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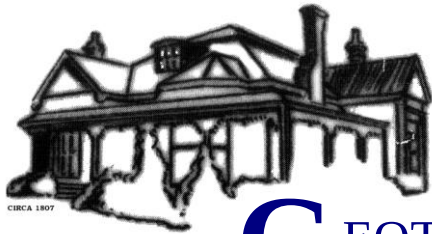
ABN 64 002 841 063



DETAILED CONTAMINATION ASSESSMENT

**LOT 101 IN DP777404
21 ATKINSON STREET, LIVERPOOL**

REPORT NO 13603/3-AA 17 NOVEMBER 2016



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Job No: 13603/3
Our Ref: 13603/3-AA
17 November 2016

Binah By Design
c/- Synergy Development Group Pty Ltd
PO Box 3142
Liverpool Westfield NSW 2170
Email: ARafaieh@binah.com.au

Attention: Mr A Refaieh

Dear Sir

re: **Proposed Multi-storey Residential (Flat) Building Development
Lot 101 in DP777404 – 21 Atkinson Street, Liverpool
Detailed Contamination Assessment**

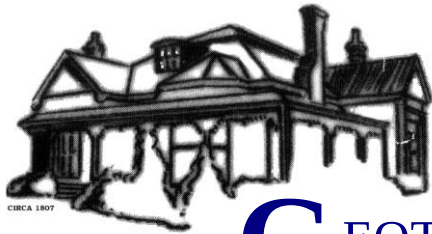
Please find herewith our *Detailed Contamination Assessment* report for the above site.

A brief of the outcome of the assessment was summarised in the Executive Summary.

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

Yours faithfully
GEOTECHNIQUE PTY LTD

JOHN XU
Associate
BE, MEngSc, MIEAust



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EXECUTIVE SUMMARY

A detailed contamination assessment (DCA) was carried out for the site currently registered as Lot 101 in DP777404, located at 21 Atkinson Street, Liverpool, in the local government area of Liverpool.

The *Preliminary Contamination Assessment* (PCA) report (Ref. 13603/1-AA dated 16 December 2015) prepared by Geotechnique Pty Ltd (Geotechnique) identified potential areas of environmental concern and associated contaminants within the site, and recommended implementation of an appropriate soil sampling and testing program.

Subsequently, Liverpool City Council has required a (Stage 2) DCA to be implemented.

The objectives of the assessment were to determine the contamination status of the site, to assess the suitability of the site for the proposed land use, and to make recommendations with regard to any future remedial works if required.

In order to achieve the objectives, review of the PCA report, site reconnaissance, sampling and testing were carried out.

The findings of this DCA are summarised as follows:

- The site was occupied by a number site features at the time of sampling and site inspection. The site conditions were essentially unchanged from those described in the PCA Report 13603/1-AA. Based on site history and the site inspection, two areas of concern and associated contaminants of potential concern have been identified within the site as summarised in Section 6.0 of this report.
- As presented in summary tables and discussed in Section 11.0, most of the laboratory test results for the recovered samples satisfied the criteria for stating that the analytes selected are either not present (i.e. concentrations less than laboratory limits of reporting) or present in the samples at concentrations that do not pose a risk of harm to human health or the environment under a “residential with minimal opportunities for soil access” form of development.

However, soil contaminated with Benzo(a)pyrene (BaP) TEQ and BaP was identified at locations BH9, BH11 and BH13.

- Potential off-site impacts of contaminants on groundwater and waterbodies are considered to be low.

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Executive Summary continued

Based on this assessment, it is our opinion that the site can be made suitable for the proposed residential (with minimal opportunities for soil access) land use subject to implementation of the following recommendations, after complete demolition and removal, and clearance of grass:

- Excavation and visual assessment of soil in the footprints of site features such as warehouse, concrete car park/driveway, hardstands, and grass covered areas, will be required. The purpose of this is to ascertain the presence or otherwise of “suspect” materials (identified by unusual staining, odour, discolouration or inclusions such as building rubble, asbestos, ash particles, etc.) and fill, which is different to those encountered for this assessment. Assessment by sampling and testing might be required. In the event of contamination, further assessment, remediation and validation will be required.
- Soil contaminated with BaP TEQ and BaP was identified at location BH9, BH11 and BH13. Further assessment is to be implemented to determine the necessity for risk assessment, remediation and/or management.

If suspect materials (identified by unusual staining, odour, discolouration or inclusions such as building rubble, asbestos sheets/pieces/pipes, ash material, etc.) and fill, which is different to those encountered for this assessment, are encountered during any stage of future demolition/site preparation, we recommend that this office is contacted for assessment, and to take all necessary actions.

Reference should be made to Section 12.0 for details of the recommendations regarding any materials to be excavated and removed from the site, and any fill to be imported to the site.

Reference should also be made to Section 13.0 of the report, which sets out details of the limitations of the DCA.

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Lot 101 in DP777404 – 21 Atkinson Street, Liverpool

1.0 INTRODUCTION

This report presents the results of a detailed contamination assessment (DCA) for the site currently registered as Lot 101 in DP777404, located at 21 Atkinson Street, Liverpool, in the local government area of Liverpool, as indicated on Figure 1 below:

FIGURE 1



Map Data ©2015 Google

It is understood that the site is proposed for a multi-storey residential (flat) building development.

The *Preliminary Contamination Assessment* (PCA) report (Ref. 13603/1-AA dated 16 December 2015) prepared by Geotechnique Pty Ltd (Geotechnique) identified potential areas of environmental concern and associated contaminants within the site, and recommended implementation of an appropriate soil sampling and testing program.

Subsequently, Liverpool City Council has required a (Stage 2) DCA to be implemented.

The objectives of the assessment were to determine the contamination status of the site, to assess the suitability of the site for the proposed land use, and to make recommendations with regard to any future remedial works if required.

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This report was generally prepared 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.

2.0 SCOPE OF WORK

In order to achieve the objectives of this assessment, the following scope of work was conducted:

- Review and summary of Report 13603/1-AA.
- Obtain and review services plans from "Dial Before You Dig" to ascertain that underground services are not present at sampling locations.
- An inspection by an Environmental Engineer from Geotechnique, to observe present site conditions and to identify site activities, site features and any visible or olfactory indicators of potential contamination that differ from those identified in Report 13603/1-AA.
- Scan the sampling locations to confirm underground utilities prior to field sampling.
- Recovery of samples for appropriate chemical analysis.
- A calibrated Photo-Ionisation Detector (PID) was used to screen the recovered soil samples for the presence of any volatile organic compounds (VOC).
- 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 located at 21 Atkinson Street, Liverpool, in the local government area of Liverpool, and is registered as Lot 101 in DP777404.

As shown on Drawing No 13603/1-AA1, the site is irregular in shape, measuring about 68 metres (m) along Atkinson Street, and covers an area of 5,412 square metres (m²).

At the time of the field sampling for this DCA (20 October 2016), the site conditions were essentially unchanged from those described in the PCA Report 13603/1-AA.

The site is bound to the north and east by Shepherd Street, to the south by Atkinson Street and to the west by a railway corridor.

4.0 TOPOGRAPHY, GEOLOGY & HYDROGEOLOGY

There were gentle slopes surrounding the site going west to east along Atkinson Street, and from south to north along Shepherd Street. However, the site itself was level compared to the surrounding landscape.

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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 site has the following two different geological soil types:

1. Triassic Age Shale of the Wianamatta Group, comprising shale, carbonaceous claystone, claystone, laminite, fine to medium grained lithic sandstone, rare coal and tuff.
2. Tertiary Age Clayey quartzose sand and clay.

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 landscape at the site is likely to belong to the Luddenham Group, which is characterized by undulating to rolling hills on Wianamatta Group shales, with local relief of 50-80m, and slopes usually of 5-20%. The subsurface soils are typically characterized by high soil erosion hazard, localised impermeable highly plastic subsoil, moderately reactive.

Reference should be made to Table 1 in Appendix A for descriptions of the soils encountered during sampling. Materials encountered in the boreholes are generally described as follows:

Hardstand	Concrete, ranging in thickness from about 130mm to 150mm, in BH1 to BH12
Fill	Sand, brown, in BH4 to BH9 and BH11, with thickness ranging from approximately 0.1m to 0.5m. Gravelly Sand, dark grey-black, with inclusion of shale fragments, in BH4 and BH6 to BH11, with thickness ranging from approximately 0.1m to 0.55m. Silty Clay, brown and grey, inclusion of shale fragments, in BH1 to BH13, with thickness ranging from approximately 0.3m to 2.2m. Brick and cement pavement in BH7 and BH8, with thickness approximately 0.4m and 0.3m, respectively. Sandy Gravel, dark grey, with inclusion of clay and slag, in BH9 to BH11, with thickness ranging from approximately 0.2m to 0.6m. Sandy Clay, brown, in BH4, with thickness about 1.0m. Shaley Clay, grey, with inclusion of shale fragments, in BH13 and BH14, with thickness approximately 1.8m and 1.5m, respectively.
Topsoil	Sandy Silt, grey, was encountered in BH13 and BH14 with thickness approximately 0.2m and 0.5m, respectively.
Natural Soil	Silty Clay, grey then yellow-brown, or orange brown and grey. Shaley Clay, grey and brown. Silty Sand, grey and brown.
Bedrock	Shale bedrock was encountered at a depth of about 1.5m below existing ground level (EGL) in BH1.

All the recovered soil samples were screened for the presence of any VOC using a calibrated PID. The PID readings were all zero, indicating that the presence of volatiles in the soils is unlikely.

There was no detectable odour, no obvious staining, no discolouration of the materials, and no fibro-cement pieces at the sampling locations or on the bare surface of part of the site.

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Seepage was encountered during sampling at depths ranging from about 1.0m to 2.6m below the EGL in BH3, BH5, BH7 and BH9 to BH11, during the short time the boreholes remained open. It should be noted that fluctuations in the level of seepage/possible groundwater might occur due to variations in rainfall and/or other factors not evident during investigation.

Reference may be made to Drawing No 13603/3-AA1 for details of the above mentioned borehole locations.

Georges River is located approximately 160m to the east of the site.

5.0 SITE HISTORY INFORMATION

Geotechnique carried out a review of site history information as part of the PCA. The review included historical aerial photographs, Department of Land (DOL) Records, Planning Certificate under Section 149 (2) of the Environmental Planning and Assessment Act 1979, Council Records, NSW Office of Environment and Heritage (OEH) record of EPA Notices for Contaminated Land and Records of the Protection of Environment Operations (POEO) Public Register, as well as WorkCover NSW information on potential licensing to keep dangerous goods. For details, reference should be made to Report 13603/1-AA

Aerial photographs taken in 1951, 1961, 1970, 1978, 1986, 1998 and 2015 revealed that the property contained buildings/sheds since 1951. The surrounding land appeared to be used as both commercial and industrial land prior to 1951. The main warehouse building structure on the property appeared to be constructed between 1986 and 1998. The adjoining southern properties appeared to remain as mixed commercial/industrial land with some structures changing between 1951 and 2015. The land to the north surrounding the site appeared to have transformed from commercial/industrial to residential dwellings between 1951 and 2015.

NSW DOL records indicated various current and past owners/lessors/lessees (either private or commercial) of the site. Newton Properties Pty Ltd has owned the site since 2003, Pets International Investments Limited from 1997 to 2003, and Mumode Pty Ltd from 1988 to 1997.

The site was permitted to use for manufacture, storage and dispatch of pet (animal) requisites and accessories and associated commercial offices or such other use as may be permitted by the law and agreed to by the lessor, in its absolute discretion.

The Section 149 (2) Planning Certificate issued on 9 November 2015 indicated the site was zoned R4 High Density Residential in accordance with The Liverpool Local Environmental Plan 2010 and was not affected by any of the matters prescribed by Section 59 (2) of the Contaminated Land Management (CLM) Act 1997.

A summary of the available records of Liverpool City Council is listed below:

- 19 November 1986: Council notice of determination (permit number 390/86) for George House Liverpool Pty Ltd for erection of an industrial building at the corner of Atkinson and Shepherd Street, Liverpool - conditional approval.

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- 20 July 1988: Council notice of determination (permit number 349/88) for Mr Roy Tullipan for erection of an industrial building containing two factory units associated with office area at the corner of Atkinson and Shepherd Streets, Liverpool - conditional approval.
- 4 July 1989: Council notice of determination (permit number 477/89) for Mr R Tullipan for alterations to existing buildings to incorporate showroom and caretakers dwelling at the corner of Shepherd and Atkinson Streets - conditional approval.
- 22 May 1992: Council notice of determination (permit number 247/92) for Universal Air Conditioning for the use of premises for the manufacture and storage of air conditioning systems and components - conditional approval.
- 10 September 1996: Council notice for statement of classification (permit number 5/97) for Mr R Moy, for the manufacture of air conditioning units and admin offices was approved.
- 8 October 1996: Building Certificate (permit number (BA 356/97) for the class 5 office and class 8 factory approved.
- 21 October 1996: Council notice of determination (permit number 242/97) for GA Green and associates PL, for the use of existing premises for a pet requisites and accessories warehouse - conditional approval.
- 29 November 1996: Modification of Consent (permit number 242/97) for GA Green and associates PL - conditional approval.
- 4 February 2003: Council notice of determination (permit number DA1398/2003) for Neil Newton of Accent Air, for the use of existing unit to manufacture and store air conditioning units - conditional approval.

A search of the OEH records on 4 November 2015 found no EPA Records of Notices issued for the site.

It should be noted that the OEH records of EPA notices for contaminated land do not provide records of all contaminated land in NSW. At the time of searching the records, 340 sites in NSW were registered in the database.

A search of the licences, applications and notices under the POEO Public Register on 4 November 2015 found no records for the subject site.

A search of Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW did not locate any records pertaining to the site.

6.0 SUMMARY OF THE PRELIMINARY CONTAMINATION ASSESSMENT REPORT

Geotechnique carried out a PCA of the site in November and December 2015. The results were presented in Report 13603/1-AA. This section presents a summary of the scope of work involved in the PCA, and the subsequent findings and recommendations.

The objectives of the PCA were to identify any areas of potential contamination, and to assess if the site was likely to present a risk of harm to human health and the environment under the conditions of the proposed residential use.

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In order to achieve the objective of the assessment, the scope of work included a desktop study of site history information and a site inspection.

An Environmental Engineer from Geotechnique made the following observations during the site inspection for the PCA on 10 November 2015:

- One warehouse with the inclusion of an office occupied most of the site.
- Concrete car park/driveway.
- The warehouse was constructed on a concrete slab.
- A chemical storage area containing gas cylinders and oil drums on the western side of the site.
- A timber and scrap metal storage area on the site's southern perimeter.
- A power exchange on the south eastern corner of the site.
- A drainage pit on the eastern corner of the site.
- The eastern corner of the site also featured a barbeque area.
- Around the perimeter of the site there was a grassy mound which appeared to be created using fill.
- There was no petroleum hydrocarbon staining on the ground surface of the site that would indicate the potential for contamination.
- There were no signs of soil staining, plant distress or visible indicators of potential contamination.
- There were no obvious features associated with underground storage tanks (bowsers, breather pipe, inlet valve and piping).

Based on the assessment, the following potential Areas of Environmental Concern (AEC) and associated contaminants were identified:

Potential AEC	Rational / Details	Potential Contaminants ¹
The Site	➤ Potential for filling to have taken place, for levelling out concrete land for concrete slab and fill used in mounds surrounding the perimeter of the property. ➤ Fill materials could have been imported from unknown sources, therefore, there is potential for the fill materials to be contaminated.	➤ Metals ➤ Volatile organic compounds (VOC) ➤ Total Petroleum Hydrocarbon (TPH) ➤ Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) ➤ Polycyclic Aromatic Hydrocarbon (PAH) ➤ Organochlorine pesticides (OCP) ➤ Polychlorinated Biphenyls (PCB) ➤ Phenols ➤ Cyanides ➤ Asbestos

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Potential AEC	Rational / Details	Potential Contaminants ¹
Drainage Pits	➤ Drainage pits being located within vicinity of chemical storage areas have the potential to be influenced by contaminants in run-off during rain periods.	➤ VOC ➤ Metals ➤ TPH ➤ BTEX ➤ PAH ➤ Phenols

¹ The suite of potential contaminants identified will be reviewed subject to the findings of the excavated materials and added to if considered appropriate.

