickel, Ni	mg/L	0.005	0.48	0.5	80 - 120	97
	Zinc, Zn	mg/L	0.01	0.48	0.5	80 - 120	96

#### OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184137.002	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	93
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	93
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	87
	Dieldrin	mg/kg	0.05	0.19	0.2	60 - 140	93
	Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	90
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	85
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.15	40 - 130

#### PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB184137.002	Naphthalene	mg/kg	0.1	4.2	4	60 - 140	105	
	Acenaphthylene	mg/kg	0.1	4.4	4	60 - 140	110	
	Acenaphthene	mg/kg	0.1	4.4	4	60 - 140	109	
	Phenanthrene	mg/kg	0.1	4.5	4	60 - 140	113	
	Anthracene	mg/kg	0.1	4.2	4	60 - 140	105	
	Fluoranthene	mg/kg	0.1	4.2	4	60 - 140	104	
	Pyrene	mg/kg	0.1	4.4	4	60 - 140	110	
	Benzo(a)pyrene	mg/kg	0.1	4.4	4	60 - 140	110	
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	90
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	84
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	84

#### PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB184345.002	Naphthalene	µg/L	0.1	27	40	60 - 140	69	
	Acenaphthylene	µg/L	0.1	33	40	60 - 140	83	
	Acenaphthene	µg/L	0.1	30	40	60 - 140	75	
	Phenanthrene	µg/L	0.1	35	40	60 - 140	87	
	Anthracene	µg/L	0.1	31	40	60 - 140	77	
	Fluoranthene	µg/L	0.1	33	40	60 - 140	82	
	Pyrene	µg/L	0.1	32	40	60 - 140	81	
	Benzo(a)pyrene	µg/L	0.1	34	40	60 - 140	86	
	Surrogates	d5-nitrobenzene (Surrogate)	µg/L	-	0.3	0.5	40 - 130	62
		2-fluorobiphenyl (Surrogate)	µg/L	-	0.3	0.5	40 - 130	64
		d14-p-terphenyl (Surrogate)	µg/L	-	0.4	0.5	40 - 130	70

#### PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184137.002	Arochlor 1260	mg/kg	0.2	0.5	0.4	60 - 140	113

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

#### pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184154.003	pH	pH Units	0.1	7.4	7.415	98 - 102	99

#### Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184591.002	Total Phenols	mg/kg	5	<5.0	2.5	70 - 130	97

#### Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184394.002	Arsenic, As	mg/kg	1	320	318.22	80 - 120	100
	Cadmium, Cd	mg/kg	0.3	4.8	4.62	80 - 120	105
	Chromium, Cr	mg/kg	0.5	38	38.31	80 - 120	99
	Copper, Cu	mg/kg	0.5	290	290	80 - 120	99
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	102
	Lead, Pb	mg/kg	1	95	89.9	80 - 120	106
	Zinc, Zn	mg/kg	2	280	273	80 - 120	103
LB184395.002	Arsenic, As	mg/kg	1	310	318.22	80 - 120	99
	Cadmium, Cd	mg/kg	0.3	5.2	4.62	80 - 120	112
	Chromium, Cr	mg/kg	0.5	35	38.31	80 - 120	91
	Copper, Cu	mg/kg	0.5	290	290	80 - 120	99
	Nickel, Ni	mg/kg	0.5	180	187	80 - 120	96
	Lead, Pb	mg/kg	1	95	89.9	80 - 120	106
	Zinc, Zn	mg/kg	2	280	273	80 - 120	101
LB185034.002	Arsenic, As	mg/kg	1	NA	318.22	80 - 120	97
	Cadmium, Cd	mg/kg	0.3	NA	4.62	80 - 120	106
	Chromium, Cr	mg/kg	0.5	NA	38.31	80 - 120	89
	Copper, Cu	mg/kg	0.5	NA	290	80 - 120	102
	Nickel, Ni	mg/kg	0.5	NA	187	80 - 120	97
	Lead, Pb	mg/kg	1	NA	89.9	80 - 120	102
	Zinc, Zn	mg/kg	2	NA	273	80 - 120	104

#### TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184137.002	TRH C10-C14	mg/kg	20	43	40	60 - 140	108
	TRH C15-C28	mg/kg	45	<45	40	60 - 140	95
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	78
	TRH F Bands						
	TRH >C10-C16	mg/kg	25	41	40	60 - 140	103
	TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	88
	TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	75

#### TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184345.002	TRH C10-C14	µg/L	50	1200	1200	60 - 140	102
	TRH C15-C28	µg/L	200	1300	1200	60 - 140	111
	TRH C29-C36	µg/L	200	1300	1200	60 - 140	110
	TRH F Bands						
	TRH >C10-C16	µg/L	60	1300	1200	60 - 140	108
	TRH >C16-C34 (F3)	µg/L	500	1400	1200	60 - 140	113
	TRH >C34-C40 (F4)	µg/L	500	660	600	60 - 140	110

#### VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184266.002	Monocyclic	Benzene	mg/kg	0.1	5.4	5	60 - 140	108
	Aromatic	Toluene	mg/kg	0.1	3.6	5	60 - 140	72
		Ethylbenzene	mg/kg	0.1	4.7	5	60 - 140	94
		m/p-xylene	mg/kg	0.2	10	10	60 - 140	104
	o-xylene	mg/kg	0.1	5.2	5	60 - 140	103	
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	10	70 - 130	92
		d8-toluene (Surrogate)	mg/kg	-	8.8	10	70 - 130	88
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.0	10	70 - 130	90

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

#### VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB184371.002	Monocyclic	Benzene	µg/L	0.5	48	45.45	60 - 140
	Aromatic	Toluene	µg/L	0.5	44	45.45	60 - 140
		Ethylbenzene	µg/L	0.5	47	45.45	60 - 140
		m/p-xylene	µg/L	1	90	90.9	60 - 140
		o-xylene	µg/L	0.5	45	45.45	60 - 140
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.2	10	60 - 140
		d8-toluene (Surrogate)	µg/L	-	9.1	10	60 - 140
		Bromofluorobenzene (Surrogate)	µg/L	-	10.2	10	60 - 140

#### Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB184266.002	TRH C6-C10	mg/kg	25	93	92.5	60 - 140	100	
	TRH C6-C9	mg/kg	20	83	80	60 - 140	103	
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	10	70 - 130	92
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.0	10	70 - 130	90
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	63	62.5	60 - 140	101

#### Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB184371.002	TRH C6-C10	µg/L	50	740	946.63	60 - 140	78	
	TRH C6-C9	µg/L	40	690	818.71	60 - 140	84	
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.2	10	60 - 140	92
		d8-toluene (Surrogate)	µg/L	-	9.1	10	60 - 140	91
		Bromofluorobenzene (Surrogate)	µg/L	-	10.2	10	60 - 140	102
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	460	639.67	60 - 140	72



Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198143.001	LB184400.004	Mercury	mg/kg	0.05	0.20	<0.05	0.2	94
SE198143.020	LB184401.004	Mercury	mg/kg	0.05	0.18	<0.05	0.2	84

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198143.001	LB184137.004	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Lindane	mg/kg	0.1	<0.1	<0.1	-	-
		Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	99
		Aldrin	mg/kg	0.1	0.2	<0.1	0.2	103
		Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	100
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
		Dieldrin	mg/kg	0.05	0.20	<0.05	0.2	102
		Endrin	mg/kg	0.2	<0.2	<0.2	0.2	93
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	-	-
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	76
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	-	-
		Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
		Mirex	mg/kg	0.1	<0.1	<0.1	-	-
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.14	-	95

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198143.033	LB184591.009	Total Phenols	mg/kg	5	<5.0	<5.0	2.5	84

## Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198143.001	LB184394.004	Arsenic, As	mg/kg	1	47	3	50	88
		Cadmium, Cd	mg/kg	0.3	42	<0.3	50	85
		Chromium, Cr	mg/kg	0.5	64	12	50	103
		Copper, Cu	mg/kg	0.5	48	2.5	50	91
		Nickel, Ni	mg/kg	0.5	49	2.2	50	93
		Lead, Pb	mg/kg	1	61	14	50	93
		Zinc, Zn	mg/kg	2	56	9	50	94
SE198143.020	LB184395.004	Arsenic, As	mg/kg	1	47	5	50	83
		Cadmium, Cd	mg/kg	0.3	39	<0.3	50	78
		Chromium, Cr	mg/kg	0.5	54	13	50	83
		Copper, Cu	mg/kg	0.5	48	3.6	50	88
		Nickel, Ni	mg/kg	0.5	46	2.2	50	87
		Lead, Pb	mg/kg	1	58	15	50	85
		Zinc, Zn	mg/kg	2	56	10	50	91

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR
-----------	---------------	-----------	-------	-----

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%	
SE198143.010	LB184266.004	Monocyclic	Benzene	mg/kg	0.1	4.8	<0.1	5	95	
			Aromatic	Toluene	mg/kg	0.1	4.8	<0.1	5	96
			Ethylbenzene	mg/kg	0.1	4.8	<0.1	5	96	
			m/p-xylene	mg/kg	0.2	9.6	<0.2	10	96	
			o-xylene	mg/kg	0.1	4.8	<0.1	5	97	
			Polycyclic	Naphthalene	mg/kg	0.1	4.5	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)		mg/kg	-	9.2	8.4	10	92
			d8-toluene (Surrogate)		mg/kg	-	9.4	8.1	10	94
			Bromofluorobenzene (Surrogate)		mg/kg	-	9.5	8.3	10	95
		Totals	Total Xylenes		mg/kg	0.3	14	<0.3	-	-
Total BTEX			mg/kg	0.6	29	<0.6	-	-		

## VOCs in Water

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE198149.001	LB184371.023	Monocyclic  Aromatic	Benzene	µg/L	0.5	51	<0.5	45.45	111
			Toluene	µg/L	0.5	51	<0.5	45.45	112
			Ethylbenzene	µg/L	0.5	49	<0.5	45.45	108
			m/p-xylene	µg/L	1	99	<1	90.9	108
			o-xylene	µg/L	0.5	49	<0.5	45.45	108
		Polycyclic	Naphthalene	µg/L	0.5	63	<0.5	-	-
			Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.5	10.8	-
		d8-toluene (Surrogate)		µg/L	-	10.2	9.7	-	102
		Bromofluorobenzene (Surrogate)		µg/L	-	10.5	8.1	-	105

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%	
SE198143.010	LB184266.004	TRH C6-C10	mg/kg	25	85	<25	92.5	91	
		TRH C6-C9	mg/kg	20	74	<20	80	92	
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	8.4	10	92
			d8-toluene (Surrogate)	mg/kg	-	9.4	8.1	10	94
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.5	8.3	-	95
		VPH F	Benzene (F0)	mg/kg	0.1	4.8	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	56	<25	62.5	89

## Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%	
SE198149.001	LB184371.023	TRH C6-C10	µg/L	50	940	<50	946.63	99	
		TRH C6-C9	µg/L	40	830	<40	818.71	99	
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.5	10.8	-	105
			d8-toluene (Surrogate)	µg/L	-	10.2	9.7	-	102
			Bromofluorobenzene (Surrogate)	µg/L	-	10.5	8.1	-	105
		VPH F	Benzene (F0)	µg/L	0.5	51	<0.5	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	640	<50	639.67	99

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here : [https://www.sgs.com.au/~media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022\\_QA\\_QC\\_Plan.pdf](https://www.sgs.com.au/~media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022_QA_QC_Plan.pdf)

- \* NATA accreditation does not cover the performance of this service .
  - \*\* Indicative data, theoretical holding time exceeded.
  - Sample not analysed for this analyte.
  - IS Insufficient sample for analysis.
  - LNR Sample listed, but not received.
  - LOR Limit of reporting.
  - QFH QC result is above the upper tolerance.
  - QFL QC result is below the lower tolerance.
- 
- ① At least 2 of 3 surrogates are within acceptance criteria.
  - ② RPD failed acceptance criteria due to sample heterogeneity.
  - ③ Results less than 5 times LOR preclude acceptance criteria for RPD.
  - ④ Recovery failed acceptance criteria due to matrix interference.
  - ⑤ Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
  - ⑥ LOR was raised due to sample matrix interference.
  - ⑦ LOR was raised due to dilution of significantly high concentration of analyte in sample.
  - ⑧ Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
  - ⑨ Recovery failed acceptance criteria due to sample heterogeneity.
  - ⑩ LOR was raised due to high conductivity of the sample (required dilution).
  - † Refer to Analytical Report comments for further information.

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law .

This test report shall not be reproduced, except in full.

## CLIENT DETAILS

Contact Anwar Barbhuyia  
 Client Geotechnique  
 Address P.O. Box 880  
 PENRITH NSW 2751

Telephone 02 4722 2700  
 Facsimile 02 4722 6161  
 Email anwar@geotech.com.au

Project **14513-2 Marsden Park**  
 Order Number (Not specified)  
 Samples 4

## 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 **SE198143 R1**  
 Date Received 26 Sep 2019  
 Date Reported 10 Oct 2019

## COMMENTS

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

This report cancels and supersedes the report No.SE198143 R0 dated 10/10/19 issued by SGS Environment, Health and Safety due to the inclusion of 8HM results for sample #33 as per COC.


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

Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

## SIGNATORIES




Bennet LO  
 Senior Organic Chemist/Metals Chemis



Dong LIANG  
 Metals/Inorganics Team Leader



Huong CRAWFORD  
 Production Manager



Kamrul AHSAN  
 Senior Chemist



Ly Kim HA  
 Organic Section Head



Ravee SIVASUBRAMANIAM  
 Hygiene Team Leader

### RESULTS

#### Fibre Identification in soil

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE198143.010	TP63	Soil	352g Clay, Rocks	25 Sep 2019	No Asbestos Found	<0.01
SE198143.013	TP64	Soil	311g Clay, Rocks	25 Sep 2019	No Asbestos Found	<0.01
SE198143.027	TP72	Soil	325g Clay, Rocks	25 Sep 2019	No Asbestos Found	<0.01
SE198143.030	TP73	Soil	465g Clay, Rocks	25 Sep 2019	No Asbestos Found	<0.01

### Gravimetric Determination of Asbestos in Soil [AN605] Tested: 2/10/2019

PARAMETER	UOM	LOR	TP63	TP64	TP72	TP73
			SOIL 0.2-0.4 25/9/2019 SE198143.010	SOIL 0.2-0.4 25/9/2019 SE198143.013	SOIL 0.2-0.5 25/9/2019 SE198143.027	SOIL 0.2-0.5 25/9/2019 SE198143.030
Total Sample Weight*	g	1	<b>352</b>	<b>311</b>	<b>325</b>	<b>465</b>
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-

## 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 unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
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	<p>The sample can be reported "no asbestos found at the reporting limit of 0.1 g/kg" (&lt;0.01%w/w) where AN602 section 4.5 of this method has been followed, and if-</p> <ul style="list-style-type: none"> <li>(a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres);</li> <li>(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</li> <li>(c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.</li> </ul>
AN605	This technique gravimetrically determines the mass of Asbestos Containing Material retained on a 7mm Sieve and assumes that 15% of this ACM is asbestos. This calculated asbestos weight is then calculated as a percentage of the total sample weight.
AN605	This technique also gravimetrically determines the mass of Fibrous Asbestos (FA) and Asbestos Fines (AF) Containing Material retained on and passing a 2mm sieve post 7mm sieving. Assumes that FA and AF are 100% asbestos containing. This calculated asbestos weight is then calculated as a percentage of the total sample weight. This does not include free fibres which are only observed by standard trace analysis as per AN 602.
AN605	Insofar as is technically feasible, this report is consistent with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment Remediation and Management of Asbestos - Contaminated Sites in Western Australia - May 2009.



# 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.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

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 and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: [www.sgs.com.au/pv.sgsvr/en-gb/environment](http://www.sgs.com.au/pv.sgsvr/en-gb/environment).

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law .

This test report shall not be reproduced, except in full.

**E-MAILED**  
26/9/19 @ 2:04pm

1 LEMKO PLACE PENRITH NSW 2750

Tel: (02) 4722 2700

## CHAIN OF CUSTODY

Results Required By: Normal Turnaround  
Except pH Results Required By 2 days

Date: Thursday, 3 October 2019  
Date: Monday, 30 September 2019

Your Reference No.:

TO: SGS UNIT 16, 33 MADDOX STREET ALEXANDRIA NSW 2015 Tel: 02 8594 0400							Sampled By: IC		Ref No: 14513/2		Project Manager: ANWAR BARBHUYIA														
							Location: Marsden Park																		
Location	Depth (m)	Date	Soil	Water	Material	Metals As Cd Cr Cu Pb Hg Ni Zn	pH	CEC	CL8 TRH BTEX PAH	CL10 Metals* TRH BTEX PAH	CL16 Metals* TRH BTEX PAH OC PCB	Be B Co Mn Se	Mn	Asbestos 0.001% w/w	Asbestos	BTEX	TRH & BTEX	PAH	OCP	OCP & PCB	Phenol	Cyanide	VOC	OCP OPP & PCB	
TP58	0.0-0.15	25/09/19	GP		Clay	✓	✓	✓												✓					
TP58	0.25-0.35	25/09/19	G		Clay	✓	✓	✓																	
TP59	0.0-0.15	25/09/19	GP		Clay	✓														✓					
TP59	0.35-0.45	25/09/19	G		Clay																				
TP60	0.0-0.15	25/09/19	GP		Clay	✓	✓	✓												✓					
TP60	0.25-0.35	25/09/19	G		Clay	✓	✓	✓																	
TP61	0.0-0.15	25/09/19	GP		Clay	✓														✓					
TP61	0.25-0.35	25/09/19	G		Clay																				
TP62	0.0-0.15	25/09/19	GP		Clay	✓	✓	✓												✓					
TP62	0.35-0.45	25/09/19	G		Clay	✓	✓	✓																	
TP63	0.0-0.15	25/09/19	GP		Clay	✓														✓					
TP63	0.2-0.4	25/09/19	GP		Clay		✓	✓			✓			✓								✓			
TP63	0.45-0.55	25/09/19	G		Clay	✓																			
TP64	0.0-0.15	25/09/19	GP		Clay	✓	✓	✓												✓					
TP64	0.2-0.4	25/09/19	GP		Clay		✓	✓			✓			✓								✓			
TP64	0.45-0.55	25/09/19	G		Clay	✓																			
TP65	0.0-0.15	25/09/19	GP		Clay	✓														✓					
TP65	0.25-0.35	25/09/19	G		Clay	✓	✓	✓																	