Off-site impacts of contaminants in soil are generally governed by the transport media available and likely receptors. The most common transport medium is water, whilst receptors include initially uncontaminated soils, groundwater, surface water bodies, humans, flora and fauna.

Migration of soil contaminants to the deeper soils or groundwater regime would generally be via leaching from the surface soil or fill, facilitated by infiltration of surface water. Given that the site is covered by a concrete slab, the potential for any contaminants migrating from the site to the groundwater table below was considered low.

Georges River is located approximately 160m to the east of the site. However, due to the minimal chemical use, the potential for contamination of surface water bodies as a result of any contaminants within the site was considered to be low.

Any potential off-site impacts of contaminants on groundwater and water bodies would be addressed upon completion of the proposed sampling and testing plan.

Based on the PCA, it was considered that the site would be suitable for the proposed residential use subject to sampling (after removal of the site features) and testing to address the potential contamination as listed above. If any contaminants are identified, the site could be made suitable for the proposed use following successful remediation and validation.

7.0 SAMPLING & ANALYSIS PLAN AND SAMPLING METHODOLOGY

Sampling and analyses for the assessment was carried out to obtain a reasonable assessment of the following:

1. Nature and location of any soil contaminants within the site.
2. The risks that the contaminants (if present) pose to human health and/or the environment under the conditions of the proposed land use.

The risk of harm to human health and the environment was determined through comparison of test results with EPA produced or endorsed criteria available at the time, as discussed in Section 10.0 of this report.

Sampling across the site was carried out on 20 October 2016 by our Environmental Engineer, Lan Ye.

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Based on the "Sampling Design Guidelines for Contaminated Sites" 1995 EPA, for a site area of 5,412m², 14 sampling points are required. Boreholes BH1 to BH14 were drilled across the entire site.

Reference may be made to Drawing No 13603/3-AA1 for locations of the above-mentioned boreholes.

Prior to sampling, the borehole locations were scanned by a services locator in order to avoid any underground services.

The sampling procedures adopted were as follows:

- Soil samples were collected using a Geoprobe ® sampling system. The *direct push* technique inserts small diameter sampling tools directly into the ground, enabling accurate sampling, with minimal disturbance to the sub-surface soil profile.
- Push tube soil samples were obtained continuously from ground level. The use of dedicated acetate sample liners during the sampling process minimises the possibility of cross contamination of samples from different horizons, as well as minimising potential loss of readily volatile compounds.
- At each sampling depth, two samples were recovered using a stainless steel liner cutter to make a lengthwise opening of the liner, and a stainless steel knife to cut longitudinally into two halves.

One half for laboratory analysis 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 other half was recovered for head space screening for the presence or otherwise of VOC using a calibrated PID.

The soil sample for PID screening was placed in an airtight polyethylene bag, ensuring enough air space ('headspace') above the sample is present to be screened in the field. The soil sample remained in the bag for approximately 15 minutes before being shaken (to thoroughly mix soil with the air in the headspace) and a PID reading recorded. The PID readings were all equal to 0.0ppm. A copy of the PID calibration sheet is presented in Appendix B.

- Soil samples recovered for asbestos testing were transferred into small plastic bags.

In order to ensure the analytical performance of the primary laboratory, duplicate and split samples were prepared for analyses. Samples were kept in a 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 completion of the field work. The fully filled bottle and vial were labelled and placed in a chilled container.

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

The primary samples and QA/QC samples in the chilled container with trip spike sample and plastic bags were forwarded under Chain of Custody (COC) conditions to the primary testing laboratory of SGS Environmental Services (SGS). Inter-laboratory duplicate (split) samples were forwarded to the

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secondary testing laboratory of Envirolab Services Pty Ltd (Envirolab). Both SGS and Envirolab are National Association of Testing Authorities (NATA) accredited.

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

At the time of the field sampling for this DCA, the site conditions were essentially unchanged from those described in the PCA Report 13603/1-AA. Based on site observation, the soil profiles encountered, and the potential AEC and associated contaminants presented in a table in Section 6.0, the following laboratory analysis plan was implemented:

- All the recovered fill and topsoil samples, as well as the corresponding duplicate and split samples, were analysed for metals.
- Seventeen fill samples covering different types of materials and one topsoil sample were selected for analysis of Cation Exchange Capacity (CEC) and pH.
- Thirty one fill samples covering different types of materials at various depths, as well as the corresponding duplicate and split samples, were selected for analysis of TPH, BTEX, OCP and PCB.
- Forty nine fill samples covering different types of materials at various depths, as well as the corresponding duplicate and split samples, were selected for analysis of PAH.
- Twenty eight fill samples covering different types of materials at various depths, as well as the corresponding duplicate and split samples, were selected for analysis of Cyanides and Phenols.
- Eleven surface samples, four deeper samples, as well as the corresponding duplicate sample and split sample, were screened for VOC analysis.
- All the recovered fill and topsoil samples were analysed for asbestos for screening purposes.
- One rinsate sample R1 was analysed for metals, TPH, BTEX and PAH.
- One trip spike sample TS1 was analysed for BTEX.

8.0 FIELD QUALITY ASSURANCE AND QUALITY CONTROL

8.1 Sampling Personnel

Geotechnique undertook all the sampling associated with this assessment. The Environmental Engineer (Lan Ye) from Geotechnique located sampling positions based on the project brief prepared by the Project Manager and site conditions, supervised the drilling of each sample location, logged the soil profile encountered, recovered soil samples at a frequency determined by the sampling plan (project brief), carried out insitu PID screening, preparation of QA/QC samples, and packaged the samples (refer to Section 7.0).

Lan Ye has undergone supervised training in Geotechnique procedures for sampling and logging.

8.2 Field Instrument Calibration

As stated in Section 7.0, a calibrated PID was used in the field to screen for the presence of volatile compounds in the recovered samples (head space screening). The PID was calibrated on-site before use. A copy of the PID calibration sheet is included in Appendix B of this report.

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8.3 Decontamination Procedures

Soil sampling was carried out using a Geoprobe® “push tube” sampling system. Push tube soil samples were obtained continuously from ground level. The use of dedicated acetate sample liners during the sampling process minimises the possibility of cross contamination of samples from different horizons, as well as minimising potential loss of readily volatile compounds.

A stainless steel liner cutter was used to make a lengthwise opening of the liner, and a stainless steel knife was used to cut soil samples. A stainless steel trowel was used to transfer the soil sample from the liner to the laboratory supplied glass jar and plastic bag. Decontamination of the cutter, knife and trowel involved the following:

- Removal of soils adhering to the cutter, knife and trowel by scrubbing with a brush.
- Washing the cutter, knife and trowel thoroughly in a solution of phosphate free detergent (Decon 90) using brushes and disposable towels (Bucket 1).
- Rinsing the cutter, knife and trowel thoroughly with distilled water (Bucket 2).
- Repeating the washing / rinsing steps and rinsing with water (Bucket 3).
- Drying the cutter, knife and trowel with a clean cloth.

A sample of the final rinsate water sample (Bucket 3) was recovered at completion of sampling.

8.4 Rinsate Sample

One rinsate water sample (Rinsate R1) was recovered at the end of field work in order to identify possible cross contamination between the sampling locations.

The rinsate water sample was analysed for Metals, TPH, BTEX and PAH. The test results for the rinsate water sample are summarised in Table A. A copy of the laboratory analytical report is included in Appendix C of this report.

As shown in Table A, all concentrations of analytes in the rinsate sample were less than laboratory limits of reporting (LOR), which indicated that adequate decontamination had been carried out in the field.

8.5 Trip Spike Sample

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

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.

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One trip spike sample (TS1) was forwarded to the primary analytical laboratory with the samples collected from the site and tested for BTEX. The test results for the trip spike sample, reported as a percentage recovery of the applied and known spike concentrations, are shown in Table B. A copy of the laboratory analytical report is included in Appendix C of this report.

As indicated in Table B, the results show a good recovery of the spike concentrations, ranging between 90% and 94%. Furthermore, BTEX results were in general 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/conclusion of this report.

8.6 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.

Duplicate samples were prepared on the basis of sample numbers recovered during the field work. The duplicate sample frequency was computed using the total number of samples analysed as part of this assessment.

The duplicate frequency adopted (6% for metals, TPH, BTEX, PAH, OCP and PCB, and 7% for Cyanides, Phenols and VOC) complies with Schedule B3 Guideline on Laboratory Analysis of Potentially Contaminated Soils of the National Environment Protection (Assessment of Site Contamination) Measure (NEPM) 1999 (April 2013), which recommends a duplicate frequency of at least 5%.

The laboratory test results are summarised in Tables C1 to C3. A copy of the laboratory analytical report is included in Appendix C of this report.

A comparison was made of the laboratory test results for the duplicate sample with the original sample and the Relative Percentage Differences (RPD) was 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 or non-homogeneous samples.

As shown in Tables C1 to C3, the comparisons between the duplicate and corresponding original sample indicated generally acceptable RPD, with the exception of metals (ranging from 41% to 146%) in Tables C1 to C3 and PAH (ranging from 56% to 60%) in Table C2, which were in excess of 30%, mainly due to the low concentrations of some analytes detected and/or expected for organic analysis.

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It should be noted that the duplicates were prepared from fill samples and therefore, heterogeneity of the samples might also result in relatively higher RPD.

All the concentrations with RPD in excess of 30% in the duplicate pairs were in general both less than the relevant assessment criteria, with exception of duplicate pair D3 and BH11 (2.5-2.8m).

The duplicate pair D3 and BH11 (2.5-2.8m) in Table C2 was found to have BaP concentration in the original sample BH11 (2.5-2.8m) that was higher than the corresponding duplicate sample D3, and in excess of the relevant assessment criterion (refer to Table G).

As such, the higher concentration of BaP in the original sample was adopted for the assessment and included in Table G.

Based on the overall duplicate sample numbers and comparisons, the RPD are not considered crucial, therefore it is concluded that the test results provided by the primary laboratory SGS are of adequate accuracy and reliability for this assessment.

8.7 Inter-laboratory Duplicate (Split) Samples

The inter-laboratory duplicate (split) samples provide a check on the analytical performance of the primary laboratory. The split samples were prepared in the same manner as the duplicate sample (refer to Section 8.6). The split samples were forwarded to the secondary laboratory (Envirolab) for analysis.

Split samples were prepared on the basis of sample numbers recovered during field work. The split sample frequency was computed using the total number of samples analysed as part of this assessment.

The split sample frequency adopted (6% for metals, TPH, BTEX, PAH, OCP and PCB, and 7% for Cyanides, Phenols and VOC) complies with the Schedule B3 of the NEPM 1999 (April 2013), which recommends a frequency of 5%.

The results are summarised in Tables D1 to D3. A copy of the laboratory analytical report and certificate of analysis is included in Appendix C of this report.

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, higher variations can be expected for organic analyses compared to inorganic analyses and for samples with low analyte concentrations or non-homogeneous samples.

As indicated in Tables D1 to D3, the comparisons between the split and corresponding original sample indicated generally acceptable RPD, with the exception of metals (ranging from 49% to 167%) in Tables D1 and D2 and Total PAH (69%) in Table D3, which were in excess of 30%, mainly due to the non-homogeneous nature of the fill samples and/or expected for organic analysis.

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

Based on the above, the variations are not considered critical. Based on the overall split sample numbers and comparisons, it is concluded that the test results provided by the primary laboratory can be relied upon for this assessment.

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9.0 LABORATORY QUALITY ASSURANCE AND QUALITY CONTROL

Geotechnique uses only laboratories accredited by the NATA for chemical analyses. The laboratories must 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.

The soil samples were generally analysed within the allowable holding times, detailed in Schedule B3 of the NEPM 1999 (April 2013). The rinsate sample was analysed within the allowable holding times for water detailed in Standard Methods for the Examination of Water and Wastewater (APHA).

The test methods and LOR/practical quantitation limits (PQL) adopted by the laboratories are indicated with the laboratory analytical reports/certificate of analysis. A copy of the laboratory analytical reports/certificate of analysis is included in Appendix C of this report.

As part of the analytical run for the project, the laboratories included laboratory blanks, duplicate samples, laboratory control samples, matrix spikes and surrogate spikes.

The QA/QC procedures adopted by the laboratories have been checked and are considered to generally comply with Schedule B3 of the NEPM 1999 (April 2013).

Overall, the QA/QC adopted by SGS and Envirolab indicated the analytical data to fall within acceptable levels of accuracy and precision. 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 1999 (April 2013), and the *Guidelines for the NSW Site Auditor Scheme* (NSW EPA/DEC, 2006) will be used for 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 multi-storey residential (flat) building development. Therefore, with regard to human health, analytical results were assessed against risk based HIL for *residential with minimal opportunities for soil access* (HIL B).

- Health Screening Levels (HSL) for selected petroleum compounds, 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 >4 m.

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For this assessment the analytical results were assessed against the available HSL for *high density residential* (HSL B) for clay and sand to depth of 0m to <4m.

- 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 results were assessed against the available ESL for *urban residential* for fine-grained soil (clay) and coarse-grained soil (sand).

- Ecological Investigation Levels (EIL), a specific type of Soil Quality Guidelines (SQG) for selected metals, Naphthalene and DDT, are 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 this assessment, the analytical results were assessed against the available EIL for *urban residential* land use for aged contamination in soil.

For arsenic, Naphthalene and DDT, generic EIL for urban residential are adopted for aged contaminants. For other metals, EIL are the sum of the added contaminant limit (ACL) and the ambient background concentration (ABC). Where available, EIL are calculated using the EIL calculator developed by CSIRO for NEPC.

- Due to a lack of EIL for cadmium and mercury, the available Provisional Phytotoxicity Based Investigation Levels (PIL) published in the *Guidelines for the NSW Site Auditor Scheme* (NSW EPA, 2006) were used, with regard to protection of the environment and impact on plant growth.

For asbestos, the assessed soil must not contain bonded asbestos containing material (ACM) in excess of 0.04% w/w and surface soil within the site must be free of visible ACM, as well as asbestos fines (AF) and fibrous asbestos (FA) in the soil is <0.001% w/w.

The soil/site will be deemed contaminated if any of the above criteria are unfulfilled. Further investigation, remediation and/or management will be recommended if the soil is found to be contaminated.

11.0 LABORATORY TEST RESULTS, ASSESSMENT & DISCUSSION

Reference may be made to Appendix C for the actual laboratory analytical reports from SGS. The laboratory test results for the soil samples analysed are presented in Tables E to J. A discussion of the test results is presented in the following sub-sections.

11.1 Metals (As, Cd, Cr, Cu, Pb, Hg, Ni & Zn), CEC& pH

The lowest test results of CEC and pH of samples in Table E were adopted to calculate the relevant EIL.

As indicated in Table E, the concentrations of metals in the soil samples analysed were below the HIL B, EIL and/or PIL.

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11.2 Total Petroleum Hydrocarbons (TPH) and BTEX

As presented in Table F, the concentrations of F1 (TPH C6-C10 less BTEX), F2 (TPH >C10-C16 less Naphthalene and TPH>C10-C16), F3 (TPH >C16-C34), F4 (TPH >C34-C40) and BTEX were below the HSL B and/or ESL adopted. The test results of F1, F4, Ethyl Benzene and Xylenes were also less than the laboratory LOR. The test results of F2, F3, Benzene and Toluene were in general less than the laboratory LOR.

There was not limiting of HSL B for clay for:

- Toluene at depths of 1.0m and >1.0m.
- Ethyl Benzene at all depths.
- Xylenes at depths of 2.0m and >2.0m.

11.3 Polycyclic Aromatic Hydrocarbons (PAH)

As indicated in Table G, with the exception of the highlighted concentrations of BaP TEQ and BaP, the remaining concentrations of BaP TEQ and BaP were well below the HIL B or ESL adopted.

The highlighted BaP TEQ concentration (4.9mg/kg) in sample BH9 (2.5-2.7m) exceeded the HIL B of 4mg/kg. The highlighted BaP concentrations (ranging from 0.9mg/kg to 3.3mg/kg) in samples BH9 (2.5-2.7m), BH11 (2.5-2.8m) and BH13 (2.0-2.3m) exceeded the ESL of 0.7mg/kg.

As shown in Table G, all the concentrations of Total PAH and Naphthalene were well below the HIL B, HSL B and/or EIL.

There was not limiting of HSL B for Naphthalene for clay at depths of 1.0m and >1.0m.

11.4 Organochlorine Pesticides (OCP)

As presented in Table H, the concentrations of OCP were well below the HIL B and less than the laboratory LOR. The concentrations of DDT were also well below the EIL.

11.5 Polychlorinated Biphenyls (PCB)

As summarised in Table H, the concentrations of PCB were below the HIL B and less than laboratory LOR.

11.6 Cyanides

As indicated in Table H, the concentrations of Cyanides were well below the HIL B and less than the laboratory LOR.

11.7 Phenols

As shown in Table H, the concentrations of Phenols were well below the HIL B and less than the laboratory LOR.

11.8 Volatile Organic Compounds (VOC)

As indicated in Table I, all the concentrations of VOC excluding BTEX were less than the laboratory LOR.

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Reference should be made to Section 11.2 regarding the assessment of BTEX test results.

11.9 Asbestos

As shown in Table J, no ACM in >7mm fraction and no asbestos (<7mm AF/FA) were found at laboratory LOR in any of the analysed soil samples.

12.0 CONCLUSION AND RECOMMENDATIONS

The findings of this DCA are summarised as follows:

- The majority of the site was occupied by a number site features at the time of sampling and site inspection (refer to Drawing No 13603/1-AA1). The site conditions were essentially unchanged from those described in the PCA Report 13603/1-AA. Based on the site history and site inspection, two areas of concern and associated contaminants of potential concern have been identified within the site, as summarised in the table presented in Section 6.0 of this report.
- As presented in summary tables (Tables E to J) and discussed in Section 11.0, most of the laboratory test results for the recovered samples satisfied the criteria for stating that the analytes selected are either not present (i.e. concentrations less than laboratory LOR) or present in the samples at concentrations that do not pose a risk of harm to human health or the environment under a “residential with minimal opportunities for soil access” form of development.

However, soil contaminated with Benzo(a)pyrene (BaP) TEQ and BaP was identified at locations BH9, BH11 and BH13, as indicated and tabulated on Drawing No 13603/3-AA2.

- Potential off-site impacts of contaminants on groundwater and waterbodies are considered to be low.

Based on this assessment, it is our opinion that the site can be made suitable for the proposed residential (with minimal opportunities for soil access) land use, subject to implementation of the following recommendations, after complete demolition and removal and clearance of grass:

- Excavation and visual assessment of soil in the footprints of site features such as warehouse, concrete car park/driveway, hardstands, and grass covered areas, will be required. The purpose of this is to ascertain the presence or otherwise of “suspect” materials (identified by unusual staining, odour, discolouration or inclusions such as building rubble, asbestos, ash particles, etc.) and fill, which is different to those encountered for this assessment. Assessment by sampling and testing might be required. In the event of contamination, further assessment, remediation and validation will be required.
- Soil contaminated with BaP TEQ and BaP was identified at location BH9, BH11 and BH13, as indicated and tabulated on Drawing No 13603/3-AA2. Further assessment is to be implemented to determine the necessity for risk assessment, remediation and/or management.

If suspect materials (identified by unusual staining, odour, discolouration or inclusions such as building rubble, asbestos sheets/pieces/pipes, ash material, etc.) and fill, which is different to those encountered for this assessment, are encountered during any stage of future demolition/site preparation, we recommend that this office is contacted for assessment, and to take all necessary actions.

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

Any imported soil (fill) 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 virgin excavated natural material (VENM) or excavated natural material (ENM).

13.0 LIMITATIONS

Within the scope of work outlined in our proposal in the email dated 18 April 2016, the services performed by Geotechnique in preparing this report 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 the purpose stated within, based on the agreed scope of work. Liverpool City Council and any relevant authorities may rely on the report for development and building application assessment processes. 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.

The information in this report is considered accurate at the completion of field sampling on 20 October 2016, in accordance with the current conditions of the site. Any variations to the site form or use beyond that date will nullify the conclusion stated.

No contamination assessment can eliminate all risk; even a rigorous professional assessment might not detect all contamination within a site. Although the assessment conducted at the site was carried out in accordance with current NSW guidelines, the potential always exists for contaminants and contaminated soils to be present between sampled locations and in the hardstands/grass covered areas.

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

LIST OF REFERENCES

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

Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (2nd Edition) – NSW DEC 2006

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

Geological Series Sheet 9030, Scale 1:100,000 (Penrith), Department of Minerals and Energy 1991

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) Measures, 1999 (April 2013) - National Environmental Protection Council

Protection of the Environment Operations Act 1997

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

DRAWINGS

Drawing No 13603/1-AA1

Site Features

Drawing No 13603/3-AA1

Borehole Locations

Drawing No 13603/3-AA2

Locations of Contamination



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0 8 16 24 32 40m

Scale 1:800

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Site Features

Drawing No: 13603/1-AA1
Job No: 13603/1
Drawn By: MH
Date: 10 November 2015
Checked By: JH

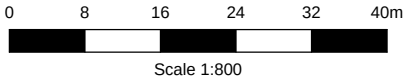
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LEGEND

● Borehole



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Borehole Locations

Drawing No: 13603/3-AA1
 Job No: 13603/3
 Drawn By: MH
 Date: 24 October 2016
 Checked By: LY/JX

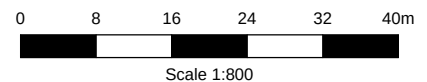
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LEGEND

● Borehole



Location	Depth (m)	Contaminant	Concentration (mg/kg)
BH9	2.5-2.7	BaP TEQ, BaP	4.9, 3.3
BH11	2.5-2.8	BaP	0.9
BH13	2.0-2.3	BaP	1.3
Assessment Criteria	BaP TEQ = 4 (HIL B) BaP = 0.7 (ESL)		

Notes:

BaP : Benzo(a)pyrene

HIL B : Health-based Investigation Level for residential with minimal opportunities for soil access

ESL : Ecological Screening Level for urban residential - Coarse-grained Soil (Sand) & Fine-grained Soil (Clay)

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Locations of Contamination

Drawing No: 13603/3-AA2
Job No: 13603/3
Drawn By: MH
Date: 9 November 2016
Checked By: JX

File No: 13603-3
Layers: 0, AA2

TABLES

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Table B	<i>Trip Spike Sample</i>
Table C1 to C3	<i>Duplicate Samples</i>
Table D1 to D3	<i>Split Samples</i>
Table E	<i>Heavy Metals, Cation Exchange Capacity (CEC) and pH Test Results – Discrete Samples</i>
Table F	<i>Total Petroleum Hydrocarbons (TPH) & BTEX Test Results – Discrete Samples</i>
Table G	<i>Polycyclic Aromatic Hydrocarbons (PAH) Test Results – Discrete Samples</i>
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TABLE A
RINSATE SAMPLE
(Ref No: 13603/3-AA)

ANALYTES	Rinsate R1 20/10/2016
METALS	(mg/L)
Arsenic	<0.02
Cadmium	<0.001
Chromium	<0.005
Copper	<0.005
Lead	<0.02
Mercury	<0.0001
Nickel	<0.005
Zinc	<0.01
TOTAL PETROLEUM HYDROCARBONS (TPH)	(µg/L)
F1 (C6-C10 less BTEX)	<50
F2 (>C10-C16)	<60
F3 (>C16-C34)	<500
F4 (>C34-C40)	<500
BTEX	(µg/L)
Benzene	<0.5
Toluene	<0.5
Ethyl Benzene	<0.5
Xylenes	<1.5
POLYCYCLIC AROMATIC HYDROCARBONS (PAH)	(µg/L)
Total PAH	<1
Naphthalene	<0.1
Benzo(a)Pyrene	<0.1

TABLE B
TRIP SPIKE SAMPLE
(Ref No: 13603/3-AA)

ANALYTES	Trip Spike TS1
BTEX	
Benzene	94%
Toluene	93%
Ethyl Benzene	94%
Xylenes	90%

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

TABLE C1
DUPLICATE SAMPLE
(Ref No: 13603/3-AA)

ANALYTES	BH8 0.5-0.8 m mg/kg	Duplicate D1 mg/kg	RELATIVE PERCENTAGE DIFFERENCES (RPD) %
METALS			
Arsenic	7	8	13
Cadmium	0.3	0.5	50
Chromium	11	14	24
Copper	23	29	23
Lead	76	90	17
Mercury	0.07	0.09	25
Nickel	6.6	6.5	2
Zinc	84	95	12
TOTAL PETROLEUM HYDROCARBONS (TPH)			
F1 (C6-C10 less BTEX)	<25	<25	-
F2 (>C10-C16)	<25	<25	-
F3 (>C16-C34)	<90	350	-
F4 (>C34-C40)	<120	<120	-
BTEX			
Benzene	<0.1	<0.1	-
Toluene	<0.1	<0.1	-
Ethyl Benzene	<0.1	<0.1	-
Xylenes	<0.3	<0.3	-
POLYCYCLIC AROMATIC HYDROCARBONS			
Benzo(a)Pyrene TEQ	<0.3	<0.3	-
Total PAH	<0.8	1.7	-
Naphthalene	<0.1	0.1	-
Benzo(a)Pyrene	<0.1	<0.1	-
ORGANOCHLORINE PESTICIDES (OCP)			
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	-
POLYCHLORINATED BIPHENYLS (PCB)			
Total PCB	<1	<1	-
CYANIDES & PHENOLS			
Cyanides	<0.5	<0.5	-
Phenols	<5	<5	-

TABLE C2
DUPLICATE SAMPLE
(Ref No: 13603/3-AA)

ANALYTES	BH11 2.5-2.8 m mg/kg	Duplicate D3 mg/kg	RELATIVE PERCENTAGE DIFFERENCES (RPD) %
METALS			
Arsenic	32	5	146
Cadmium	0.4	0.3	29
Chromium	18	6.5	94
Copper	40	200	133
Lead	130	86	41
Mercury	0.19	0.08	81
Nickel	11	9.4	16
Zinc	200	85	81
POLYCYCLIC AROMATIC HYDROCARBONS			
Benzo(a)Pyrene TEQ	1.3	0.7	60
Total PAH	8.5	4.8	56
Naphthalene	<0.1	<0.1	-
Benzo(a)Pyrene	0.9	0.5	57

TABLE C3
DUPLICATE SAMPLE
(Ref No: 13603/3-AA)

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ANALYTES	BH13 0.2-0.5 m mg/kg	Duplicate D6 mg/kg	RELATIVE PERCENTAGE DIFFERENCES (RPD) %
METALS			
Arsenic	<3	6	-
Cadmium	<0.3	<0.3	-
Chromium	2.7	4.5	50
Copper	14	25	56
Lead	8	13	48
Mercury	0.07	<0.05	-
Nickel	5.4	6.9	24
Zinc	22	43	65
TOTAL PETROLEUM HYDROCARBONS (TPH)			
F1 (C6-C10 less BTEX)	<25	<25	-
F2 (>C10-C16)	<25	<25	-
F3 (>C16-C34)	<90	<90	-
F4 (>C34-C40)	<120	<120	-
BTEX			
Benzene	<0.1	<0.1	-
Toluene	<0.1	<0.1	-
Ethyl Benzene	<0.1	<0.1	-
Xylenes	<0.3	<0.3	-
POLYCYCLIC AROMATIC HYDROCARBONS			
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	-
ORGANOCHLORINE PESTICIDES (OCP)			
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	-
POLYCHLORINATED BIPHENYLS (PCB)			
Total PCB	<1	<1	-
CYANIDES & PHENOLS			
Cyanides	<0.5	<0.5	-
Phenols	<5	<5	-

TABLE C3
DUPLICATE SAMPLE
(Ref No: 13603/3-AA)

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ANALYTE	BH13 0.2-0.5 m mg/kg	DUPLICATE D6 mg/kg	RELATIVE PERCENTAGE DIFFERENCE %
VOC			
Dichlorodifluoromethane	<1	<1	-
Chloromethane	<1	<1	-
Vinyl Chloride	<0.1	<0.1	-
Bromomethane	<1	<1	-
Chloroethane	<1	<1	-
Trichlorofluoromethane	<1	<1	-
Acetone	<10	<10	-
Iodomethane	<5	<5	-
1,1-Dichloroethene	<0.1	<0.1	-
Acrylonitrile	<0.1	<0.1	-
Methylene Chloride	<0.5	<0.5	-
Allyl Chloride	<0.1	<0.1	-
Carbon Disulphide	<0.5	<0.5	-
Trans-1,2-dichloroethene	<0.1	<0.1	-
Methyl-tert-butyl ether	<0.1	<0.1	-
1,1-dichloroethane	<0.1	<0.1	-
Vinyl acetate	<10	<10	-
2-Butanone	<10	<10	-
Cis-1,2-dichloroethene	<0.1	<0.1	-
Bromochloromethane	<0.1	<0.1	-
Chloroform	<0.1	<0.1	-
2,2-dichloropropane	<0.1	<0.1	-
1,2-dichloroethane	<0.1	<0.1	-
1,1,1-trichloroethane	<0.1	<0.1	-
1,1-dichloropropene	<0.1	<0.1	-
Carbon tetrachloride	<0.1	<0.1	-
Dibromomethane	<0.1	<0.1	-
1,2-dichloropropane	<0.1	<0.1	-
Trichloroethene	<0.1	<0.1	-
2-Nitropropane	<10	<10	-
Bromodichloromethane	<0.1	<0.1	-
4-Methyl-2-Pentanone	<1	<1	-
cis-1,3-dichloropropene	<0.1	<0.1	-
trans-1,3-dichloropropene	<0.1	<0.1	-
1,1,2-trichloroethane	<0.1	<0.1	-
1,3-dichloropropane	<0.1	<0.1	-
2-Hexanone	<5	<5	-
1,2-dibromoethane	<0.1	<0.1	-
Tetrachloroethene	<0.1	<0.1	-
1,1,1,2-tetrachloroethane	<0.1	<0.1	-

TABLE C3
DUPLICATE SAMPLE
(Ref No: 13603/3-AA)

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ANALYTE	BH13 0.2-0.5 m mg/kg	DUPLICATE D6 mg/kg	RELATIVE PERCENTAGE DIFFERENCE %
VOC			
Chlorobenzene	<0.1	<0.1	-
Bromoform	<0.1	<0.1	-
Cis-1,4-dichloro-2-butene	<1	<1	-
Styrene	<0.1	<0.1	-
1,1,2,2-tetrachloroethane	<0.1	<0.1	-
1,2,3-trichloropropane	<0.1	<0.1	-
Trans-1,4-dichloro-2-butene	<1	<1	-
Isopropylbenzene	<0.1	<0.1	-
Bromobenzene	<0.1	<0.1	-
n-propyl benzene	<0.1	<0.1	-
2-chlorotoluene	<0.1	<0.1	-
4-chlorotoluene	<0.1	<0.1	-
1,3,5-trimethyl benzene	<0.1	<0.1	-
Tert-butyl benzene	<0.1	<0.1	-
1,2,4-trimethyl benzene	<0.1	<0.1	-
Sec-butyl benzene	<0.1	<0.1	-
1,3-dichlorobenzene	<0.1	<0.1	-
1,4-dichlorobenzene	<0.1	<0.1	-
p-Isopropyl toluene	<0.1	<0.1	-
1,2-dichlorobenzene	<0.1	<0.1	-
n-butyl benzene	<0.1	<0.1	-
1,2-dibromo-3-chloropropane	<0.1	<0.1	-
1,2,4-trichlorobenzene	<0.1	<0.1	-
Hexachlorobutadiene	<0.1	<0.1	-
1,2,3-trichlorobenzene	<0.1	<0.1	-

TABLE D1
SPLIT SAMPLE
(Ref No: 13603/3-AA)