SGS EHS Alexandria Laboratory



**SE198143 COC**  
Received: 26-Sep-2019

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16

Tel: (02) 4722 2700

**Results Required By: Normal Turnaround**  
**Except pH Results Required By 2 days**

**Date: Monday, 30 September 2019**

**Your Reference No.:**

[illegible]



# GEOTECHNIQUE PTY LTD

1 LEMKO PLACE PENRITH NSW 2750

Tel: (02) 4722 2700

## CHAIN OF CUSTODY

Results Required By: Normal Turnaround  
Except pH Results Required By 2 days

Date: Thursday, 3 October 2019

Date: Monday, 30 September 2019

Your Reference No.:

TO: SGS UNIT 16, 33 MADDOX STREET ALEXANDRIA NSW 2015 Tel: 02 8594 0400							Sampled By: IC		Ref No: 14513/2		Project Manager: ANWAR BARBHUYIA														
							Location: Marsden Park																		
Location	Depth (m)	Date	Soil	Water	Material	Metals As Cd Cr Cu Pb Hg Ni Zn	pH	CEC	CL8 TRH BTEX PAH	CL10 Metals* TRH BTEX PAH	CL16 Metals* TRH BTEX PAH OC PCB	Be B Co Mn Se	Mn	Asbestos 0.001% w/w	Asbestos	BTEX	TRH & BTEX	PAH	OCP	OCP & PCB	Phenol	Cyanide	VOC	OCP OPP & PCB	
32 DDS7		25/09/19	G		Clay	✓													✓						
33 DDS8		25/09/19	G		Clay					✓											✓				
34 RS3		25/09/19		WG/Vial						✓															
35 TS3					Sand											✓									
Relinquished by							Received by																		
Name		Signature		Date		Name		Signature		Date															
ANWAR BARBHUYIA		AB		26/09/19		Anwar Barbhuyia		[Signature]		26/9/19 3.30 p															
WG: Water sample (glass bottle)			G		Soil sample (glass jar)		FCP		Fibro Cement Piece (plastic bag)			*: As,Cd,Cr,Cu,Pb,Hg,Ni & Zn (8 metals)													
WP: Water sample (plastic bottle)			P		Soil sample (plastic bag)		✓		Test required																



## SAMPLE RECEIPT ADVICE

SE198143

### CLIENT DETAILS

Contact Anwar Barbhuyia  
Client Geotechnique  
Address P.O. Box 880  
PENRITH NSW 2751

Telephone 02 4722 2700  
Facsimile 02 4722 6161  
Email anwar@geotech.com.au

Project **14513-2 Marsden Park**  
Order Number (Not specified)  
Samples 35

### 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

Samples Received Thu 26/9/2019  
Report Due Thu 3/10/2019  
SGS Reference **SE198143**

### SUBMISSION DETAILS

This is to confirm that 35 samples were received on Thursday 26/9/2019. Results are expected to be ready by COB Thursday 3/10/2019. Please quote SGS reference SE198143 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	34 Soil, 1 Water
Date documentation received	26/9/2019@2:09pm	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	12°C	Sufficient sample for analysis	Yes
Turnaround time requested	2 Day/Standard		

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

### COMMENTS

5 soil samples have been placed on hold as no tests have been assigned for them by the client. These samples will not be processed.

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

## CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

## SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	pH in soil (1:5)	Total Phenolics in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	TP58 0.0-0.15	28	-	-	1	-	-	-	-
002	TP58 0.25-0.35	-	-	-	1	-	-	-	-
003	TP59 0.0-0.15	28	-	-	-	-	-	-	-
004	TP60 0.0-0.15	28	-	-	1	-	-	-	-
005	TP60 0.25-0.35	-	-	-	1	-	-	-	-
006	TP61 0.0-0.15	28	-	-	-	-	-	-	-
007	TP62 0.0-0.15	28	-	-	1	-	-	-	-
008	TP62 0.35-0.45	-	-	-	1	-	-	-	-
009	TP63 0.0-0.15	28	-	-	-	-	-	-	-
010	TP63 0.2-0.4	28	26	11	1	1	10	11	7
012	TP64 0.0-0.15	28	-	-	1	-	-	-	-
013	TP64 0.2-0.4	28	26	11	1	1	10	11	7
015	TP65 0.0-0.15	28	-	-	-	-	-	-	-
016	TP65 0.25-0.35	-	-	-	1	-	-	-	-
017	TP66 0.0-0.15	28	-	-	1	-	-	-	-
018	TP67 0.0-0.15	28	-	-	-	-	-	-	-
019	TP67 0.25-0.35	-	-	-	1	-	-	-	-
020	TP68 0.0-0.15	28	-	-	1	-	-	-	-
021	TP69 0.0-0.15	28	-	-	-	-	-	-	-
023	TP70 0.0-0.15	28	-	-	1	-	-	-	-
024	TP71 0.0-0.15	28	-	-	-	-	-	-	-

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .

## CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

## SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	pH in soil (1:5)	Total Phenolics in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
026	TP72 0.0-0.15	28	-	-	1	-	-	-	-
027	TP72 0.2-0.5	28	26	11	1	1	10	11	7
029	TP73 0.0-0.15	28	-	-	-	-	-	-	-
030	TP73 0.2-0.5	28	26	11	1	1	10	11	7
031	TP73 0.75-0.85	-	-	-	1	-	-	-	-
032	DDS7	28	-	-	-	-	-	-	-
033	DDS8	-	26	-	-	1	10	11	7
035	TS3	-	-	-	-	-	-	11	-

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document. The numbers shown in the table indicate the number of results requested in each package. Please indicate as soon as possible should your request differ from these details. Testing as per this table shall commence immediately unless the client intervenes with a correction.

## CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

## SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Fibre Identification in soil	Gravimetric Determination of Asbestos in Soil	Mercury in Soil	Moisture Content	Total Recoverable Elements in Soil/Waste
001	TP58 0.0-0.15	13	-	-	1	1	7
002	TP58 0.25-0.35	13	-	-	1	1	7
003	TP59 0.0-0.15	-	-	-	1	1	7
004	TP60 0.0-0.15	13	-	-	1	1	7
005	TP60 0.25-0.35	13	-	-	1	1	7
006	TP61 0.0-0.15	-	-	-	1	1	7
007	TP62 0.0-0.15	13	-	-	1	1	7
008	TP62 0.35-0.45	13	-	-	1	1	7
009	TP63 0.0-0.15	-	-	-	1	1	7
010	TP63 0.2-0.4	13	2	9	1	1	7
011	TP63 0.45-0.55	-	-	-	1	1	7
012	TP64 0.0-0.15	13	-	-	1	1	7
013	TP64 0.2-0.4	13	2	9	1	1	7
014	TP64 0.45-0.55	-	-	-	1	1	7
015	TP65 0.0-0.15	-	-	-	1	1	7
016	TP65 0.25-0.35	13	-	-	1	1	7
017	TP66 0.0-0.15	13	-	-	1	1	7
018	TP67 0.0-0.15	-	-	-	1	1	7
019	TP67 0.25-0.35	13	-	-	1	1	7
020	TP68 0.0-0.15	13	-	-	1	1	7
021	TP69 0.0-0.15	-	-	-	1	1	7
022	TP69 0.25-0.35	-	-	-	1	1	7
023	TP70 0.0-0.15	13	-	-	1	1	7
024	TP71 0.0-0.15	-	-	-	1	1	7

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .



### CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

### SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Fibre Identification in soil	Gravimetric Determination of Asbestos in Soil	Mercury in Soil	Moisture Content	Total Recoverable Elements in Soil/Waste
025	TP71 0.25-0.35	-	-	-	1	1	7
026	TP72 0.0-0.15	13	-	-	1	1	7
027	TP72 0.2-0.5	13	2	9	1	1	7
028	TP72 0.65-0.75	-	-	-	1	1	7
029	TP73 0.0-0.15	-	-	-	1	1	7
030	TP73 0.2-0.5	13	2	9	1	1	7
031	TP73 0.75-0.85	13	-	-	1	1	7
032	DDS7	-	-	-	1	1	7
033	DDS8	-	-	-	-	1	-

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.  
The numbers shown in the table indicate the number of results requested in each package.  
Please indicate as soon as possible should your request differ from these details .  
Testing as per this table shall commence immediately unless the client intervenes with a correction .



## SAMPLE RECEIPT ADVICE

SE198143

### CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park**

### SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water	Metals in Water (Dissolved) by ICPOES	PAH (Polynuclear Aromatic Hydrocarbons) in Water	TRH (Total Recoverable Hydrocarbons) in Water	VOCs in Water	Volatile Petroleum Hydrocarbons in Water
034	RS3	1	7	22	9	11	7

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.  
The numbers shown in the table indicate the number of results requested in each package.  
Please indicate as soon as possible should your request differ from these details .  
Testing as per this table shall commence immediately unless the client intervenes with a correction .

## CLIENT DETAILS

Contact **Anwar Barbhuyia**  
 Client **Geotechnique**  
 Address **P.O. Box 880  
 PENRITH NSW 2751**

Telephone **02 4722 2700**  
 Facsimile **02 4722 6161**  
 Email **anwar@geotech.com.au**

Project **14513-2 Marsden Park - Additional**  
 Order Number **(Not specified)**  
 Samples **35**

## 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 **SE198143A R0**  
 Date Received **16/10/2019**  
 Date Reported **17/10/2019**

## COMMENTS

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

## SIGNATORIES



**Ly Kim HA**  
 Organic Section Head

OC Pesticides in Soil [AN420]    Tested: 16/10/2019

			DDS8
			SOIL
			-
			25/9/2019
			SE198143A.033
PARAMETER	UOM	LOR	
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1
Lindane	mg/kg	0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1
Aldrin	mg/kg	0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1
Dieldrin	mg/kg	0.05	<0.05
Endrin	mg/kg	0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1
Isodrin	mg/kg	0.1	<0.1
Mirex	mg/kg	0.1	<0.1

PCBs in Soil [AN420] Tested: 16/10/2019

			DDS8
			SOIL
			-
			25/9/2019
			SE198143A.033
PARAMETER	UOM	LOR	
Arochlor 1016	mg/kg	0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1

## METHOD

## METHODOLOGY SUMMARY

### 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).

## FOOTNOTES

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

Unless it is reported that sampling has been performed by SGS, the samples have been 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:

- 1 Bq is equivalent to 27 pCi
- 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 and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: [www.sgs.com.au/pv.sgsvr/en-gb/environment](http://www.sgs.com.au/pv.sgsvr/en-gb/environment).

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

This report must not be reproduced, except in full.



## STATEMENT OF QA/QC PERFORMANCE

SE198143A R0

### CLIENT DETAILS

Contact **Anwar Barbhuyia**  
Client **Geotechnique**  
Address **P.O. Box 880  
PENRITH NSW 2751**

Telephone **02 4722 2700**  
Facsimile **02 4722 6161**  
Email **anwar@geotech.com.au**

Project **14513-2 Marsden Park - Additional**  
Order Number **(Not specified)**  
Samples **35**

### 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 **SE198143A R0**  
Date Received **16 Oct 2019**  
Date Reported **17 Oct 2019**

### COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.  
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.  
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Extraction Date	OC Pesticides in Soil	1 item
	PCBs in Soil	1 item

### SAMPLE SUMMARY

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

### OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
DDS8	SE198143A.033	LB185531	25 Sep 2019	16 Oct 2019	09 Oct 2019	16 Oct 2019†	25 Nov 2019	17 Oct 2019

### PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
DDS8	SE198143A.033	LB185531	25 Sep 2019	16 Oct 2019	09 Oct 2019	16 Oct 2019†	25 Nov 2019	17 Oct 2019



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

**OC Pesticides in Soil****Method: ME-(AU)-[ENV]AN420**

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	DDS8	SE198143A.033	%	60 - 130%	88

**PCBs in Soil****Method: ME-(AU)-[ENV]AN420**

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	DDS8	SE198143A.033	%	60 - 130%	88

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB185531.001	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Alpha BHC	mg/kg	0.1	<0.1
	Lindane	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	<0.2
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.05	<0.05
	Endrin	mg/kg	0.2	<0.2
	Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	Endrin Aldehyde	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Endrin Ketone	mg/kg	0.1	<0.1
	Isodrin	mg/kg	0.1	<0.1
	Mirex	mg/kg	0.1	<0.1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	89

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB185531.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2
	Arochlor 1254	mg/kg	0.2	<0.2
	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1	<1
	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	89
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	89

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

#### OC Pesticides in Soil

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198874.008	LB185531.015	Hexachlorobenzene (HCB)	mg/kg	0.1	0	0	200	0
		Alpha BHC	mg/kg	0.1	0	0	200	0
		Lindane	mg/kg	0.1	0	0	200	0
		Heptachlor	mg/kg	0.1	0	0	200	0
		Aldrin	mg/kg	0.1	0	0	200	0
		Beta BHC	mg/kg	0.1	0	0	200	0
		Delta BHC	mg/kg	0.1	0	0	200	0
		Heptachlor epoxide	mg/kg	0.1	0	0	200	0
		o,p'-DDE	mg/kg	0.1	0	0	200	0
		Alpha Endosulfan	mg/kg	0.2	0	0	200	0
		Gamma Chlordane	mg/kg	0.1	0	0	200	0
		Alpha Chlordane	mg/kg	0.1	0	0	200	0
		trans-Nonachlor	mg/kg	0.1	0	0	200	0
		p,p'-DDE	mg/kg	0.1	0	0	200	0
		Dieldrin	mg/kg	0.05	0	0	200	0
		Endrin	mg/kg	0.2	0	0	200	0
		o,p'-DDD	mg/kg	0.1	0	0	200	0
		o,p'-DDT	mg/kg	0.1	0	0	200	0
		Beta Endosulfan	mg/kg	0.2	0	0	200	0
		p,p'-DDD	mg/kg	0.1	0	0	200	0
		p,p'-DDT	mg/kg	0.1	0	0	200	0
		Endosulfan sulphate	mg/kg	0.1	0	0	200	0
		Endrin Aldehyde	mg/kg	0.1	0	0	200	0
		Methoxychlor	mg/kg	0.1	0	0	200	0
		Endrin Ketone	mg/kg	0.1	0	0	200	0
		Isodrin	mg/kg	0.1	0	0	200	0
		Mirex	mg/kg	0.1	0	0	200	0
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.132	0.125	30	5	

#### PCBs in Soil

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE198874.008	LB185531.015	Arochlor 1016	mg/kg	0.2	0	0	200	0
		Arochlor 1221	mg/kg	0.2	0	0	200	0
		Arochlor 1232	mg/kg	0.2	0	0	200	0
		Arochlor 1242	mg/kg	0.2	0	0	200	0
		Arochlor 1248	mg/kg	0.2	0	0	200	0
		Arochlor 1254	mg/kg	0.2	0	0	200	0
		Arochlor 1260	mg/kg	0.2	0	0	200	0
		Arochlor 1262	mg/kg	0.2	0	0	200	0
		Arochlor 1268	mg/kg	0.2	0	0	200	0
		Total PCBs (Arochlors)	mg/kg	1	0	0	200	0
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.132	0.125	30	5	

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB185531.002	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	116
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	118
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	112
	Dieldrin	mg/kg	0.05	0.22	0.2	60 - 140	112
	Endrin	mg/kg	0.2	0.2	0.2	60 - 140	114
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	77
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	40 - 130	98

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB185531.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	104

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

QC Sample	Sample Number	Parameter	Units	LOR
-----------	---------------	-----------	-------	-----

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here : [https://www.sgs.com.au/~media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022\\_QA\\_QC\\_Plan.pdf](https://www.sgs.com.au/~media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022_QA_QC_Plan.pdf)

- \* NATA accreditation does not cover the performance of this service .
  - \*\* Indicative data, theoretical holding time exceeded.
  - Sample not analysed for this analyte.
  - IS Insufficient sample for analysis.
  - LNR Sample listed, but not received.
  - LOR Limit of reporting.
  - QFH QC result is above the upper tolerance.
  - QFL QC result is below the lower tolerance.
- 
- ① At least 2 of 3 surrogates are within acceptance criteria.
  - ② RPD failed acceptance criteria due to sample heterogeneity.
  - ③ Results less than 5 times LOR preclude acceptance criteria for RPD.
  - ④ Recovery failed acceptance criteria due to matrix interference.
  - ⑤ Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
  - ⑥ LOR was raised due to sample matrix interference.
  - ⑦ LOR was raised due to dilution of significantly high concentration of analyte in sample.
  - ⑧ Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
  - ⑨ Recovery failed acceptance criteria due to sample heterogeneity.
  - ⑩ LOR was raised due to high conductivity of the sample (required dilution).
  - † Refer to Analytical Report comments for further information.

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law .

This test report shall not be reproduced, except in full.

**E-MAILED**  
16/10/19 2:11 pm

**GEOTECHNIQUE PTY LTD**

1 LEMKO PLACE PENRITH NSW 2750

Tel: (02) 4722 2700

**CHAIN OF CUSTODY**

Results Required By: 24 hrs  
Except pH Results Required By ☐

Date:  
Date:

Your Reference No.: SE198143

SGS EHS Alexandria Laboratory



**SE198143A COC**  
Received: 16 - Oct - 2019

TO: SGS UNIT 16, 33 MADDOX STREET ALEXANDRIA NSW 2015 Tel: 02 8594 0400							Sampled By: IC Ref No: 14513/2 Project Manager: ANWAR BARBHUYIA Location: Marsden Park																		
Location	Depth (m)	Date	Soil	Water	Material	Metals As Cd Cr Cu Pb Hg Ni Zn	pH	CEC	CL8 TRH BTEX PAH	CL10 Metals* TRH BTEX PAH	CL16 Metals* TRH BTEX PAH OC PCB	Be B Co Mn Se	Mn	Asbestos 0.001% w/w	Asbestos	BTEX	TRH & BTEX	PAH	OCP	OCP & PCB	Phenol	Cyanide	VOC	OCP OPP & PCB	
TP72	0.0-0.15	25/09/19	GP		Clay																				
TP72	0.2-0.5	25/09/19	GP		Clay																				
TP72	0.65-0.75	25/09/19	G		Clay																				
TP73	0.0-0.15	25/09/19	GP		Clay																				
TP73	0.2-0.5	25/09/19	GP		Clay																				
TP73	0.75-0.85	25/09/19	G		Clay																				
DDS7		25/09/19	G		Clay																				
DDS8		25/09/19	G		Clay																				
RS3		25/09/19		WG/Vial																					
TS3					Sand																				
Relinquished by							Received by																		
Name		Signature		Date			Name		Signature		Date														
ANWAR BARBHUYIA		AB		16/10/19			[Signature]		[Signature]		16/10/19 2:11 pm														
WG: Water sample (glass bottle)			G		Soil sample (glass jar)			FCP		Fibro Cement Piece (plastic bag)			*: As,Cd,Cr,Cu,Pb,Hg,Ni & Zn (8 metals)												
WP: Water sample (plastic bottle)			P		Soil sample (plastic bag)			✓		Test required															





## SAMPLE RECEIPT ADVICE

SE198143A

### CLIENT DETAILS

Contact Anwar Barbhuyia  
Client Geotechnique  
Address P.O. Box 880  
PENRITH NSW 2751

Telephone 02 4722 2700  
Facsimile 02 4722 6161  
Email anwar@geotech.com.au

Project **14513-2 Marsden Park - Additional**  
Order Number (Not specified)  
Samples 35

### 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

Samples Received Wed 16/10/2019  
Report Due Thu 17/10/2019  
SGS Reference **SE198143A**

### SUBMISSION DETAILS

This is to confirm that 35 samples were received on Wednesday 16/10/2019. Results are expected to be ready by COB Thursday 17/10/2019. Please quote SGS reference SE198143A when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	1 Soil
Date documentation received	16/10/19@2:11pm	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	12°C	Sufficient sample for analysis	Yes
Turnaround time requested	Next Day		

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

### COMMENTS

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.