ANALYTES	BH7 0.35-0.65 m mg/kg (SGS)	Split Sample S1 mg/kg (ENVIROLAB)	RELATIVE PERCENTAGE DIFFERENCES (RPD) %
METALS			
Arsenic	26	15	54
Cadmium	<0.3	<0.4	-
Chromium	7.5	7	7
Copper	13	14	7
Lead	58	17	109
Mercury	<0.05	<0.1	-
Nickel	3.2	4	22
Zinc	30	28	7
TOTAL PETROLEUM HYDROCARBONS (TPH)			
F1 (C6-C10 less BTEX)	<25	<25	-
F2 (>C10-C16)	<25	<50	-
F3 (>C16-C34)	<90	<100	-
F4 (>C34-C40)	<120	<100	-
BTEX			
Benzene	<0.1	<0.2	-
Toluene	<0.1	<0.5	-
Ethyl Benzene	<0.1	<1	-
Xylenes	<0.3	<3	-
POLYCYCLIC AROMATIC HYDROCARBONS (PAH)			
Benzo(a)Pyrene TEQ	<0.3	<0.5	-
Total PAH	<0.8	<1.55	-
Naphthalene	<0.1	<0.1	-
Benzo(a)Pyrene	<0.1	<0.05	-
ORGANOCHLORINE PESTICIDES (OCP)			
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	-
POLYCHLORINATED BIPHENYLS (PCB)			
Total PCB	<1	<0.7	-
CYANIDES & PHENOLS			
Cyanides	<0.5	<0.5	-
Phenols	<5	<5	-

TABLE D2
SPLIT SAMPLE
(Ref No: 13603/3-AA)

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ANALYTES	BH3 0.13-0.43 m mg/kg (SGS)	Split Sample S4 mg/kg (ENVIROLAB)	RELATIVE PERCENTAGE DIFFERENCES (RPD) %
METALS			
Arsenic	24	18	29
Cadmium	0.4	<0.4	-
Chromium	13	16	21
Copper	23	14	49
Lead	32	17	61
Mercury	<0.05	<0.1	-
Nickel	9.3	7	28
Zinc	270	24	167
TOTAL PETROLEUM HYDROCARBONS (TPH)			
F1 (C6-C10 less BTEX)	<25	<25	-
F2 (>C10-C16)	<25	<50	-
F3 (>C16-C34)	<90	<100	-
F4 (>C34-C40)	<120	<100	-
BTEX			
Benzene	<0.1	<0.2	-
Toluene	<0.1	<0.5	-
Ethyl Benzene	<0.1	<1	-
Xylenes	<0.3	<3	-
POLYCYCLIC AROMATIC HYDROCARBONS (PAH)			
Benzo(a)Pyrene TEQ	<0.3	<0.5	-
Total PAH	<0.8	2.0	-
Naphthalene	<0.1	<0.1	-
Benzo(a)Pyrene	<0.1	0.07	-
ORGANOCHLORINE PESTICIDES (OCP)			
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	-
POLYCHLORINATED BIPHENYLS (PCB)			
Total PCB	<1	<0.7	-
CYANIDES & PHENOLS			
Cyanides	<0.5	<0.5	-
Phenols	<5	<5	-

TABLE D2
SPLIT SAMPLE
(Ref No: 13603/3-AA)

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ANALYTE	BH3 0.13-0.43 m (SGS) mg/kg	SPLIT S4 (ENVIROLAB) mg/kg	RELATIVE PERCENTAGE DIFFERENCE %
VOC			
Dichlorodifluoromethane	<1	<1	-
Chloromethane	<1	<1	-
Vinyl Chloride	<0.1	<1	-
Bromomethane	<1	<1	-
Chloroethane	<1	<1	-
Trichlorofluoromethane	<1	<1	-
1,1-Dichloroethene	<0.1	<1	-
Trans-1,2-dichloroethene	<0.1	<1	-
1,1-dichloroethane	<0.1	<1	-
Cis-1,2-dichloroethene	<0.1	<1	-
Bromochloromethane	<0.1	<1	-
Chloroform	<0.1	<1	-
2,2-dichloropropane	<0.1	<1	-
1,2-dichloroethane	<0.1	<1	-
1,1,1-trichloroethane	<0.1	<1	-
1,1-dichloropropene	<0.1	<1	-
Carbon tetrachloride	<0.1	<1	-
Dibromomethane	<0.1	<1	-
1,2-dichloropropane	<0.1	<1	-
Trichloroethene	<0.1	<1	-
Bromodichloromethane	<0.1	<1	-
cis-1,3-dichloropropene	<0.1	<1	-
trans-1,3-dichloropropene	<0.1	<1	-
1,1,2-trichloroethane	<0.1	<1	-
1,3-dichloropropane	<0.1	<1	-
1,2-dibromoethane	<0.1	<1	-
Tetrachloroethene	<0.1	<1	-
1,1,1,2-tetrachloroethane	<0.1	<1	-

TABLE D2
SPLIT SAMPLE
(Ref No: 13603/3-AA)

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ANALYTE	BH3 0.13-0.43 (SGS) mg/kg	SPLIT S4 (ENVIROLAB) mg/kg	RELATIVE PERCENTAGE DIFFERENCE %
VOC			
Chlorobenzene	<0.1	<1	-
Bromoform	<0.1	<1	-
Styrene	<0.1	<1	-
1,1,2,2-tetrachloroethane	<0.1	<1	-
1,2,3-trichloropropane	<0.1	<1	-
Isopropylbenzene	<0.1	<1	-
Bromobenzene	<0.1	<1	-
n-propyl benzene	<0.1	<1	-
2-chlorotoluene	<0.1	<1	-
4-chlorotoluene	<0.1	<1	-
1,3,5-trimethyl benzene	<0.1	<1	-
Tert-butyl benzene	<0.1	<1	-
1,2,4-trimethyl benzene	<0.1	<1	-
Sec-butyl benzene	<0.1	<1	-
1,3-dichlorobenzene	<0.1	<1	-
1,4-dichlorobenzene	<0.1	<1	-
1,2-dichlorobenzene	<0.1	<1	-
n-butyl benzene	<0.1	<1	-
1,2-dibromo-3-chloropropane	<0.1	<1	-
1,2,4-trichlorobenzene	<0.1	<1	-
Hexachlorobutadiene	<0.1	<1	-
1,2,3-trichlorobenzene	<0.1	<1	-

TABLE D3
SPLIT SAMPLE
(Ref No: 13603/3-AA)

ANALYTES	BH14 0.5-0.8 m mg/kg (SGS)	Split Sample S6 mg/kg (ENVIROLAB)	RELATIVE PERCENTAGE DIFFERENCES (RPD) %
METALS			
Arsenic	15	15	0
Cadmium	0.4	<0.4	-
Chromium	8.6	9	5
Copper	26	23	12
Lead	38	30	24
Mercury	<0.05	<0.1	-
Nickel	13	11	17
Zinc	70	58	19
POLYCYCLIC AROMATIC HYDROCARBONS (PAH)			
Benzo(a)Pyrene TEQ	<0.3	<0.5	-
Total PAH	0.9	1.85	69
Naphthalene	<0.1	<0.1	-
Benzo(a)Pyrene	0.1	<0.05	-

TABLE E
METALS, CATION EXCHANGE CAPACITY (CEC) & pH TEST RESULTS
DISCRETE SAMPLES
(Ref No: 13603/3-AA)

Sample Location		METALS (mg/kg)										CEC (cmq/kg)	pH	
		ARSENIC	CADMIUM	CHROMIUM (Taal)	COPPER	LEAD	MERCURY	NICKEL	NICKEL	NICKEL	ZINC			ZINC
BH1	0.15-0.45	10	<0.3	7.5	17	24	<0.05	10	-	-	49	-	34	8.4
BH2	0.15-0.45	4	<0.3	3.9	14	12	<0.05	5.8	-	-	27	-	-	-
BH3	0.13-0.43	24	0.4	13	23	32	<0.05	9.3	-	-	270	-	-	-
BH4	0.15-0.25	4	<0.3	2.9	12	11	<0.05	12	-	-	26	-	29	9.0
BH4	0.25-0.35	<3	<0.3	2.5	17	19	<0.05	15	-	-	30	-	20	8.9
BH4	0.35-0.65	8	0.3	6.2	20	34	<0.05	13	-	-	71	-	-	-
BH4	1.0-1.3	12	0.4	13	43	310	0.27	9.4	-	-	270	-	29	8.2
BH4	1.5-1.8	15	<0.3	7.8	13	39	<0.05	7.5	-	-	41	-	-	-
BH4	2.0-2.3	<3	<0.3	3.0	2.0	5	<0.05	-	1.6	-	-	3.4	-	-
BH5	0.15-0.45	7	<0.3	11	19	37	<0.05	4.5	-	-	50	-	22	8.5
BH5	1.0-1.3	10	1.4	20	34	76	0.13	5.9	-	-	240	-	-	-
BH5	1.5-1.8	<3	<0.3	2.7	3.2	7	<0.05	-	2.0	-	-	6.4	-	-
BH6	0.15-0.25	3	<0.3	1.2	2.7	3	<0.05	-	2.1	-	-	6.4	-	-
BH6	0.25-0.4	5	<0.3	2.2	22	18	<0.05	19	-	-	50	-	-	-
BH6	0.4-0.7	5	<0.3	3.5	25	17	0.08	12	-	-	55	-	-	-
BH6	1.0-1.3	16	<0.3	12	15	18	<0.05	3.8	-	-	20	-	-	-
BH6	1.5-1.8	15	0.3	11	20	52	<0.05	5.7	-	-	54	-	-	-
BH7	0.15-0.25	4	<0.3	1.6	6.5	9	<0.05	-	2.9	-	-	11	2.7	8.9
BH7	0.25-0.35	5	<0.3	2.6	14	16	<0.05	9.5	-	-	25	-	14	8.9
BH7	0.35-0.65	26	<0.3	7.5	13	58	<0.05	3.2	-	-	30	-	-	-
BH7	1.4-1.7	65	1.5	8.0	41	37	<0.05	12	-	-	97	-	13	8.4
BH8	0.15-0.25	<3	<0.3	1.1	0.8	2	<0.05	-	0.6	-	-	3.2	1.1	8.3
BH8	0.25-0.5	<3	<0.3	2.2	18	17	<0.05	5.7	-	-	28	-	-	-
BH8	0.5-0.8	7	0.3	11	23	76	0.07	6.6	-	-	84	-	-	-
BH8	0.9-1.2	<3	<0.3	9.3	67	7	<0.05	7.1	-	-	48	-	-	-
BH9	0.15-0.25	<3	<0.3	2.5	5.1	2	<0.05	-	1.4	-	-	4.6	-	-
BH9	0.25-0.5	8	<0.3	5.1	19	21	<0.05	9.6	-	-	42	-	20	8.8
BH9	0.5-0.8	8	0.5	11	37	170	0.14	11	-	-	200	-	-	-
BH9	1.0-1.3	8	<0.3	5.0	16	12	<0.05	4.0	-	-	22	-	15	8.2
BH9	1.5-1.8	8	<0.3	4.3	28	23	0.06	13	-	-	66	-	-	-
BH9	2.0-2.3	13	0.4	9.9	29	95	0.13	12	-	-	150	-	-	-
BH9	2.5-2.7	14	<0.3	6.3	23	110	<0.05	4.8	-	-	200	-	-	-
BH10	0.15-0.45	4	<0.3	1.7	13	13	<0.05	7.8	-	-	27	-	-	-
BH10	0.5-0.8	9	<0.3	5.8	21	18	<0.05	6.9	-	-	44	-	-	-
BH10	1.0-1.3	14	<0.3	7.7	36	16	<0.05	10	-	-	66	-	-	-
BH10	1.5-1.8	6	<0.3	7	19	14	<0.05	6.9	-	-	43	-	-	-
BH10	2.0-2.3	4	<0.3	2.7	14	10	0.05	14	-	-	69	-	9.0	8.1
BH10	2.7-3.0	<3	<0.3	1.8	13	9	<0.05	2.8	-	-	130	-	13	7.6
BH11	0.15-0.25	6	<0.3	1.4	10	9	<0.05	-	-	6.7	-	20	2.2	8.7
BH11	0.25-0.55	<3	<0.3	2.3	13	18	<0.05	5.7	-	-	20	-	-	-
BH11	0.8-1.1	10	<0.3	8.0	28	41	0.05	14	-	-	69	-	-	-
BH11	1.2-1.5	5	<0.3	7.8	15	15	<0.05	5.3	-	-	34	-	-	-
BH11	1.7-2.2	11	0.6	31	23	51	<0.05	11	-	-	98	-	-	-
BH11	2.5-2.8	32	0.4	18	40	130	0.19	11	-	-	200	-	-	-
BH12	0.15-0.45	5	<0.3	3.2	17	14	<0.05	11	-	-	61	-	11	8.4
BH12	1.0-1.3	4	0.4	48	27	14	<0.05	59	-	-	51	-	-	-
BH13	0-0.15	8	<0.3	6.9	14	24	<0.05	7.8	-	-	47	-	-	-
BH13	0.2-0.5	<3	<0.3	2.7	14	8	0.07	5.4	-	-	22	-	-	-
BH13	1.0-1.3	5	<0.3	14	9.3	15	<0.05	15	-	-	25	-	32	9.0
BH13	2.0-2.3	7	0.5	13	32	36	<0.05	23	-	-	68	-	-	-
BH14	0-0.15	13	<0.3	8.4	23	32	<0.05	8.4	-	-	62	-	12	7.6
BH14	0.5-0.8	15	0.4	8.6	26	38	<0.05	13	-	-	70	-	22	8.5
BH14	1.0-1.3	5	<0.3	4.3	10	6	<0.05	3.5	-	-	12	-	-	-
Limits of Reporting (LOR)		3	0.3	0.3	0.5	1	0.01	0.5	0.5	0.5	0.5	0.5	0.02	-
NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)														
Health-based Investigation Levels (HIL) B - Residential B		500	150	^{b,c} 500	30000	1200	^d 30	1200	1200	1200	60000	60000		
Ecological Investigation Levels (EIL) - Urban residential		^e 100	-	^f 190	^g 110	^h 1200	-	^b 140	ⁱ 6	^j 10	^b 450	^k 150		
GUIDELINES FOR THE NSW SITE AUDITOR SCHEME (2006)														
Provisional Phytotoxicity-Based Investigation Levels (PIL)		3					1							

- Notes:
- a: Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.
 - b: EIL of aged nickel & zinc were derived from calculation spreadsheet developed by CSIRO for NEPC; old NSW suburb with low traffic volume; the low est CEC=9 cmol/kg & pH=8.1 for fill other than sand were selected for derivation of EIL; a conservative approach.
 - c: Chromium (VI)
 - d: Methyl Mercury
 - e: Generic EIL for aged arsenic
 - f: Chromium (III), clay content was assumed =1%, a conservative assumption
 - g: EIL = Ambient Background Concentration (ABC) + Added Contaminant Level (ACL) (Rounding rules applied). ABC = 18mg/kg, 25th percentile of the data for old NSW suburb with low traffic volume. ACL=95mg/kg, the low er ACL used based on the low est CEC=5cmol/kg or pH=7.5.
 - h: Generic added contaminant limit for aged lead + ambient background concentration; old NSW suburb with low traffic volume.
 - i: EIL of aged nickel was derived from calculation spreadsheet developed by CSIRO for NEPC; old NSW suburb with low traffic volume; the low est CEC=1.1 cmol/kg for fill comprising sand was selected for derivation of EIL; a conservative approach.
 - j: EIL of aged nickel was derived from calculation spreadsheet developed by CSIRO for NEPC; old NSW suburb with low traffic volume; CEC=2.2 cmol/kg for fill comprising sand was selected for derivation of EIL.
 - k: EIL of aged zinc was derived from calculation spreadsheet developed by CSIRO for NEPC; old NSW suburb with low traffic volume; the low est CEC=1.1 cmol/kg & pH=8.3 for fill comprising sand were selected for derivation of EIL; a conservative approach.