## SAMPLE RECEIPT ADVICE

SE198143A

### CLIENT DETAILS

Client **Geotechnique**

Project **14513-2 Marsden Park - Additional**

### SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PCBs in Soil
033	DDS8	28	11

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.  
The numbers shown in the table indicate the number of results requested in each package.  
Please indicate as soon as possible should your request differ from these details .  
Testing as per this table shall commence immediately unless the client intervenes with a correction .

## CERTIFICATE OF ANALYSIS 227225

### Client Details

<b>Client</b>	Geotechnique Pty Ltd
<b>Attention</b>	Frances Kuipers
<b>Address</b>	PO Box 880, Penrith, NSW, 2751

### Sample Details

<b>Your Reference</b>	<u>14513/2, Marsden Park</u>
<b>Number of Samples</b>	4 Soil
<b>Date samples received</b>	25/09/2019
<b>Date completed instructions received</b>	25/09/2019

### Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.  
 Samples were analysed as received from the client. Results relate specifically to the samples as received.  
 Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

### Report Details

<b>Date results requested by</b>	03/10/2019
<b>Date of Issue</b>	02/10/2019
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. <b>Tests not covered by NATA are denoted with *</b>	

#### Results Approved By

Diego Bigolin, Team Leader, Inorganics  
 Jaimie Loa-Kum-Cheung, Metals Supervisor  
 Josh Williams, Chemist  
 Steven Luong, Organics Supervisor

#### Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		227225-2	227225-4
Your Reference	UNITS	DSS2	DSS4
Date Sampled		23/09/2019	23/09/2019
Type of sample		Soil	Soil
Date extracted	-	01/10/2019	01/10/2019
Date analysed	-	02/10/2019	02/10/2019
TRH C <sub>6</sub> - C <sub>9</sub>	mg/kg	<25	<25
TRH C <sub>6</sub> - C <sub>10</sub>	mg/kg	<25	<25
vTPH C <sub>6</sub> - C <sub>10</sub> less BTEX (F1)	mg/kg	<25	<25
Benzene	mg/kg	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1
m+p-xylene	mg/kg	<2	<2
o-Xylene	mg/kg	<1	<1
naphthalene	mg/kg	<1	<1
Total +ve Xylenes	mg/kg	<3	<3
Surrogate aaa-Trifluorotoluene	%	82	96

svTRH (C10-C40) in Soil			
Our Reference		227225-2	227225-4
Your Reference	UNITS	DSS2	DSS4
Date Sampled		23/09/2019	23/09/2019
Type of sample		Soil	Soil
Date extracted	-	01/10/2019	01/10/2019
Date analysed	-	02/10/2019	02/10/2019
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	<50	<50
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	<100	<100
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	<100	<100
TRH >C <sub>10</sub> -C <sub>16</sub>	mg/kg	<50	<50
TRH >C <sub>10</sub> - C <sub>16</sub> less Naphthalene (F2)	mg/kg	<50	<50
TRH >C <sub>16</sub> -C <sub>34</sub>	mg/kg	<100	<100
TRH >C <sub>34</sub> -C <sub>40</sub>	mg/kg	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50
Surrogate o-Terphenyl	%	84	80

PAHs in Soil			
Our Reference		227225-2	227225-4
Your Reference	UNITS	DSS2	DSS4
Date Sampled		23/09/2019	23/09/2019
Type of sample		Soil	Soil
Date extracted	-	01/10/2019	01/10/2019
Date analysed	-	01/10/2019	01/10/2019
Naphthalene	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+k)fluoranthene	mg/kg	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	103	102

Organochlorine Pesticides in soil					
Our Reference		227225-1	227225-2	227225-3	227225-4
Your Reference	UNITS	DSS1	DSS2	DSS3	DSS4
Date Sampled		23/09/2019	23/09/2019	23/09/2019	23/09/2019
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	01/10/2019	01/10/2019	01/10/2019	01/10/2019
Date analysed	-	01/10/2019	01/10/2019	01/10/2019	01/10/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	92	96	93	94

PCBs in Soil			
Our Reference		227225-2	227225-4
Your Reference	UNITS	DSS2	DSS4
Date Sampled		23/09/2019	23/09/2019
Type of sample		Soil	Soil
Date extracted	-	01/10/2019	01/10/2019
Date analysed	-	01/10/2019	01/10/2019
Aroclor 1016	mg/kg	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1
Surrogate TCMX	%	96	94



Acid Extractable metals in soil					
Our Reference		227225-1	227225-2	227225-3	227225-4
Your Reference	UNITS	DSS1	DSS2	DSS3	DSS4
Date Sampled		23/09/2019	23/09/2019	23/09/2019	23/09/2019
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	01/10/2019	01/10/2019	01/10/2019	01/10/2019
Date analysed	-	01/10/2019	01/10/2019	01/10/2019	01/10/2019
Arsenic	mg/kg	6	8	7	4
Cadmium	mg/kg	1	<0.4	<0.4	<0.4
Chromium	mg/kg	16	24	22	14
Copper	mg/kg	9	16	4	10
Lead	mg/kg	19	21	13	12
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	8	2	6
Zinc	mg/kg	190	34	7	19

Misc Soil - Inorg			
Our Reference		227225-2	227225-4
Your Reference	UNITS	DSS2	DSS4
Date Sampled		23/09/2019	23/09/2019
Type of sample		Soil	Soil
Date prepared	-	01/10/2019	01/10/2019
Date analysed	-	01/10/2019	01/10/2019
Total Phenolics (as Phenol)	mg/kg	<5	<5

Moisture					
Our Reference		227225-1	227225-2	227225-3	227225-4
Your Reference	UNITS	DSS1	DSS2	DSS3	DSS4
Date Sampled		23/09/2019	23/09/2019	23/09/2019	23/09/2019
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	01/10/2019	01/10/2019	01/10/2019	01/10/2019
Date analysed	-	02/10/2019	02/10/2019	02/10/2019	02/10/2019
Moisture	%	17	30	22	15

Method ID	Methodology Summary
<b>Inorg-008</b>	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
<b>Inorg-031</b>	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
<b>Metals-020</b>	Determination of various metals by ICP-AES.
<b>Metals-021</b>	Determination of Mercury by Cold Vapour AAS.
<b>Org-003</b>	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
<b>Org-003</b>	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.  F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.  Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
<b>Org-005</b>	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
<b>Org-005</b>	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
<b>Org-006</b>	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
<b>Org-006</b>	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs.

Method ID	Methodology Summary
<b>Org-012</b>	<p>Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.</p> <p>For soil results:-</p> <ol style="list-style-type: none"> <li>1. 'EQ PQL' values are assuming all contributing PAHs reported as &lt;PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present.</li> <li>2. 'EQ zero' values are assuming all contributing PAHs reported as &lt;PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL.</li> <li>3. 'EQ half PQL' values are assuming all contributing PAHs reported as &lt;PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above.</li> </ol> <p>Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.</p>
<b>Org-014</b>	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
<b>Org-016</b>	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
<b>Org-016</b>	<p>Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.</p> <p>Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.</p>

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			01/10/2019	[NT]	[NT]	[NT]	[NT]	01/10/2019	[NT]
Date analysed	-			02/10/2019	[NT]	[NT]	[NT]	[NT]	02/10/2019	[NT]
TRH C <sub>6</sub> - C <sub>9</sub>	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	112	[NT]
TRH C <sub>6</sub> - C <sub>10</sub>	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	112	[NT]
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	[NT]	[NT]	114	[NT]
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	[NT]	[NT]	111	[NT]
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	113	[NT]
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	111	[NT]
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	113	[NT]
naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	91	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			01/10/2019	[NT]	[NT]	[NT]	[NT]	01/10/2019	[NT]
Date analysed	-			02/10/2019	[NT]	[NT]	[NT]	[NT]	02/10/2019	[NT]
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	129	[NT]
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	84	[NT]
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	91	[NT]
TRH >C <sub>10</sub> -C <sub>16</sub>	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	129	[NT]
TRH >C <sub>16</sub> -C <sub>34</sub>	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	84	[NT]
TRH >C <sub>34</sub> -C <sub>40</sub>	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	91	[NT]
Surrogate o-Terphenyl	%		Org-003	76	[NT]	[NT]	[NT]	[NT]	119	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			01/10/2019	[NT]	[NT]	[NT]	[NT]	01/10/2019	[NT]
Date analysed	-			01/10/2019	[NT]	[NT]	[NT]	[NT]	01/10/2019	[NT]
Naphthalene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Phenanthrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	[NT]	[NT]	[NT]	[NT]	82	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	90	[NT]	[NT]	[NT]	[NT]	95	[NT]



QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			01/10/2019	[NT]	[NT]	[NT]	[NT]	01/10/2019	[NT]
Date analysed	-			01/10/2019	[NT]	[NT]	[NT]	[NT]	01/10/2019	[NT]
HCB	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	113	[NT]
gamma-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Heptachlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
delta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	119	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	116	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	115	[NT]
Dieldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	128	[NT]
Endrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	113	[NT]
pp-DDD	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	118	[NT]
Endosulfan II	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	130	[NT]
Methoxychlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCMX	%		Org-005	94	[NT]	[NT]	[NT]	[NT]	90	[NT]

Client Reference: 14513/2, Marsden Park

QUALITY CONTROL: PCBs in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			01/10/2019	[NT]	[NT]	[NT]	[NT]	01/10/2019	[NT]
Date analysed	-			01/10/2019	[NT]	[NT]	[NT]	[NT]	01/10/2019	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCMX	%		Org-006	94	[NT]	[NT]	[NT]	[NT]	90	[NT]

**Client Reference: 14513/2, Marsden Park**

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			01/10/2019	[NT]	[NT]	[NT]	[NT]	01/10/2019	[NT]
Date analysed	-			01/10/2019	[NT]	[NT]	[NT]	[NT]	01/10/2019	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	109	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	101	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	111	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	113	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	89	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]

**Client Reference: 14513/2, Marsden Park**

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			01/10/2019	[NT]	[NT]	[NT]	[NT]	01/10/2019	[NT]
Date analysed	-			01/10/2019	[NT]	[NT]	[NT]	[NT]	01/10/2019	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	[NT]	[NT]	[NT]	[NT]	105	[NT]

## Result Definitions

<b>NT</b>	Not tested
<b>NA</b>	Test not required
<b>INS</b>	Insufficient sample for this test
<b>PQL</b>	Practical Quantitation Limit
<b>&lt;</b>	Less than
<b>&gt;</b>	Greater than
<b>RPD</b>	Relative Percent Difference
<b>LCS</b>	Laboratory Control Sample
<b>NS</b>	Not specified
<b>NEPM</b>	National Environmental Protection Measure
<b>NR</b>	Not Reported

## Quality Control Definitions

<b>Blank</b>	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
<b>Duplicate</b>	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
<b>Matrix Spike</b>	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
<b>LCS (Laboratory Control Sample)</b>	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
<b>Surrogate Spike</b>	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	

## Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.



Envirolab Services  
12 Ashley St  
Chatswood NSW 2067  
Ph: (02) 9910 6200

Job No: 227225

Date Received: 25/9/19

Time Received: 16:44

Received by: [Signature]

Temp: Cool/Ambient

Cooling: Ice/Icepack

Security: Intact/Broken/None

**G**EOTECHNIQUE PTY LTD

## Laboratory Test Request / Chain of Custody Record

Lemko Place

PENRITH NSW 2750

Tel: (02) 4722 2700

Page 1 of 1

TO: ENVIROLAB SERVICES PTY LD  
12 ASHLEY STREET  
CHATSWOOD NSW 2067

PH: 02 9910 6200

ATTN: MS AILEEN HIE

Sampling By: IC/JH

Ref No: 14513/2

Project:

Project Manager: AB

Location: Marsden Park

### Sampling details

### Sample type

Results required by: NORMAL TURNAROUND TIME

Location	Depth (m)	Date	Time	Soil		METALS As, Cd, Cr, Cu, Pb, Hg, Ni and Zn	TRH & BTEX	PAH	OCP	PCB	PHENOL	CYANIDE	COMBO NO		
1 DSS1		23/09/2019		G		✓			✓						
2 DSS2		23/09/2019		G		✓	✓	✓	✓	✓	✓		7		
3 DSS3		24/09/2019		G		✓			✓						
4 DSS4		24/09/2019		G		✓	✓	✓	✓	✓	✓		7		

### Relinquished by

### Received by

Name	Signature	Date	Name	Signature	Date
ANWAR BARBHUYIA	AB	25/09/2019	[Signature]	[Signature]	25/9/19

Legend:

G Soil sample (glass jar)

P Soil sample (plastic bag)

✓ Test required

## SAMPLE RECEIPT ADVICE

### Client Details

<b>Client</b>	Geotechnique Pty Ltd
<b>Attention</b>	Frances Kuipers

### Sample Login Details

<b>Your reference</b>	14513/2, Marsden Park
<b>Envirolab Reference</b>	227225
<b>Date Sample Received</b>	25/09/2019
<b>Date Instructions Received</b>	25/09/2019
<b>Date Results Expected to be Reported</b>	03/10/2019

### Sample Condition

<b>Samples received in appropriate condition for analysis</b>	Yes
<b>No. of Samples Provided</b>	4 Soil
<b>Turnaround Time Requested</b>	Standard
<b>Temperature on Receipt (°C)</b>	13.1
<b>Cooling Method</b>	Ice Pack
<b>Sampling Date Provided</b>	YES

### Comments

Nil

Please direct any queries to:

#### Aileen Hie

**Phone:** 02 9910 6200  
**Fax:** 02 9910 6201  
**Email:** ahie@envirolab.com.au

#### Jacinta Hurst

**Phone:** 02 9910 6200  
**Fax:** 02 9910 6201  
**Email:** jhurst@envirolab.com.au

*Analysis Underway, details on the following page:*





**Envirolab Services Pty Ltd**

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg
DSS1				✓		✓	
DSS2	✓	✓	✓	✓	✓	✓	✓
DSS3				✓		✓	
DSS4	✓	✓	✓	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

### Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

## **CERTIFICATE OF ANALYSIS 227223**

### **Client Details**

<b>Client</b>	Geotechnique Pty Ltd
<b>Attention</b>	Anwar Barbhuyia
<b>Address</b>	PO Box 880, Penrith, NSW, 2751

### **Sample Details**

<b>Your Reference</b>	<b><u>14513/2, Marsden Park</u></b>
<b>Number of Samples</b>	4 Soil
<b>Date samples received</b>	27/09/2019
<b>Date completed instructions received</b>	27/09/2019

### **Analysis Details**

Please refer to the following pages for results, methodology summary and quality control data.  
Samples were analysed as received from the client. Results relate specifically to the samples as received.  
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

### **Report Details**

<b>Date results requested by</b>	04/10/2019
<b>Date of Issue</b>	02/10/2019
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. <b>Tests not covered by NATA are denoted with *</b>	

#### **Results Approved By**

Diego Bigolin, Team Leader, Inorganics  
Dragana Tomas, Senior Chemist  
Jaimie Loa-Kum-Cheung, Metals Supervisor  
Josh Williams, Chemist

#### **Authorised By**



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		227223-4
Your Reference	UNITS	DSS8
Date Sampled		25/09/2019
Type of sample		Soil
Date extracted	-	30/09/2019
Date analysed	-	01/10/2019
TRH C <sub>6</sub> - C <sub>9</sub>	mg/kg	<25
TRH C <sub>6</sub> - C <sub>10</sub>	mg/kg	<25
vTPH C <sub>6</sub> - C <sub>10</sub> less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<3
Surrogate aaa-Trifluorotoluene	%	73

svTRH (C10-C40) in Soil		
Our Reference		227223-4
Your Reference	UNITS	DSS8
Date Sampled		25/09/2019
Type of sample		Soil
Date extracted	-	30/09/2019
Date analysed	-	01/10/2019
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	<50
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	<100
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	<100
TRH >C <sub>10</sub> -C <sub>16</sub>	mg/kg	<50
TRH >C <sub>10</sub> - C <sub>16</sub> less Naphthalene (F2)	mg/kg	<50
TRH >C <sub>16</sub> -C <sub>34</sub>	mg/kg	<100
TRH >C <sub>34</sub> -C <sub>40</sub>	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	88

PAHs in Soil		
Our Reference		227223-4
Your Reference	UNITS	DSS8
Date Sampled		25/09/2019
Type of sample		Soil
Date extracted	-	30/09/2019
Date analysed	-	30/09/2019
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	104

Organochlorine Pesticides in soil					
Our Reference		227223-1	227223-2	227223-3	227223-4
Your Reference	UNITS	DSS5	DSS6	DSS7	DSS8
Date Sampled		24/09/2019	24/09/2019	25/09/2019	25/09/2019
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	30/09/2019	30/09/2019	30/09/2019	30/09/2019
Date analysed	-	01/10/2019	01/10/2019	01/10/2019	01/10/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	101	102	100	102

PCBs in Soil		
Our Reference		227223-4
Your Reference	UNITS	DSS8
Date Sampled		25/09/2019
Type of sample		Soil
Date extracted	-	30/09/2019
Date analysed	-	01/10/2019
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate TCMX	%	102