TABLE F
TOTAL PETROLEUM HYDROCARBONS (TPH) AND BTEX TEST RESULTS
DISCRETE SAMPLES
(Ref No: 13603/3-AA)

			NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)																																
Sample Location	Depth (m)	Soil type	TPH (mg/kg)					BTEX (mg/kg)				Health Screening Levels (HSL) B High density residential						Ecological Screening Levels for fine-grained soil Urban residential						Ecological Screening Levels for coarse-grained soil Urban residential											
			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		
BH1	0.15-0.45	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	-	-	-	-	-	-	-	-		
BH2	0.15-0.45	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	-	-	-	-	-	-	-	-		
BH3	0.13-0.43	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	-	-	-	-	-	-	-	-		
BH4	0.15-0.25	sand	<25	32	32	<90	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105		
BH4	0.25-0.35	sand	<25	50	50	<90	<120	0.1	0.2	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105		
BH4	1.0-1.3	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	-	-	-	-	-	-	-	-		
BH5	0.15-0.45	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	-	-	-	-	-	-	-	-		
BH6	0.15-0.25	sand	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105		
BH6	0.25-0.4	sand	<25	58	58	170	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105		
BH6	1.0-1.3	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	-	-	-	-	-	-	-	-		
BH7	0.15-0.25	sand	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105		
BH7	0.25-0.35	sand	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105		
BH7	0.35-0.65	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	-	-	-	-	-	-	-	-		
BH8	0.15-0.25	sand	<25	<25	<25	<90	<120	0.2	0.2	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105		
BH8	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	-	-	-	-	-	-	-	-		
BH9	0.15-0.25	sand	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105		
BH9	0.25-0.5	sand	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105		
BH9	1.0-1.3	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	-	-	-	-	-	-	-	-		
BH9	2.0-2.3	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	-	-	-	-	-	-	-	-		
BH9	2.5-2.7	sand	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	110	440	0.5	310	NL	95	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105		
BH10	0.15-0.45	sand	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105		
BH10	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	-	-	-	-	-	-	-	-		
BH10	1.5-1.8	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	-	-	-	-	-	-	-	-		
BH10	2.7-3.0	sand	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	110	440	0.5	310	NL	95	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105		
BH11	0.15-0.25	sand	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105		
BH11	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	-	-	-	-	-	-	-	-		
BH11	2.5-2.8	sand	<25	<25	<25	180	<120	<0.1	<0.1	<0.1	<0.3	110	440	0.5	310	NL	95	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105		
BH12	0.15-0.45	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	-	-	-	-	-	-	-	-		
BH13	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	-	-	-	-	-	-	-	-		
BH13	2.0-2.3	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	-	-	-	-	-	-	-	-		
BH14	0.5-0.8	clay	<25	<25	<25	120	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-		
Limits 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: 13603/3-AA)

							NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)				
			PAH (mg/kg)				Health-based Investigation Levels (HIL) B ^a Residential B		Health Screening Level (HSL) B - High density residential	Generic Ecological Investigation Level (EL) - 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)
BH1	0.15-0.45	clay	<0.3	1.4	<0.1	0.1	4	400	5	170	0.7
BH2	0.15-0.45	clay	<0.3	1.5	0.1	<0.1	4	400	5	170	0.7
BH3	0.13-0.43	clay	<0.3	<0.8	<0.1	<0.1	4	400	5	170	0.7
BH4	0.15-0.25	sand	<0.3	3.1	0.4	<0.1	4	400	3	170	0.7
BH4	0.25-0.35	sand	<0.3	4.9	1.1	0.1	4	400	3	170	0.7
BH4	0.35-0.65	clay	0.3	2.0	<0.1	0.2	4	400	5	170	0.7
BH4	1.0-1.3	clay	0.4	2.4	<0.1	0.3	4	400	NL	170	0.7
BH4	1.5-1.8	clay	<0.3	<0.8	<0.1	<0.1	4	400	NL	170	0.7
BH4	2.0-2.3	sand	<0.3	<0.8	<0.1	<0.1	4	400	NL	170	0.7
BH5	0.15-0.45	clay	<0.3	<0.8	<0.1	0.1	4	400	5	170	0.7
BH5	1.0-1.3	clay	<0.3	<0.8	<0.1	<0.1	4	400	NL	170	0.7
BH5	1.5-1.8	sand	<0.3	<0.8	<0.1	<0.1	4	400	NL	170	0.7
BH6	0.15-0.25	sand	<0.3	<0.8	<0.1	<0.1	4	400	3	170	0.7
BH6	0.25-0.4	sand	0.3	4.8	0.2	0.1	4	400	3	170	0.7
BH6	0.4-0.7	clay	<0.3	<0.8	<0.1	<0.1	4	400	5	170	0.7
BH6	1.0-1.3	clay	<0.3	<0.8	<0.1	<0.1	4	400	NL	170	0.7
BH6	1.5-1.8	clay	<0.3	<0.8	<0.1	<0.1	4	400	NL	170	0.7
BH7	0.15-0.25	sand	<0.3	<0.8	<0.1	<0.1	4	400	3	170	0.7
BH7	0.25-0.35	sand	<0.3	<0.8	<0.1	<0.1	4	400	3	170	0.7
BH7	0.35-0.65	clay	<0.3	<0.8	<0.1	<0.1	4	400	5	170	0.7
BH8	0.15-0.25	sand	<0.3	<0.8	<0.1	<0.1	4	400	3	170	0.7
BH8	0.25-0.5	sand	<0.3	<0.8	<0.1	<0.1	4	400	3	170	0.7
BH8	0.5-0.8	clay	<0.3	<0.8	<0.1	<0.1	4	400	5	170	0.7
BH9	0.15-0.25	sand	<0.3	<0.8	<0.1	<0.1	4	400	3	170	0.7
BH9	0.25-0.5	sand	<0.3	<0.8	<0.1	<0.1	4	400	3	170	0.7
BH9	0.5-0.8	clay	0.8	5.3	<0.1	0.5	4	400	5	170	0.7
BH9	1.0-1.3	clay	<0.3	<0.8	<0.1	<0.1	4	400	NL	170	0.7
BH9	1.5-1.8	clay	<0.3	<0.8	<0.1	<0.1	4	400	NL	170	0.7
BH9	2.0-2.3	clay	<0.3	<0.8	<0.1	<0.1	4	400	NL	170	0.7
BH9	2.5-2.7	sand	4.9	27	<0.1	3.3	4	400	NL	170	0.7
BH10	0.15-0.45	sand	<0.3	0.9	<0.1	0.1	4	400	3	170	0.7
BH10	0.5-0.8	clay	<0.3	<0.8	<0.1	<0.1	4	400	5	170	0.7
BH10	1.0-1.3	clay	<0.3	<0.8	<0.1	<0.1	4	400	NL	170	0.7
BH10	1.5-1.8	clay	<0.3	<0.8	<0.1	<0.1	4	400	NL	170	0.7
BH10	2.0-2.3	clay	<0.3	<0.8	<0.1	<0.1	4	400	NL	170	0.7
BH10	2.7-3.0	sand	<0.3	<0.8	<0.1	<0.1	4	400	NL	170	0.7
BH11	0.15-0.25	sand	<0.3	1.2	<0.1	<0.1	4	400	3	170	0.7
BH11	0.25-0.55	sand	<0.3	3.1	0.2	<0.1	4	400	3	170	0.7
BH11	0.8-1.1	clay	<0.3	<0.8	<0.1	<0.1	4	400	5	170	0.7
BH11	1.2-1.5	clay	<0.3	<0.8	<0.1	<0.1	4	400	NL	170	0.7
BH11	1.7-2.2	clay	<0.3	<0.8	<0.1	0.1	4	400	NL	170	0.7
BH11	2.5-2.8	sand	1.3	8.5	<0.1	0.9	4	400	NL	170	0.7
BH12	0.15-0.45	clay	<0.3	<0.8	<0.1	<0.1	4	400	5	170	0.7
BH12	1.0-1.3	clay	<0.3	<0.8	<0.1	<0.1	4	400	NL	170	0.7
BH13	0.2-0.5	clay	<0.3	<0.8	<0.1	<0.1	4	400	5	170	0.7
BH13	1.0-1.3	clay	<0.3	<0.8	<0.1	<0.1	4	400	NL	170	0.7
BH13	2.0-2.3	clay	1.8	15	<0.1	1.3	4	400	NL	170	0.7
BH14	0.5-0.8	clay	<0.3	0.9	<0.1	0.1	4	400	5	170	0.7
BH14	1.0-1.3	clay	<0.3	<0.8	<0.1	<0.1	4	400	NL	170	0.7
Limits of Reporting (LOR)			0.3	0.8	0.1	0.1					

Notes: a: Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.
NL: Not Limiting

TABLE H
ORGANOCHLORINE PESTICIDES (OCP), POLYCHLORINATED BIPHENYLS (PCB), CYANIDES & PHENOLS TEST
RESULTS
DISCRETE SAMPLES
(Ref No: 13603/3-AA)

Sample Location	Depth (m)	OCP (mg/kg)										(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)			
BH1	0.15-0.45	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH2	0.15-0.45	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH3	0.13-0.43	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH4	0.15-0.25	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH4	0.25-0.35	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH4	1.0-1.3	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH5	0.15-0.45	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH6	0.15-0.25	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH6	0.25-0.4	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	-	-
BH6	1.0-1.3	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH7	0.15-0.25	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH7	0.25-0.35	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH7	0.35-0.65	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH8	0.15-0.25	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH8	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	<0.5	<5
BH9	0.15-0.25	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH9	0.25-0.5	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH9	1.0-1.3	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH9	2.0-2.3	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	-	-
BH9	2.5-2.7	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH10	0.15-0.45	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH10	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	<0.5	<5
BH10	1.5-1.8	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	-	-
BH10	2.7-3.0	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH11	0.15-0.25	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH11	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	<0.5	<5
BH11	2.5-2.8	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH12	0.15-0.45	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH13	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	<0.5	<5
BH13	2.0-2.3	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5
BH14	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	<0.5	<5
Limits of Reporting (LOR)		0.1	0.1	0.15	0.2	0.1	0.1	0.5	0.6	0.2	0.2	1	0.5	5
NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)														
Health-based Investigation Levels (HIL) ^a - Residential B		15	10	10	20	500	20	400	600		90	1	300	45000
Ecological Investigation Levels (EIL) - Urban residential														

Notes: a: Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.

b: Generic EIL for DDT

TABLE I
VOLATILE ORGANIC COMPOUNDS (VOC) EXCLUDING BTEX TEST RESULTS
DISCRETE SAMPLES
(Ref No: 13603/3-AA)

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Analyte		VOC (mg/kg)																								
		Dichlorodifluoromethane	Chloromethane	Vinyl Chloride	Bromomethane	Chloroethane	Trichlorofluoromethane	Acetone	Iodomethane	1,1-Dichloroethene	Acrylonitrile	Methylene Chloride	Allyl Chloride	Carbon Disulphide	trans-1,2-Dichloroethene	Methyl-tert-butyl ether	1,1-Dichloroethane	Vinyl acetate	2-Butanone	cis-1,2-Dichloroethene	Bromochloromethane	Chloroform	2,2-Dichloropropane	1,2-Dichloroethane	1,1,1-Trichloroethane	
Sample Location	Depth (m)																									
BH1	0.15-0.45	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.5	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
BH2	0.15-0.45	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.5	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
BH3	0.13-0.43	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.5	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
BH4	0.15-0.25	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.5	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
BH4	1.0-1.3	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.5	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
BH5	0.15-0.45	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.5	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
BH6	0.15-0.25	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.5	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
BH7	0.15-0.25	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.5	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
BH8	0.15-0.25	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.5	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
BH9	0.25-0.5	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.5	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
BH10	0.15-0.45	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.5	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
BH10	2.7-3.0	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.5	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
BH11	0.15-0.25	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.5	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
BH12	0.15-0.45	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.5	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
BH13	0.2-0.5	<1	<1	<0.1	<1	<1	<1	<10	<5	<0.1	<0.1	<0.5	<0.1	<0.5	<0.1	<0.5	<0.1	<10	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Limit of Reporting (LOR)		1	1	0.1	1	1	1	10	5	0.1	0.1	0.5	0.1	0.5	0.1	0.5	0.1	10	10	0.1	0.1	0.1	0.1	0.1	0.1	

TABLE I
VOLATILE ORGANIC COMPOUNDS (VOC) EXCLUDING BTEX TEST RESULTS
DISCRETE SAMPLES
(Ref No: 13603/3-AA)

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Analyte		VOC (mg/kg)																				
		1,1-Dichloropropene	Carbon tetrachloride	Dibromomethane	1,2-Dichloropropane	Trichloroethene	2-Nitropropane	Bromodichloromethane	4-Methyl-2-Pentanone	cis-1,3-Dichloropropene	trans-1,3-Dichloropropene	1,1,2-Trichloroethane	1,3-Dichloropropane	2-Hexanone	Dibromochloromethane	1,2-Dibromoethane	Tetrachloroethene	1,1,1,2-Tetrachloroethane	Chlorobenzene	Bromoform	Cis-1,4-dichloro-2-butene	Styrene
Sample Location																						
BH1	0.15-0.45	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1	<0.1	<0.1	<0.1	<0.1	♂	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1
BH2	0.15-0.45	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1	<0.1	<0.1	<0.1	<0.1	♂	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1
BH3	0.13-0.43	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1	<0.1	<0.1	<0.1	<0.1	♂	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1
BH4	0.15-0.25	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1	<0.1	<0.1	<0.1	<0.1	♂	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1
BH4	1.0-1.3	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1	<0.1	<0.1	<0.1	<0.1	♂	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1
BH5	0.15-0.45	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1	<0.1	<0.1	<0.1	<0.1	♂	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1
BH6	0.15-0.25	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1	<0.1	<0.1	<0.1	<0.1	♂	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1
BH7	0.15-0.25	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1	<0.1	<0.1	<0.1	<0.1	♂	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1
BH8	0.15-0.25	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1	<0.1	<0.1	<0.1	<0.1	♂	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1
BH9	0.25-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1	<0.1	<0.1	<0.1	<0.1	♂	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1
BH10	0.15-0.45	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1	<0.1	<0.1	<0.1	<0.1	♂	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1
BH10	2.7-3.0	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1	<0.1	<0.1	<0.1	<0.1	♂	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1
BH11	0.15-0.25	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1	<0.1	<0.1	<0.1	<0.1	♂	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1
BH12	0.15-0.45	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1	<0.1	<0.1	<0.1	<0.1	♂	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1
BH13	0.2-0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1	<0.1	<0.1	<0.1	<0.1	♂	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<0.1
Limit of Reporting (LOR)		0.1	0.1	0.1	0.1	0.1	10	0.1	1	0.1	0.1	0.1	0.1	5	0.1	0.1	0.1	0.1	0.1	0.1	1	0.1

TABLE I
VOLATILE ORGANIC COMPOUNDS (VOC) EXCLUDING BTEX TEST RESULTS
DISCRETE SAMPLES
(Ref No: 13603/3-AA)

Analyte		VOC (mg/kg)																					
		1,1,2,2-Tetrachloroethane	1,2,3-Trichloropropane	Trans-1,4-dichloro-2-butene	Isopropylbenzene	Bromobenzene	n-Propylbenzene	2-Chlorotoluene	4-Chlorotoluene	1,3,5-Trimethylbenzene	tert-Butylbenzene	1,2,4-Trimethylbenzene	sec-Butylbenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	p-Isopropyl toluene	1,2-Dichlorobenzene	n-Butylbenzene	1,2-Dibromo-3-chloropropane	1,2,4-Trichlorobenzene	Naphthalene	Hexachlorobutadiene	1,2,3-Trichlorobenzene
Sample Location																							
BH1	0.15-0.45	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH2	0.15-0.45	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH3	0.13-0.43	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH4	0.15-0.25	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH4	1.0-1.3	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH5	0.15-0.45	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH6	0.15-0.25	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH7	0.15-0.25	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH8	0.15-0.25	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH9	0.25-0.5	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH10	0.15-0.45	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH10	2.7-3.0	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH11	0.15-0.25	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH12	0.15-0.45	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH13	0.2-0.5	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Limit of Reporting (LOR)		0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

TABLE J
ASBESTOS TEST RESULTS
DISCRETE SAMPLES
(Ref No: 13603/3-AA)

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[illegible]

ASBESTOS TEST RESULTS
DISCRETE SAMPLES
(Ref No: 13603/3-AA)

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[illegible]

APPENDIX A

TABLE 1 - BOREHOLE LOGS

Project	Proposed Multi-storey Residential (Flat) Building Development	Job No	13603/3
Location	21 Atkinson Street, Liverpool	Refer to Drawing No	13603/3-AA1
		Logged & Sampled by	LY

TABLE 1

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Borehole	Depth (m)	Sample Depth (m)	Date	Time	Material Description	Remarks*
BH1	0.0-0.15	NS	20/10/2016		CONCRETE	
	0.15-0.5	0.15-0.45			FILL: Silty Clay, high plasticity, brown and grey, with inclusion of shale fragments	
	0.5-1.5	0.55-0.65			(CI) Shaley CLAY, medium plasticity, grey and brown	
	1.5-1.7	NS			SHALE	
BH2	0.0-0.15	NS	20/10/2016		CONCRETE	
	0.15-0.5	0.15-0.45			FILL: Silty Clay, high plasticity, brown and grey, with inclusion of shale fragments	
	0.5-1.5	0.55-0.65			(CH) Silty CLAY, high plasticity, orange-brown and grey, with inclusion of ironstone	
BH3	0.0-0.13	NS	20/10/2016		CONCRETE	
	0.13-0.6	0.13-0.43			FILL: Silty Clay, high plasticity, brown and grey, with inclusion of shale fragments	
	0.6-1.5	0.65-0.75			(CH) Silty CLAY, high plasticity, orange-brown and grey, with inclusion of ironstone	
BH4	0.0-0.15	NS	20/10/2016		CONCRETE	
	0.15-0.25	0.15-0.25			FILL: Sand, medium to coarse grained, brown	
	0.25-0.35	0.25-0.35			FILL: Gravelly Sand, medium to coarse grained, dark grey-black, with inclusion of shale fragments	
	0.35-1.0	0.35-0.65			FILL: Silty Clay, high plasticity, brown and grey, with inclusion of shale fragments	
	1.0-2.0	1.0-1.3 1.5-1.8			FILL: Sandy Clay, low plasticity, brown	
	2.0-2.5	2.0-2.3			FILL: Sand, medium to coarse grained, brown	
	2.5-2.7	2.55-2.65			(CI-CH) Silty CLAY, medium to high plasticity, grey then yellow-brown	

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.

Project	Proposed Multi-storey Residential (Flat) Building Development	Job No	13603/3
Location	21 Atkinson Street, Liverpool	Refer to Drawing No	13603/3-AA1
		Logged & Sampled by	LY

TABLE 1

Page 2 of 4

Borehole	Depth (m)	Sample Depth (m)	Date	Time	Material Description	Remarks*
BH5	0.0-0.15	NS	20/10/2016		CONCRETE	
	0.15-1.5	0.15-0.45 1.0-1.3			FILL: Silty Clay, high plasticity, brown and grey, with inclusion of shale fragments	
	1.5-2.0	1.5-1.8			FILL: Sand, medium to coarse grained, brown	
	2.0-2.6	2.05-2.15			(SC) Silty SAND, medium grained, grey and brown	Groundwater at 2.6m
	2.6-3.9				(CI-CH) Silty CLAY, medium to high plasticity, grey then yellow-brown	
BH6	0.0-0.15	NS	20/10/2016		CONCRETE	
	0.15-0.25	0.15-0.25			FILL: Sand, medium to coarse grained, brown	
	0.25-0.4	0.25-0.4			FILL: Gravelly Sand, medium to coarse grained, dark grey-black, with inclusion of shale fragments	
	0.4-1.8	0.4-0.7 1.0-1.3 1.5-1.8			FILL: Silty Clay, high plasticity, brown and grey, with inclusion of shale fragments	
	1.8-2.0	1.85-1.95			(CI-CH) Silty CLAY, medium to high plasticity, grey then yellow-brown	
BH7	0.0-0.15	NS	20/10/2016		CONCRETE	
	0.15-0.25	0.15-0.25			FILL: Sand, medium to coarse grained, brown	
	0.25-0.35	0.25-0.35			FILL: Gravelly Sand, medium to coarse grained, dark grey-black, with inclusion of shale fragments	
	0.35-1.4	0.35-0.65			FILL: Silty Clay, high plasticity, brown and grey, with inclusion of shale fragments	
	1.4-1.8	1.4-1.7			FILL: Brick and Cement pavement	Seepage at 1.5m
	1.8-2.7	1.85-1.95			(CI-CH) Silty CLAY, medium to high plasticity, grey then yellow-brown	

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.

Project	Proposed Multi-storey Residential (Flat) Building Development	Job No	13603/3
Location	21 Atkinson Street, Liverpool	Refer to Drawing No	13603/3-AA1
		Logged & Sampled by	LY

TABLE 1

Page 3 of 4

Borehole	Depth (m)	Sample Depth (m)	Date	Time	Material Description	Remarks*
BH8	0.0-0.15	NS	20/10/2016		CONCRETE	
	0.15-0.25	0.15-0.25			FILL: Sand, medium to coarse grained, brown	
	0.25-0.5	0.25-0.5			FILL: Gravelly Sand, medium to coarse grained, dark grey-black, with inclusion of shale fragments	
	0.5-0.9	0.5-0.8			FILL: Silty Clay, high plasticity, brown and grey, with inclusion of shale fragments	
	0.9-1.2	0.9-1.2			FILL: Brick and Cement pavement	
	1.2-2.7	1.25-1.35			(CI-CH) Silty CLAY, medium to high plasticity, grey then yellow-brown	
BH9	0.0-0.15	NS	20/10/2016		CONCRETE	Seepage at 2.0m
	0.15-0.25	0.15-0.25			FILL: Sand, medium to coarse grained, brown	
	0.25-0.5	0.25-0.5			FILL: Gravelly Sand, medium to coarse grained, dark grey-black, with inclusion of shale fragments	
	0.5-2.5	0.5-0.8 1.0-1.3 1.5-1.8 2.0-2.3			FILL: Silty Clay, high plasticity, brown and grey, with inclusion of shale fragments	
	2.5-2.7	2.5-2.7			FILL: Sandy Gravel, dark grey, with inclusion of clay and slag	
	2.7-3.9	2.75-2.85			(CI-CH) Silty CLAY, medium to high plasticity, grey then yellow-brown	
BH10	0.0-0.15	NS			CONCRETE	Seepage at 2.0m
	0.15-0.5	0.15-0.45			FILL: Gravelly Sand, medium to coarse grained, dark grey-black, with inclusion of shale fragments	
	0.5-2.7	0.5-0.8 1.0-1.3 1.5-1.8 2.0-2.3			FILL: Silty Clay, high plasticity, brown and grey, with inclusion of shale fragments	
	2.7-3.0	2.7-3.0			FILL: Sandy Gravel, dark grey, with inclusion of clay and slag	
	3.0-3.9	3.05-3.15			(CI-CH) Silty CLAY, medium to high plasticity, grey then yellow-brown	

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.

Project	Proposed Multi-storey Residential (Flat) Building Development	Job No	13603/3
Location	21 Atkinson Street, Liverpool	Refer to Drawing No	13603/3-AA1
		Logged & Sampled by	LY

TABLE 1

Page 4 of 4

Borehole	Depth (m)	Sample Depth (m)	Date	Time	Material Description	Remarks*
BH11	0.0-0.15	NS	20/10/2016		CONCRETE	Seepage at 2.0m
	0.15-0.25	0.15-0.25			FILL: Sand, medium to coarse grained, brown	
	0.25-0.8	0.25-0.55			FILL: Gravelly Sand, medium to coarse grained, dark grey-black, with inclusion of shale fragments	
	0.8-2.5	0.8-1.1 1.2-1.5 1.7-2.2			FILL: Silty Clay, high plasticity, brown and grey, with inclusion of shale fragments	
	2.5-3.1	2.5-2.8			FILL: Sandy Gravel, dark grey, with inclusion of clay and slag	
	3.1-3.9	3.15-3.25			(CI-CH) Silty CLAY, medium to high plasticity, grey then yellow-brown	
BH12	0.0-0.15	NS	20/10/2016		CONCRETE	
	0.15-1.4	0.15-0.45 1.0-1.3			FILL: Silty Clay, high plasticity, brown and grey, with inclusion of shale fragments	
	1.4-2.9	1.45-1.55			(CI-CH) Silty CLAY, medium to high plasticity, grey then yellow-brown	
BH13	0.0-0.2	0.0-0.15			TOPSOIL: Sandy Silt, grey, with inclusion of gravel	
	0.2-2.0	0.2-0.5 1.0-1.3			FILL: Shaley Clay, low plasticity, grey, with inclusion of shale fragments	
	2.0-2.5	2.0-2.3			FILL: Silty Clay, high plasticity, brown and grey, with inclusion of shale fragments	
	2.5-2.7	2.55-2.65			(CI-CH) Silty CLAY, medium to high plasticity, grey then yellow-brown	
BH14	0.0-0.5	0.0-0.15			TOPSOIL: Sandy Silt, grey, with inclusion of gravel	
	0.5-2.0	0.5-0.8 1.0-1.3			FILL: Shaley Clay, low plasticity, grey, with inclusion of shale fragments	
	2.0-2.7	2.05-2.15			(CI-CH) Silty CLAY, medium to high plasticity, grey then yellow-brown	

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 B

PID CALIBRATION SHEET

PID CALIBRATION

CLIENT	Binah by Design	JOB NO	13603/3
PROJECT	Proposed Residential Development	DATE	20/10/2016
ADDRESS	21 Atkinson Street, Liverpool	CHECKED BY	LY
PID MODEL	PID MODEL: PGM – 7600 MINIRAE 2000	CALIBRATED BY	LY
SERIAL NO	SERIAL NO: 110 – 005380		

This performance of this PID has been checked and calibrated as follows:

☒ **Charged***

☒ **Calibrate** **0.0ppm** **Reading: 0 ppm**

100ppm **Isobutylene** **Reading: 100 ppm**

Gas Bottle Number 173 **Lot No 51809**

Signed & Approved  Date: 20/10/2016

Note: * Should be between 5.V and 6.2V

APPENDIX C

LABORATORY TEST CERTIFICATES

CLIENT DETAILS

Contact John Xu
Client Geotechnique
Address P.O. Box 880
PENRITH NSW 2751

Telephone 02 4722 2700
Facsimile 02 4722 6161
Email john.xu@geotech.com.au
Project **13603-3 Liverpool**
Order Number (Not specified)
Samples 59

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 **SE158465 R0**
Date Received 21/10/2016
Date Reported 2/11/2016

COMMENTS

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

No respirable fibres detected in all soil samples using trace analysis technique as per AS 4964-2004.

Asbestos analysed by Approved Identifiers Ravee Sivasubramaniam and Yusuf Kuthpudin .

SIGNATORIES



Andy Sutton
Senior Organic Chemist



Bennet Lo
Senior Organic Chemist/Metals Chemist



Dong Liang
Metals/Inorganics Team Leader



Huong Crawford
Production Manager



Ly Kim Ha
Organic Section Head



Ravee Sivasubramaniam
Hygiene Team Leader

VOC's in Soil [AN433] Tested: 27/10/2016

PARAMETER	UOM	LOR	BH1 0.15-0.45	BH2 0.15-0.45	BH3 0.13-0.43	BH4 0.15-0.25	BH4 0.25-0.35
			SOIL - 20/10/2016 SE158465.001	SOIL - 20/10/2016 SE158465.002	SOIL - 20/10/2016 SE158465.003	SOIL - 20/10/2016 SE158465.004	SOIL - 20/10/2016 SE158465.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.2
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
Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	<1	<1	-
Chloromethane	mg/kg	1	<1	<1	<1	<1	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Bromomethane	mg/kg	1	<1	<1	<1	<1	-
Chloroethane	mg/kg	1	<1	<1	<1	<1	-
Trichlorofluoromethane	mg/kg	1	<1	<1	<1	<1	-
Acetone (2-propanone)	mg/kg	10	<10	<10	<10	<10	-
Iodomethane	mg/kg	5	<5	<5	<5	<5	-
1,1-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Acrylonitrile	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	-
Allyl chloride	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Carbon disulfide	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	-
trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Vinyl acetate	mg/kg	10	<10	<10	<10	<10	-
MEK (2-butanone)	mg/kg	10	<10	<10	<10	<10	-
cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Bromochloromethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Chloroform	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,2-dichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Dibromomethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
2-nitropropane	mg/kg	10	<10	<10	<10	<10	-
Bromodichloromethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	<1	<1	-
cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Chlorodibromomethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
2-hexanone (MBK)	mg/kg	5	<5	<5	<5	<5	-
1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Chlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Bromoform	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
cis-1,4-dichloro-2-butene	mg/kg	1	<1	<1	<1	<1	-
Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	<1	<1	-

VOC's in Soil [AN433] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH1 0.15-0.45	BH2 0.15-0.45	BH3 0.13-0.43	BH4 0.15-0.25	BH4 0.25-0.35
			SOIL - 20/10/2016 SE158465.001	SOIL - 20/10/2016 SE158465.002	SOIL - 20/10/2016 SE158465.003	SOIL - 20/10/2016 SE158465.004	SOIL - 20/10/2016 SE158465.005
Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Bromobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
n-propylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
n-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Total VOC*	mg/kg	24	<24	<24	<24	<24	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	<3.0	<3.0	<3.0	-
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	<1.8	<1.8	-
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	<1.8	<1.8	-

VOC's in Soil [AN433] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH4 1.0-1.3	BH5 0.15-0.45	BH6 0.15-0.25	BH6 0.25-0.4	BH6 1.0-1.3
			SOIL - 20/10/2016 SE158465.007	SOIL - 20/10/2016 SE158465.010	SOIL - 20/10/2016 SE158465.013	SOIL - 20/10/2016 SE158465.014	SOIL - 20/10/2016 SE158465.016
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
Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	<1	-	-
Chloromethane	mg/kg	1	<1	<1	<1	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Bromomethane	mg/kg	1	<1	<1	<1	-	-
Chloroethane	mg/kg	1	<1	<1	<1	-	-
Trichlorofluoromethane	mg/kg	1	<1	<1	<1	-	-
Acetone (2-propanone)	mg/kg	10	<10	<10	<10	-	-
Iodomethane	mg/kg	5	<5	<5	<5	-	-
1,1-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Acrylonitrile	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	<0.5	-	-
Allyl chloride	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Carbon disulfide	mg/kg	0.5	<0.5	<0.5	<0.5	-	-
trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Vinyl acetate	mg/kg	10	<10	<10	<10	-	-
MEK (2-butanone)	mg/kg	10	<10	<10	<10	-	-
cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Bromochloromethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Chloroform	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2-dichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Dibromomethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
2-nitropropane	mg/kg	10	<10	<10	<10	-	-
Bromodichloromethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	<1	-	-
cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Chlorodibromomethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
2-hexanone (MBK)	mg/kg	5	<5	<5	<5	-	-
1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Chlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Bromoform	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
cis-1,4-dichloro-2-butene	mg/kg	1	<1	<1	<1	-	-
Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	<1	-	-

VOC's in Soil [AN433] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH4 1.0-1.3	BH5 0.15-0.45	BH6 0.15-0.25	BH6 0.25-0.4	BH6 1.0-1.3
			SOIL - 20/10/2016 SE158465.007	SOIL - 20/10/2016 SE158465.010	SOIL - 20/10/2016 SE158465.013	SOIL - 20/10/2016 SE158465.014	SOIL - 20/10/2016 SE158465.016
Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Bromobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
n-propylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
n-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Total VOC*	mg/kg	24	<24	<24	<24	-	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	<3.0	<3.0	-	-
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	<1.8	-	-
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	<1.8	-	-