Acid Extractable metals in soil					
Our Reference		227223-1	227223-2	227223-3	227223-4
Your Reference	UNITS	DSS5	DSS6	DSS7	DSS8
Date Sampled		24/09/2019	24/09/2019	25/09/2019	25/09/2019
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	30/09/2019	30/09/2019	30/09/2019	30/09/2019
Date analysed	-	30/09/2019	30/09/2019	30/09/2019	30/09/2019
Arsenic	mg/kg	<4	5	6	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	6	19	13
Copper	mg/kg	5	13	5	1
Lead	mg/kg	7	9	17	4
Mercury	mg/kg	<0.1	0.6	<0.1	<0.1
Nickel	mg/kg	1	<1	3	<1
Zinc	mg/kg	3	2	8	1



Misc Soil - Inorg		
Our Reference		227223-4
Your Reference	UNITS	DSS8
Date Sampled		25/09/2019
Type of sample		Soil
Date prepared	-	30/09/2019
Date analysed	-	30/09/2019
Total Phenolics (as Phenol)	mg/kg	<5

Moisture					
Our Reference		227223-1	227223-2	227223-3	227223-4
Your Reference	UNITS	DSS5	DSS6	DSS7	DSS8
Date Sampled		24/09/2019	24/09/2019	25/09/2019	25/09/2019
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	30/09/2019	30/09/2019	30/09/2019	30/09/2019
Date analysed	-	01/10/2019	01/10/2019	01/10/2019	01/10/2019
Moisture	%	23	7.6	17	16

Method ID	Methodology Summary
<b>Inorg-008</b>	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
<b>Inorg-031</b>	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
<b>Metals-020</b>	Determination of various metals by ICP-AES.
<b>Metals-021</b>	Determination of Mercury by Cold Vapour AAS.
<b>Org-003</b>	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
<b>Org-003</b>	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.  F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.  Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
<b>Org-005</b>	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
<b>Org-005</b>	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
<b>Org-006</b>	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
<b>Org-006</b>	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs.

Method ID	Methodology Summary
<b>Org-012</b>	<p>Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.</p> <p>For soil results:-</p> <ol style="list-style-type: none"> <li>1. 'EQ PQL' values are assuming all contributing PAHs reported as &lt;PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present.</li> <li>2. 'EQ zero' values are assuming all contributing PAHs reported as &lt;PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL.</li> <li>3. 'EQ half PQL' values are assuming all contributing PAHs reported as &lt;PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above.</li> </ol> <p>Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.</p>
<b>Org-014</b>	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
<b>Org-016</b>	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
<b>Org-016</b>	<p>Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.</p> <p>Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.</p>

Client Reference: 14513/2, Marsden Park

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			30/09/2019	4	30/09/2019	30/09/2019		30/09/2019	[NT]
Date analysed	-			01/10/2019	4	01/10/2019	01/10/2019		01/10/2019	[NT]
TRH C <sub>6</sub> - C <sub>9</sub>	mg/kg	25	Org-016	<25	4	<25	<25	0	88	[NT]
TRH C <sub>6</sub> - C <sub>10</sub>	mg/kg	25	Org-016	<25	4	<25	<25	0	88	[NT]
Benzene	mg/kg	0.2	Org-016	<0.2	4	<0.2	<0.2	0	93	[NT]
Toluene	mg/kg	0.5	Org-016	<0.5	4	<0.5	<0.5	0	90	[NT]
Ethylbenzene	mg/kg	1	Org-016	<1	4	<1	<1	0	86	[NT]
m+p-xylene	mg/kg	2	Org-016	<2	4	<2	<2	0	85	[NT]
o-Xylene	mg/kg	1	Org-016	<1	4	<1	<1	0	85	[NT]
naphthalene	mg/kg	1	Org-014	<1	4	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	76	4	73	74	1	75	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			30/09/2019	4	30/09/2019	30/09/2019		30/09/2019	[NT]
Date analysed	-			30/09/2019	4	01/10/2019	01/10/2019		30/09/2019	[NT]
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	50	Org-003	<50	4	<50	<50	0	125	[NT]
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	100	Org-003	<100	4	<100	<100	0	88	[NT]
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	100	Org-003	<100	4	<100	<100	0	123	[NT]
TRH >C <sub>10</sub> -C <sub>16</sub>	mg/kg	50	Org-003	<50	4	<50	<50	0	125	[NT]
TRH >C <sub>16</sub> -C <sub>34</sub>	mg/kg	100	Org-003	<100	4	<100	<100	0	88	[NT]
TRH >C <sub>34</sub> -C <sub>40</sub>	mg/kg	100	Org-003	<100	4	<100	<100	0	123	[NT]
Surrogate o-Terphenyl	%		Org-003	91	4	88	88	0	109	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			30/09/2019	4	30/09/2019	30/09/2019		30/09/2019	[NT]
Date analysed	-			30/09/2019	4	30/09/2019	30/09/2019		30/09/2019	[NT]
Naphthalene	mg/kg	0.1	Org-012	<0.1	4	<0.1	<0.1	0	104	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	4	<0.1	<0.1	0	94	[NT]
Phenanthrene	mg/kg	0.1	Org-012	<0.1	4	<0.1	<0.1	0	94	[NT]
Anthracene	mg/kg	0.1	Org-012	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	4	<0.1	<0.1	0	94	[NT]
Pyrene	mg/kg	0.1	Org-012	<0.1	4	<0.1	<0.1	0	96	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	4	<0.1	<0.1	0	96	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	4	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	4	<0.05	<0.05	0	94	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	102	4	104	101	3	103	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			30/09/2019	4	30/09/2019	30/09/2019		30/09/2019	[NT]
Date analysed	-			01/10/2019	4	01/10/2019	01/10/2019		01/10/2019	[NT]
HCB	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	109	[NT]
gamma-BHC	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	108	[NT]
Heptachlor	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	106	[NT]
delta-BHC	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	118	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	116	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	121	[NT]
Dieldrin	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	133	[NT]
Endrin	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	117	[NT]
pp-DDD	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	124	[NT]
Endosulfan II	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	123	[NT]
Methoxychlor	mg/kg	0.1	Org-005	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	105	4	102	105	3	87	[NT]



**Client Reference: 14513/2, Marsden Park**

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			30/09/2019	4	30/09/2019	30/09/2019		30/09/2019	[NT]
Date analysed	-			01/10/2019	4	01/10/2019	01/10/2019		01/10/2019	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	4	<0.1	<0.1	0	118	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	4	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-006	105	4	102	105	3	87	[NT]

Client Reference: 14513/2, Marsden Park

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			30/09/2019	4	30/09/2019	30/09/2019		30/09/2019	[NT]
Date analysed	-			30/09/2019	4	30/09/2019	30/09/2019		30/09/2019	[NT]
Arsenic	mg/kg	4	Metals-020	<4	4	<4	<4	0	99	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	4	<0.4	<0.4	0	97	[NT]
Chromium	mg/kg	1	Metals-020	<1	4	13	13	0	103	[NT]
Copper	mg/kg	1	Metals-020	<1	4	1	2	67	103	[NT]
Lead	mg/kg	1	Metals-020	<1	4	4	5	22	102	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	4	<0.1	<0.1	0	91	[NT]
Nickel	mg/kg	1	Metals-020	<1	4	<1	<1	0	95	[NT]
Zinc	mg/kg	1	Metals-020	<1	4	1	1	0	98	[NT]

**Client Reference: 14513/2, Marsden Park**

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			30/09/2019	[NT]	[NT]	[NT]	[NT]	30/09/2019	[NT]
Date analysed	-			30/09/2019	[NT]	[NT]	[NT]	[NT]	30/09/2019	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	[NT]	[NT]	[NT]	[NT]	105	[NT]

## Result Definitions

<b>NT</b>	Not tested
<b>NA</b>	Test not required
<b>INS</b>	Insufficient sample for this test
<b>PQL</b>	Practical Quantitation Limit
<b>&lt;</b>	Less than
<b>&gt;</b>	Greater than
<b>RPD</b>	Relative Percent Difference
<b>LCS</b>	Laboratory Control Sample
<b>NS</b>	Not specified
<b>NEPM</b>	National Environmental Protection Measure
<b>NR</b>	Not Reported

## Quality Control Definitions

<b>Blank</b>	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
<b>Duplicate</b>	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
<b>Matrix Spike</b>	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
<b>LCS (Laboratory Control Sample)</b>	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
<b>Surrogate Spike</b>	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	

## Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

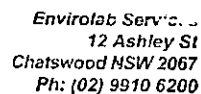
In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.



Job No: 77 7223

Date Received: 28/9/19

Time Received: 16:13

Received by: SP

Temp: Cool/Ambient

Cooling: Ice/circulator

Security: Intact/Broken/None

**Laboratory Test Request / Chain of Custody Record**

**Lemko Place**

PENRITH NSW 2750

Tel: (02) 4722 2700

Page 1 of 4

TO: ENVIROLAB SERVICES PTY LD  
12 ASHLEY STREET  
CHATSWOOD NSW 2067

Sampling By:	IC
--------------	----

Ref No: 14513/2

**Project:**

Project Manager: AB

**Location:** Marsden Park

ATTN: MS AILEEN HIE

[illegible]

## SAMPLE RECEIPT ADVICE

### Client Details

<b>Client</b>	Geotechnique Pty Ltd
<b>Attention</b>	Anwar Barbhuyia

### Sample Login Details

<b>Your reference</b>	14513/2, Marsden Park
<b>Envirolab Reference</b>	227223
<b>Date Sample Received</b>	27/09/2019
<b>Date Instructions Received</b>	27/09/2019
<b>Date Results Expected to be Reported</b>	04/10/2019

### Sample Condition

<b>Samples received in appropriate condition for analysis</b>	Yes
<b>No. of Samples Provided</b>	4 Soil
<b>Turnaround Time Requested</b>	Standard
<b>Temperature on Receipt (°C)</b>	7.6
<b>Cooling Method</b>	Ice Pack
<b>Sampling Date Provided</b>	YES

### Comments

Nil

Please direct any queries to:

#### Aileen Hie

**Phone:** 02 9910 6200  
**Fax:** 02 9910 6201  
**Email:** ahie@envirolab.com.au

#### Jacinta Hurst

**Phone:** 02 9910 6200  
**Fax:** 02 9910 6201  
**Email:** jhurst@envirolab.com.au

Analysis Underway, details on the following page:



**Envirolab Services Pty Ltd**

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg
DSS5				✓		✓	
DSS6				✓		✓	
DSS7				✓		✓	
DSS8	✓	✓	✓	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

### Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

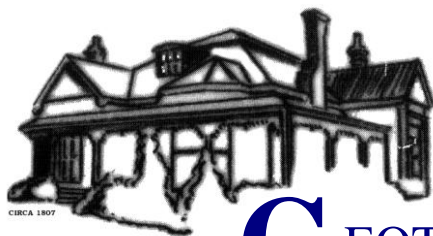
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.



## **APPENDIX G**

---

### **UNEXPECTED FINDS MANAGEMENT PROTOCOL**



**G EOTECHNIQUE<sup>®</sup>**  
**PTY LTD**

ABN 64 002 841 063



## **UNEXPECTED FINDS MANAGEMENT PROTOCOL**

### **LOT 30 IN DP1237735 CORNER ELARA BOULEVARD & KALUTA AVENUE, MARSDEN PARK**

In the event that unexpected finds and/or suspect materials (identified by unusual staining, odour, discolouration or inclusions such as building rubble, asbestos sheeting/pieces/pipes, ash material, imported fill, etc.) are encountered during future earthworks or in between sampling locations, the following actions are to be undertaken.

#### **Management of unexpected finds and/or suspect materials**

If unexpected finds and/or suspect materials are encountered:

- Works are to be ceased.
- An Environmental consultant is to be engaged to take appropriate sampling and testing of contaminants of potential concern at a nominated rate in accordance with current NSW EPA guidelines.
- If contamination is identified, the contaminated materials must be disposed of at an EPA licensed landfill facility with an appropriate waste classification.

#### **Management of bonded asbestos containing material (ACM)**

If ACM is encountered, the following measures are implemented:

- Engage a Class B Licence for bonded asbestos contractor.
- Removal of the asbestos waste must be carried out in accordance with the requirements of the regulators, such as SafeWork NSW and NSW EPA.
- Competent personnel or a SafeWork NSW Licensed Asbestos Assessor or a Professional Hygienist should be engaged to provide a clearance certificate.

#### **Management of friable asbestos within the soil**

It is recommended that the following measures are implemented if friable asbestos is encountered:

- Engage a Class A licensed contractor for friable asbestos
- Removal of the asbestos waste must be carried out in accordance with the requirements of the regulators, such as SafeWork NSW and NSW EPA
- A SafeWork NSW Licensed Asbestos Assessor or a Professional Hygienist must be engaged to provide a clearance certificate

## APPENDIX H

---

### ENVIRONMENTAL NOTES

## **IMPORTANT INFORMATION REGARDING YOUR ENVIRONMENTAL SITE ASSESSMENT**

These notes have been prepared by Geotechnique Pty Ltd, using guidelines prepared by the ASFE (Associated Soil and Foundation Engineers). The notes are offered to assist in the interpretation of your environmental site assessment report.

### **REASONS FOR AN ENVIRONMENTAL ASSESSMENT**

Environmental site assessments are typically, though not exclusively, performed in the following circumstances:

- As a pre-acquisition assessment on behalf of either a purchaser or a vendor, when a property is to be sold
- As a pre-development assessment, when a property or area of land is to be redeveloped, or the land use has changed e.g. from a factory to a residential subdivision
- As a pre-development assessment of greenfield sites, to establish baseline conditions and assess environmental, geological and hydrological constraints to the development of e.g. a landfill
- As an audit of the environmental effects of previous and present site usage

Each circumstance requires a specific approach to the assessment of soil and groundwater contamination. In all cases the objective is to identify and if possible quantify the risks that unrecognised contamination poses to the ongoing proposed activity. Such risks may be both financial (clean-up costs or limitations in site use) and physical (health risks to site users or the public).

### **ENVIRONMENTAL SITE ASSESSMENT LIMITATIONS**

Although information provided by an environmental site assessment can reduce exposure to the risk of the presence of contamination, no environmental site assessment can eliminate the risk. Even a rigorous professional assessment may not detect all contamination within a site. Contaminants may be present in areas that were not surveyed or sampled, or may migrate to areas which did not show signs of contamination when sampled. Contaminant analysis cannot possibly cover every type of contaminant that may occur; only the most likely contaminants are screened.

### **AN ENVIRONMENTAL SITE ASSESSMENT REPORT IS BASED ON A UNIQUE SET OF PROJECT SPECIFIC FACTORS**

In the following events and in order to avoid cost problems, you should ask your consultant to assess any changes in the conclusion and recommendations made in the assessment:

- When the nature of the proposed development is changed e.g. if a residential development is proposed, rather than a commercial development
- When the size or configuration of the proposed development is altered e.g. if a basement is added
- When the location or orientation of the proposed structure is modified
- When there is a change of land ownership, or
- For application to an adjacent site

### **ENVIRONMENTAL SITE ASSESSMENT FINDINGS ARE PROFESSIONAL ESTIMATES**

Site assessment identifies actual sub-surface conditions only at those points where samples are taken, when they are taken. Data obtained from the sampling and subsequent laboratory analyses are interpreted by geologists, engineers or scientists and opinions are drawn about the overall sub-surface conditions, the nature and extent of contamination, the likely impact on any proposed development and appropriate remediation measures. Actual conditions may differ from those inferred, because no professional, no matter how qualified and no sub-surface exploration program, no matter how comprehensive, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than an assessment indicates. Actual conditions in areas not sampled may differ from predictions. Nothing can be done to prevent the unanticipated, however, steps can be taken to help minimise the impact. For this reason site owners should retain the services of their consultants throughout the development stages of the project in order to identify variances, conduct additional tests that may be necessary and to recommend solutions to problems encountered on site.

Soil and groundwater contamination is a field in which legislation and interpretation of legislation by government departments is changing rapidly. Whilst every attempt is made by Geotechnique Pty Ltd to be familiar with current policy, our interpretation of the investigation findings should not be taken to be that of the relevant authority. When approval from a statutory authority is required for a project, approval should be directly sought.

**STABILITY OF SUB-SURFACE CONDITIONS**

Sub-surface conditions can change by natural processes and site activities. As an environmental site assessment is based on conditions existing at the time of the investigation, project decisions should not be based on environmental site assessment data that may have been affected by time. The consultant should be requested to advise if additional tests are required.

**ENVIRONMENTAL SITE ASSESSMENTS ARE PERFORMED FOR SPECIFIC PURPOSES AND CLIENTS**

Environmental site assessments are prepared in response to a specific scope of work required to meet the specific needs of specific individuals e.g. an assessment prepared for a consulting civil engineer may not be adequate to a construction contractor or another consulting civil engineer.

An assessment should not be used by other persons for any purpose or by the client for a different purpose. No individual, other than the client, should apply an assessment, even for its intended purpose, without first conferring with the consultant. No person should apply an assessment for any purpose other than that originally contemplated, without first conferring with the consultant.

**MISINTERPRETATION OF ENVIRONMENTAL SITE ASSESSMENTS**

Costly problems can occur when design professionals develop plans based on misinterpretation of an environmental site assessment. In order to minimise problems, the environmental consultant should be retained to work with appropriate design professionals, to explain relevant findings and to review the adequacy of plans and specifications relative to contamination issues.

**LOGS SHOULD NOT BE SEPARATED FROM THE REPORT**

Borehole and test pit logs are prepared by environmental scientists, engineers or geologists, based upon interpretation of field conditions and laboratory evaluation of field samples. Logs are normally provided in our reports and these would not be redrawn for inclusion in site remediation or other design drawings, as subtle but significant drafting errors or omissions may occur in the transfer process. Photographic reproduction can eliminate this problem, however, contractors can still misinterpret the logs during bid preparation if separated from the text of the assessment. Should this occur, delays and disputes, or unanticipated costs may result.

To reduce the likelihood of borehole and test pit log misinterpretation, the complete assessment should be available to persons or organisations involved in the project, such as contractors, for their use. Denial of such access and disclaiming responsibility for the accuracy of sub-surface information does not insulate an owner from the attendant liability. It is critical that the site owner provides all available site information to persons and organisations, such as contractors.

**READ RESPONSIBILITY CLAUSES CLOSELY**

An environmental site assessment is based extensively on judgement and opinion; therefore, it is necessarily less exact than other disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. In order to aid in prevention of this problem, model clauses have been developed for use in written transmittals. These are definitive clauses, designed to indicate consultant responsibility. Their use helps all parties involved recognise individual responsibilities and formulate appropriate action. Some of these definitive clauses are likely to appear in the environmental site assessment and you are encouraged to read them closely. Your consultant will be happy to give full and frank answers to any questions you may have.