VOC's in Soil [AN433] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH7 0.15-0.25	BH7 0.25-0.35	BH7 0.35-0.65	BH8 0.15-0.25	BH8 0.5-0.8
			SOIL - 20/10/2016 SE158465.018	SOIL - 20/10/2016 SE158465.019	SOIL - 20/10/2016 SE158465.020	SOIL - 20/10/2016 SE158465.022	SOIL - 20/10/2016 SE158465.024
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	0.2	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	0.2	<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
Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	-	-	<1	-
Chloromethane	mg/kg	1	<1	-	-	<1	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	-	-	<0.1	-
Bromomethane	mg/kg	1	<1	-	-	<1	-
Chloroethane	mg/kg	1	<1	-	-	<1	-
Trichlorofluoromethane	mg/kg	1	<1	-	-	<1	-
Acetone (2-propanone)	mg/kg	10	<10	-	-	<10	-
Iodomethane	mg/kg	5	<5	-	-	<5	-
1,1-dichloroethene	mg/kg	0.1	<0.1	-	-	<0.1	-
Acrylonitrile	mg/kg	0.1	<0.1	-	-	<0.1	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	-	-	<0.5	-
Allyl chloride	mg/kg	0.1	<0.1	-	-	<0.1	-
Carbon disulfide	mg/kg	0.5	<0.5	-	-	<0.5	-
trans-1,2-dichloroethene	mg/kg	0.1	<0.1	-	-	<0.1	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	-	-	<0.1	-
1,1-dichloroethane	mg/kg	0.1	<0.1	-	-	<0.1	-
Vinyl acetate	mg/kg	10	<10	-	-	<10	-
MEK (2-butanone)	mg/kg	10	<10	-	-	<10	-
cis-1,2-dichloroethene	mg/kg	0.1	<0.1	-	-	<0.1	-
Bromochloromethane	mg/kg	0.1	<0.1	-	-	<0.1	-
Chloroform	mg/kg	0.1	<0.1	-	-	<0.1	-
2,2-dichloropropane	mg/kg	0.1	<0.1	-	-	<0.1	-
1,2-dichloroethane	mg/kg	0.1	<0.1	-	-	<0.1	-
1,1,1-trichloroethane	mg/kg	0.1	<0.1	-	-	<0.1	-
1,1-dichloropropene	mg/kg	0.1	<0.1	-	-	<0.1	-
Carbon tetrachloride	mg/kg	0.1	<0.1	-	-	<0.1	-
Dibromomethane	mg/kg	0.1	<0.1	-	-	<0.1	-
1,2-dichloropropane	mg/kg	0.1	<0.1	-	-	<0.1	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1	-	-	<0.1	-
2-nitropropane	mg/kg	10	<10	-	-	<10	-
Bromodichloromethane	mg/kg	0.1	<0.1	-	-	<0.1	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	-	-	<1	-
cis-1,3-dichloropropene	mg/kg	0.1	<0.1	-	-	<0.1	-
trans-1,3-dichloropropene	mg/kg	0.1	<0.1	-	-	<0.1	-
1,1,2-trichloroethane	mg/kg	0.1	<0.1	-	-	<0.1	-
1,3-dichloropropane	mg/kg	0.1	<0.1	-	-	<0.1	-
Chlorodibromomethane	mg/kg	0.1	<0.1	-	-	<0.1	-
2-hexanone (MBK)	mg/kg	5	<5	-	-	<5	-
1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	-	-	<0.1	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	-	-	<0.1	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	-	-	<0.1	-
Chlorobenzene	mg/kg	0.1	<0.1	-	-	<0.1	-
Bromoform	mg/kg	0.1	<0.1	-	-	<0.1	-
cis-1,4-dichloro-2-butene	mg/kg	1	<1	-	-	<1	-
Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	-	-	<0.1	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	-	-	<0.1	-
1,2,3-trichloropropane	mg/kg	0.1	<0.1	-	-	<0.1	-
trans-1,4-dichloro-2-butene	mg/kg	1	<1	-	-	<1	-

VOC's in Soil [AN433] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH7 0.15-0.25	BH7 0.25-0.35	BH7 0.35-0.65	BH8 0.15-0.25	BH8 0.5-0.8
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.018	20/10/2016 SE158465.019	20/10/2016 SE158465.020	20/10/2016 SE158465.022	20/10/2016 SE158465.024
Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	-	-	<0.1	-
Bromobenzene	mg/kg	0.1	<0.1	-	-	<0.1	-
n-propylbenzene	mg/kg	0.1	<0.1	-	-	<0.1	-
2-chlorotoluene	mg/kg	0.1	<0.1	-	-	<0.1	-
4-chlorotoluene	mg/kg	0.1	<0.1	-	-	<0.1	-
1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	-	-	<0.1	-
tert-butylbenzene	mg/kg	0.1	<0.1	-	-	<0.1	-
1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	-	-	<0.1	-
sec-butylbenzene	mg/kg	0.1	<0.1	-	-	<0.1	-
1,3-dichlorobenzene	mg/kg	0.1	<0.1	-	-	<0.1	-
1,4-dichlorobenzene	mg/kg	0.1	<0.1	-	-	<0.1	-
p-isopropyltoluene	mg/kg	0.1	<0.1	-	-	<0.1	-
1,2-dichlorobenzene	mg/kg	0.1	<0.1	-	-	<0.1	-
n-butylbenzene	mg/kg	0.1	<0.1	-	-	<0.1	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	-	-	<0.1	-
1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	-	-	<0.1	-
Hexachlorobutadiene	mg/kg	0.1	<0.1	-	-	<0.1	-
1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	-	-	<0.1	-
Total VOC*	mg/kg	24	<24	-	-	<24	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	-	-	<3.0	-
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	-	-	<1.8	-
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	-	-	<1.8	-

VOC's in Soil [AN433] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH9 0.15-0.25	BH9 0.25-0.5	BH9 1.0-1.3	BH9 2.0-2.3	BH9 2.5-2.7
			SOIL - 20/10/2016 SE158465.026	SOIL - 20/10/2016 SE158465.027	SOIL - 20/10/2016 SE158465.029	SOIL - 20/10/2016 SE158465.031	SOIL - 20/10/2016 SE158465.032
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
Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	<1	-	-	-
Chloromethane	mg/kg	1	-	<1	-	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	<0.1	-	-	-
Bromomethane	mg/kg	1	-	<1	-	-	-
Chloroethane	mg/kg	1	-	<1	-	-	-
Trichlorofluoromethane	mg/kg	1	-	<1	-	-	-
Acetone (2-propanone)	mg/kg	10	-	<10	-	-	-
Iodomethane	mg/kg	5	-	<5	-	-	-
1,1-dichloroethene	mg/kg	0.1	-	<0.1	-	-	-
Acrylonitrile	mg/kg	0.1	-	<0.1	-	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	<0.5	-	-	-
Allyl chloride	mg/kg	0.1	-	<0.1	-	-	-
Carbon disulfide	mg/kg	0.5	-	<0.5	-	-	-
trans-1,2-dichloroethene	mg/kg	0.1	-	<0.1	-	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	-	<0.1	-	-	-
1,1-dichloroethane	mg/kg	0.1	-	<0.1	-	-	-
Vinyl acetate	mg/kg	10	-	<10	-	-	-
MEK (2-butanone)	mg/kg	10	-	<10	-	-	-
cis-1,2-dichloroethene	mg/kg	0.1	-	<0.1	-	-	-
Bromochloromethane	mg/kg	0.1	-	<0.1	-	-	-
Chloroform	mg/kg	0.1	-	<0.1	-	-	-
2,2-dichloropropane	mg/kg	0.1	-	<0.1	-	-	-
1,2-dichloroethane	mg/kg	0.1	-	<0.1	-	-	-
1,1,1-trichloroethane	mg/kg	0.1	-	<0.1	-	-	-
1,1-dichloropropene	mg/kg	0.1	-	<0.1	-	-	-
Carbon tetrachloride	mg/kg	0.1	-	<0.1	-	-	-
Dibromomethane	mg/kg	0.1	-	<0.1	-	-	-
1,2-dichloropropane	mg/kg	0.1	-	<0.1	-	-	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	-	<0.1	-	-	-
2-nitropropane	mg/kg	10	-	<10	-	-	-
Bromodichloromethane	mg/kg	0.1	-	<0.1	-	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	<1	-	-	-
cis-1,3-dichloropropene	mg/kg	0.1	-	<0.1	-	-	-
trans-1,3-dichloropropene	mg/kg	0.1	-	<0.1	-	-	-
1,1,2-trichloroethane	mg/kg	0.1	-	<0.1	-	-	-
1,3-dichloropropane	mg/kg	0.1	-	<0.1	-	-	-
Chlorodibromomethane	mg/kg	0.1	-	<0.1	-	-	-
2-hexanone (MBK)	mg/kg	5	-	<5	-	-	-
1,2-dibromoethane (EDB)	mg/kg	0.1	-	<0.1	-	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	<0.1	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	<0.1	-	-	-
Chlorobenzene	mg/kg	0.1	-	<0.1	-	-	-
Bromoform	mg/kg	0.1	-	<0.1	-	-	-
cis-1,4-dichloro-2-butene	mg/kg	1	-	<1	-	-	-
Styrene (Vinyl benzene)	mg/kg	0.1	-	<0.1	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	<0.1	-	-	-
1,2,3-trichloropropane	mg/kg	0.1	-	<0.1	-	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	-	<1	-	-	-

VOC's in Soil [AN433] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH9 0.15-0.25	BH9 0.25-0.5	BH9 1.0-1.3	BH9 2.0-2.3	BH9 2.5-2.7
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.026	20/10/2016 SE158465.027	20/10/2016 SE158465.029	20/10/2016 SE158465.031	20/10/2016 SE158465.032
Isopropylbenzene (Cumene)	mg/kg	0.1	-	<0.1	-	-	-
Bromobenzene	mg/kg	0.1	-	<0.1	-	-	-
n-propylbenzene	mg/kg	0.1	-	<0.1	-	-	-
2-chlorotoluene	mg/kg	0.1	-	<0.1	-	-	-
4-chlorotoluene	mg/kg	0.1	-	<0.1	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	-	<0.1	-	-	-
tert-butylbenzene	mg/kg	0.1	-	<0.1	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	-	<0.1	-	-	-
sec-butylbenzene	mg/kg	0.1	-	<0.1	-	-	-
1,3-dichlorobenzene	mg/kg	0.1	-	<0.1	-	-	-
1,4-dichlorobenzene	mg/kg	0.1	-	<0.1	-	-	-
p-isopropyltoluene	mg/kg	0.1	-	<0.1	-	-	-
1,2-dichlorobenzene	mg/kg	0.1	-	<0.1	-	-	-
n-butylbenzene	mg/kg	0.1	-	<0.1	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	<0.1	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	-	<0.1	-	-	-
Hexachlorobutadiene	mg/kg	0.1	-	<0.1	-	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	-	<0.1	-	-	-
Total VOC*	mg/kg	24	-	<24	-	-	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	<3.0	-	-	-
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	-	<1.8	-	-	-
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	-	<1.8	-	-	-

VOC's in Soil [AN433] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH10 0.15-0.45	BH10 0.5-0.8	BH10 1.5-1.8	BH10 2.7-3.0	BH11 0.15-0.25
			SOIL - 20/10/2016 SE158465.033	SOIL - 20/10/2016 SE158465.034	SOIL - 20/10/2016 SE158465.036	SOIL - 20/10/2016 SE158465.038	SOIL - 20/10/2016 SE158465.039
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
Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	-	-	<1	<1
Chloromethane	mg/kg	1	<1	-	-	<1	<1
Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
Bromomethane	mg/kg	1	<1	-	-	<1	<1
Chloroethane	mg/kg	1	<1	-	-	<1	<1
Trichlorofluoromethane	mg/kg	1	<1	-	-	<1	<1
Acetone (2-propanone)	mg/kg	10	<10	-	-	<10	<10
Iodomethane	mg/kg	5	<5	-	-	<5	<5
1,1-dichloroethene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
Acrylonitrile	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	-	-	<0.5	<0.5
Allyl chloride	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
Carbon disulfide	mg/kg	0.5	<0.5	-	-	<0.5	<0.5
trans-1,2-dichloroethene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
1,1-dichloroethane	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
Vinyl acetate	mg/kg	10	<10	-	-	<10	<10
MEK (2-butanone)	mg/kg	10	<10	-	-	<10	<10
cis-1,2-dichloroethene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
Bromochloromethane	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
Chloroform	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
2,2-dichloropropane	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
1,2-dichloroethane	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
1,1,1-trichloroethane	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
1,1-dichloropropene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
Carbon tetrachloride	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
Dibromomethane	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
1,2-dichloropropane	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
2-nitropropane	mg/kg	10	<10	-	-	<10	<10
Bromodichloromethane	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	-	-	<1	<1
cis-1,3-dichloropropene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
trans-1,3-dichloropropene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
1,1,2-trichloroethane	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
1,3-dichloropropane	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
Chlorodibromomethane	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
2-hexanone (MBK)	mg/kg	5	<5	-	-	<5	<5
1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
Chlorobenzene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
Bromoform	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
cis-1,4-dichloro-2-butene	mg/kg	1	<1	-	-	<1	<1
Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
1,2,3-trichloropropane	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
trans-1,4-dichloro-2-butene	mg/kg	1	<1	-	-	<1	<1

VOC's in Soil [AN433] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH10 0.15-0.45	BH10 0.5-0.8	BH10 1.5-1.8	BH10 2.7-3.0	BH11 0.15-0.25
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.033	20/10/2016 SE158465.034	20/10/2016 SE158465.036	20/10/2016 SE158465.038	20/10/2016 SE158465.039
Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
Bromobenzene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
n-propylbenzene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
2-chlorotoluene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
4-chlorotoluene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
tert-butylbenzene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
sec-butylbenzene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
1,3-dichlorobenzene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
1,4-dichlorobenzene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
p-isopropyltoluene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
1,2-dichlorobenzene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
n-butylbenzene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
Hexachlorobutadiene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	-	-	<0.1	<0.1
Total VOC*	mg/kg	24	<24	-	-	<24	<24
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	-	-	<3.0	<3.0
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	-	-	<1.8	<1.8
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	-	-	<1.8	<1.8

VOC's in Soil [AN433] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH11 1.2-1.5	BH11 2.5-2.8	BH12 0.15-0.45	BH13 0.2-0.5	BH13 2.0-2.3
			SOIL - 20/10/2016 SE158465.042	SOIL - 20/10/2016 SE158465.044	SOIL - 20/10/2016 SE158465.045	SOIL - 20/10/2016 SE158465.048	SOIL - 20/10/2016 SE158465.050
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
Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	-	<1	<1	-
Chloromethane	mg/kg	1	-	-	<1	<1	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	-	<0.1	<0.1	-
Bromomethane	mg/kg	1	-	-	<1	<1	-
Chloroethane	mg/kg	1	-	-	<1	<1	-
Trichlorofluoromethane	mg/kg	1	-	-	<1	<1	-
Acetone (2-propanone)	mg/kg	10	-	-	<10	<10	-
Iodomethane	mg/kg	5	-	-	<5	<5	-
1,1-dichloroethene	mg/kg	0.1	-	-	<0.1	<0.1	-
Acrylonitrile	mg/kg	0.1	-	-	<0.1	<0.1	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	-	<0.5	<0.5	-
Allyl chloride	mg/kg	0.1	-	-	<0.1	<0.1	-
Carbon disulfide	mg/kg	0.5	-	-	<0.5	<0.5	-
trans-1,2-dichloroethene	mg/kg	0.1	-	-	<0.1	<0.1	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	-	-	<0.1	<0.1	-
1,1-dichloroethane	mg/kg	0.1	-	-	<0.1	<0.1	-
Vinyl acetate	mg/kg	10	-	-	<10	<10	-
MEK (2-butanone)	mg/kg	10	-	-	<10	<10	-
cis-1,2-dichloroethene	mg/kg	0.1	-	-	<0.1	<0.1	-
Bromochloromethane	mg/kg	0.1	-	-	<0.1	<0.1	-
Chloroform	mg/kg	0.1	-	-	<0.1	<0.1	-
2,2-dichloropropane	mg/kg	0.1	-	-	<0.1	<0.1	-
1,2-dichloroethane	mg/kg	0.1	-	-	<0.1	<0.1	-
1,1,1-trichloroethane	mg/kg	0.1	-	-	<0.1	<0.1	-
1,1-dichloropropene	mg/kg	0.1	-	-	<0.1	<0.1	-
Carbon tetrachloride	mg/kg	0.1	-	-	<0.1	<0.1	-
Dibromomethane	mg/kg	0.1	-	-	<0.1	<0.1	-
1,2-dichloropropane	mg/kg	0.1	-	-	<0.1	<0.1	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	-	-	<0.1	<0.1	-
2-nitropropane	mg/kg	10	-	-	<10	<10	-
Bromodichloromethane	mg/kg	0.1	-	-	<0.1	<0.1	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	-	<1	<1	-
cis-1,3-dichloropropene	mg/kg	0.1	-	-	<0.1	<0.1	-
trans-1,3-dichloropropene	mg/kg	0.1	-	-	<0.1	<0.1	-
1,1,2-trichloroethane	mg/kg	0.1	-	-	<0.1	<0.1	-
1,3-dichloropropane	mg/kg	0.1	-	-	<0.1	<0.1	-
Chlorodibromomethane	mg/kg	0.1	-	-	<0.1	<0.1	-
2-hexanone (MBK)	mg/kg	5	-	-	<5	<5	-
1,2-dibromoethane (EDB)	mg/kg	0.1	-	-	<0.1	<0.1	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	-	<0.1	<0.1	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	-	<0.1	<0.1	-
Chlorobenzene	mg/kg	0.1	-	-	<0.1	<0.1	-
Bromoform	mg/kg	0.1	-	-	<0.1	<0.1	-
cis-1,4-dichloro-2-butene	mg/kg	1	-	-	<1	<1	-
Styrene (Vinyl benzene)	mg/kg	0.1	-	-	<0.1	<0.1	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	-	<0.1	<0.1	-
1,2,3-trichloropropane	mg/kg	0.1	-	-	<0.1	<0.1	-
trans-1,4-dichloro-2-butene	mg/kg	1	-	-	<1	<1	-

VOC's in Soil [AN433] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH11 1.2-1.5	BH11 2.5-2.8	BH12 0.15-0.45	BH13 0.2-0.5	BH13 2.0-2.3
			SOIL - 20/10/2016 SE158465.042	SOIL - 20/10/2016 SE158465.044	SOIL - 20/10/2016 SE158465.045	SOIL - 20/10/2016 SE158465.048	SOIL - 20/10/2016 SE158465.050
Isopropylbenzene (Cumene)	mg/kg	0.1	-	-	<0.1	<0.1	-
Bromobenzene	mg/kg	0.1	-	-	<0.1	<0.1	-
n-propylbenzene	mg/kg	0.1	-	-	<0.1	<0.1	-
2-chlorotoluene	mg/kg	0.1	-	-	<0.1	<0.1	-
4-chlorotoluene	mg/kg	0.1	-	-	<0.1	<0.1	-
1,3,5-trimethylbenzene	mg/kg	0.1	-	-	<0.1	<0.1	-
tert-butylbenzene	mg/kg	0.1	-	-	<0.1	<0.1	-
1,2,4-trimethylbenzene	mg/kg	0.1	-	-	<0.1	<0.1	-
sec-butylbenzene	mg/kg	0.1	-	-	<0.1	<0.1	-
1,3-dichlorobenzene	mg/kg	0.1	-	-	<0.1	<0.1	-
1,4-dichlorobenzene	mg/kg	0.1	-	-	<0.1	<0.1	-
p-isopropyltoluene	mg/kg	0.1	-	-	<0.1	<0.1	-
1,2-dichlorobenzene	mg/kg	0.1	-	-	<0.1	<0.1	-
n-butylbenzene	mg/kg	0.1	-	-	<0.1	<0.1	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	-	<0.1	<0.1	-
1,2,4-trichlorobenzene	mg/kg	0.1	-	-	<0.1	<0.1	-
Hexachlorobutadiene	mg/kg	0.1	-	-	<0.1	<0.1	-
1,2,3-trichlorobenzene	mg/kg	0.1	-	-	<0.1	<0.1	-
Total VOC*	mg/kg	24	-	-	<24	<24	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	-	<3.0	<3.0	-
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	-	-	<1.8	<1.8	-
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	-	-	<1.8	<1.8	-

VOC's in Soil [AN433] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH14 0.5-0.8	Duplicate D1	Duplicate D6	Trip Spike TS1
			SOIL - 20/10/2016 SE158465.052	SOIL - 20/10/2016 SE158465.054	SOIL - 20/10/2016 SE158465.056	SAND - 20/10/2016 SE158465.058
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	[94%]
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	[93%]
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	[94%]
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	[93%]
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	[90%]
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	-
Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	-	<1	-
Chloromethane	mg/kg	1	-	-	<1	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	-	<0.1	-
Bromomethane	mg/kg	1	-	-	<1	-
Chloroethane	mg/kg	1	-	-	<1	-
Trichlorofluoromethane	mg/kg	1	-	-	<1	-
Acetone (2-propanone)	mg/kg	10	-	-	<10	-
Iodomethane	mg/kg	5	-	-	<5	-
1,1-dichloroethene	mg/kg	0.1	-	-	<0.1	-
Acrylonitrile	mg/kg	0.1	-	-	<0.1	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	-	<0.5	-
Allyl chloride	mg/kg	0.1	-	-	<0.1	-
Carbon disulfide	mg/kg	0.5	-	-	<0.5	-
trans-1,2-dichloroethene	mg/kg	0.1	-	-	<0.1	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	-	-	<0.1	-
1,1-dichloroethane	mg/kg	0.1	-	-	<0.1	-
Vinyl acetate	mg/kg	10	-	-	<10	-
MEK (2-butanone)	mg/kg	10	-	-	<10	-
cis-1,2-dichloroethene	mg/kg	0.1	-	-	<0.1	-
Bromochloromethane	mg/kg	0.1	-	-	<0.1	-
Chloroform	mg/kg	0.1	-	-	<0.1	-
2,2-dichloropropane	mg/kg	0.1	-	-	<0.1	-
1,2-dichloroethane	mg/kg	0.1	-	-	<0.1	-
1,1,1-trichloroethane	mg/kg	0.1	-	-	<0.1	-
1,1-dichloropropene	mg/kg	0.1	-	-	<0.1	-
Carbon tetrachloride	mg/kg	0.1	-	-	<0.1	-
Dibromomethane	mg/kg	0.1	-	-	<0.1	-
1,2-dichloropropane	mg/kg	0.1	-	-	<0.1	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	-	-	<0.1	-
2-nitropropane	mg/kg	10	-	-	<10	-
Bromodichloromethane	mg/kg	0.1	-	-	<0.1	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	-	<1	-
cis-1,3-dichloropropene	mg/kg	0.1	-	-	<0.1	-
trans-1,3-dichloropropene	mg/kg	0.1	-	-	<0.1	-
1,1,2-trichloroethane	mg/kg	0.1	-	-	<0.1	-
1,3-dichloropropane	mg/kg	0.1	-	-	<0.1	-
Chlorodibromomethane	mg/kg	0.1	-	-	<0.1	-
2-hexanone (MBK)	mg/kg	5	-	-	<5	-
1,2-dibromoethane (EDB)	mg/kg	0.1	-	-	<0.1	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	-	<0.1	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	-	<0.1	-
Chlorobenzene	mg/kg	0.1	-	-	<0.1	-
Bromoform	mg/kg	0.1	-	-	<0.1	-
cis-1,4-dichloro-2-butene	mg/kg	1	-	-	<1	-
Styrene (Vinyl benzene)	mg/kg	0.1	-	-	<0.1	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	-	<0.1	-
1,2,3-trichloropropane	mg/kg	0.1	-	-	<0.1	-
trans-1,4-dichloro-2-butene	mg/kg	1	-	-	<1	-

VOC's in Soil [AN433] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH14 0.5-0.8	Duplicate D1	Duplicate D6	Trip Spike TS1
			SOIL - 20/10/2016 SE158465.052	SOIL - 20/10/2016 SE158465.054	SOIL - 20/10/2016 SE158465.056	SAND - 20/10/2016 SE158465.058
Isopropylbenzene (Cumene)	mg/kg	0.1	-	-	<0.1	-
Bromobenzene	mg/kg	0.1	-	-	<0.1	-
n-propylbenzene	mg/kg	0.1	-	-	<0.1	-
2-chlorotoluene	mg/kg	0.1	-	-	<0.1	-
4-chlorotoluene	mg/kg	0.1	-	-	<0.1	-
1,3,5-trimethylbenzene	mg/kg	0.1	-	-	<0.1	-
tert-butylbenzene	mg/kg	0.1	-	-	<0.1	-
1,2,4-trimethylbenzene	mg/kg	0.1	-	-	<0.1	-
sec-butylbenzene	mg/kg	0.1	-	-	<0.1	-
1,3-dichlorobenzene	mg/kg	0.1	-	-	<0.1	-
1,4-dichlorobenzene	mg/kg	0.1	-	-	<0.1	-
p-isopropyltoluene	mg/kg	0.1	-	-	<0.1	-
1,2-dichlorobenzene	mg/kg	0.1	-	-	<0.1	-
n-butylbenzene	mg/kg	0.1	-	-	<0.1	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	-	<0.1	-
1,2,4-trichlorobenzene	mg/kg	0.1	-	-	<0.1	-
Hexachlorobutadiene	mg/kg	0.1	-	-	<0.1	-
1,2,3-trichlorobenzene	mg/kg	0.1	-	-	<0.1	-
Total VOC*	mg/kg	24	-	-	<24	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	-	<3.0	-
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	-	-	<1.8	-
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	-	-	<1.8	-

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 27/10/2016

PARAMETER	UOM	LOR	BH1 0.15-0.45	BH2 0.15-0.45	BH3 0.13-0.43	BH4 0.15-0.25	BH4 0.25-0.35
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.001	20/10/2016 SE158465.002	20/10/2016 SE158465.003	20/10/2016 SE158465.004	20/10/2016 SE158465.005
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH4 1.0-1.3	BH5 0.15-0.45	BH6 0.15-0.25	BH6 0.25-0.4	BH6 1.0-1.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.007	20/10/2016 SE158465.010	20/10/2016 SE158465.013	20/10/2016 SE158465.014	20/10/2016 SE158465.016
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	BH7 0.15-0.25	BH7 0.25-0.35	BH7 0.35-0.65	BH8 0.15-0.25	BH8 0.5-0.8
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.018	20/10/2016 SE158465.019	20/10/2016 SE158465.020	20/10/2016 SE158465.022	20/10/2016 SE158465.024
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	0.2	<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	BH9 0.15-0.25	BH9 0.25-0.5	BH9 1.0-1.3	BH9 2.0-2.3	BH9 2.5-2.7
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.026	20/10/2016 SE158465.027	20/10/2016 SE158465.029	20/10/2016 SE158465.031	20/10/2016 SE158465.032
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	BH10 0.15-0.45	BH10 0.5-0.8	BH10 1.5-1.8	BH10 2.7-3.0	BH11 0.15-0.25
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.033	20/10/2016 SE158465.034	20/10/2016 SE158465.036	20/10/2016 SE158465.038	20/10/2016 SE158465.039
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	BH11 1.2-1.5	BH11 2.5-2.8	BH12 0.15-0.45	BH13 0.2-0.5	BH13 2.0-2.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.042	20/10/2016 SE158465.044	20/10/2016 SE158465.045	20/10/2016 SE158465.048	20/10/2016 SE158465.050
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



ANALYTICAL RESULTS

SE158465 R0

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 27/10/2016 (continued)

			BH14 0.5-0.8	Duplicate D1	Duplicate D6
			SOIL	SOIL	SOIL
			-	-	-
			20/10/2016	20/10/2016	20/10/2016
			SE158465.052	SE158465.054	SE158465.056
PARAMETER	UOM	LOR			
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: 27/10/2016

PARAMETER	UOM	LOR	BH1 0.15-0.45	BH2 0.15-0.45	BH3 0.13-0.43	BH4 0.15-0.25	BH4 0.25-0.35
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.001	20/10/2016 SE158465.002	20/10/2016 SE158465.003	20/10/2016 SE158465.004	20/10/2016 SE158465.005
TRH C10-C14	mg/kg	20	<20	<20	<20	21	36
TRH C15-C28	mg/kg	45	48	62	<45	76	99
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16 (F2)	mg/kg	25	<25	<25	<25	32	50
TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	<25	<25	<25	32	50
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	140
TRH C10-C40 Total	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH4 1.0-1.3	BH5 0.15-0.45	BH6 0.15-0.25	BH6 0.25-0.4	BH6 1.0-1.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.007	20/10/2016 SE158465.010	20/10/2016 SE158465.013	20/10/2016 SE158465.014	20/10/2016 SE158465.016
TRH C10-C14	mg/kg	20	<20	<20	<20	39	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	170	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16 (F2)	mg/kg	25	<25	<25	<25	58	<25
TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	<25	<25	<25	58	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	170	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	210	<110
TRH C10-C40 Total	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH7 0.15-0.25	BH7 0.25-0.35	BH7 0.35-0.65	BH8 0.15-0.25	BH8 0.5-0.8
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.018	20/10/2016 SE158465.019	20/10/2016 SE158465.020	20/10/2016 SE158465.022	20/10/2016 SE158465.024
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16 (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH C10-C40 Total	mg/kg	210	<210	<210	<210	<210	<210

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH9 0.15-0.25	BH9 0.25-0.5	BH9 1.0-1.3	BH9 2.0-2.3	BH9 2.5-2.7
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.026	20/10/2016 SE158465.027	20/10/2016 SE158465.029	20/10/2016 SE158465.031	20/10/2016 SE158465.032
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	50
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16 (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH C10-C40 Total	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH10 0.15-0.45	BH10 0.5-0.8	BH10 1.5-1.8	BH10 2.7-3.0	BH11 0.15-0.25
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.033	20/10/2016 SE158465.034	20/10/2016 SE158465.036	20/10/2016 SE158465.038	20/10/2016 SE158465.039
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16 (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH C10-C40 Total	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH11 1.2-1.5	BH11 2.5-2.8	BH12 0.15-0.45	BH13 0.2-0.5	BH13 2.0-2.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.042	20/10/2016 SE158465.044	20/10/2016 SE158465.045	20/10/2016 SE158465.048	20/10/2016 SE158465.050
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	97	<45	<45	50
TRH C29-C36	mg/kg	45	<45	110	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16 (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	180	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	210	<110	<110	<110
TRH C10-C40 Total	mg/kg	210	<210	210	<210	<210	<210

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH14 0.5-0.8	Duplicate D1	Duplicate D6
			SOIL - 20/10/2016 SE158465.052	SOIL - 20/10/2016 SE158465.054	SOIL - 20/10/2016 SE158465.056
TRH C10-C14	mg/kg	20	<20	<20	<20
TRH C15-C28	mg/kg	45	110	320	<45
TRH C29-C36	mg/kg	45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100
TRH >C10-C16 (F2)	mg/kg	25	<25	<25	<25
TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	120	350	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	110	320	<110
TRH C10-C40 Total	mg/kg	210	<210	320	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 27/10/2016

PARAMETER	UOM	LOR	BH1 0.15-0.45	BH2 0.15-0.45	BH3 0.13-0.43	BH4 0.15-0.25	BH4 0.25-0.35
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.001	20/10/2016 SE158465.002	20/10/2016 SE158465.003	20/10/2016 SE158465.004	20/10/2016 SE158465.005
Naphthalene	mg/kg	0.1	<0.1	0.1	<0.1	0.4	1.1
2-methylnaphthalene	mg/kg	0.1	<0.1	0.3	<0.1	0.5	1.0
1-methylnaphthalene	mg/kg	0.1	<0.1	0.2	<0.1	0.3	0.6
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	0.3	0.6	0.2	1.3	1.8
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	0.2	0.2	<0.1	0.2	0.3
Pyrene	mg/kg	0.1	0.2	0.3	<0.1	0.2	0.3
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	0.1	0.2
Chrysene	mg/kg	0.1	0.2	0.2	<0.1	0.5	0.6
Benzo(b&j)fluoranthene	mg/kg	0.1	0.2	0.1	<0.1	0.3	0.4
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	0.2	0.1	0.1	0.1	0.2
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	0.2	<0.2	<0.2	<0.2	0.2
Total PAH (18)	mg/kg	0.8	1.4	2.0	<0.8	3.9	6.6
Total PAH (NEPM/WHO 16)	mg/kg	0.8	1.4	1.5	<0.8	3.1	4.9

PARAMETER	UOM	LOR	BH4 0.35-0.65	BH4 1.0-1.3	BH4 1.5-1.8	BH4 2.0-2.3	BH5 0.15-0.45
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.006	20/10/2016 SE158465.007	20/10/2016 SE158465.008	20/10/2016 SE158465.009	20/10/2016 SE158465.010
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	0.3	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	0.3	0.3	0.1	<0.1	0.2
Pyrene	mg/kg	0.1	0.3	0.4	0.1	<0.1	0.2
Benzo(a)anthracene	mg/kg	0.1	0.1	0.2	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	0.2	0.3	0.1	<0.1	0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	0.2	0.3	0.2	<0.1	0.2
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	0.2	0.3	<0.1	<0.1	0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.2	0.2	<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	0.2	0.2	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	0.2	0.3	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	0.3	0.4	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	0.3	0.4	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	2.0	2.4	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	2.0	2.4	<0.8	<0.8	<0.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH5 1.0-1.3	BH5 1.5-1.8	BH6 0.15-0.25	BH6 0.25-0.4	BH6 0.4-0.7
			SOIL - 20/10/2016 SE158465.011	SOIL - 20/10/2016 SE158465.012	SOIL - 20/10/2016 SE158465.013	SOIL - 20/10/2016 SE158465.014	SOIL - 20/10/2016 SE158465.015
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	0.2	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	0.6	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	0.4	<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	0.2	2.0	<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	0.3	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	0.3	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	0.2	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	0.7	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	0.4	<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	0.3	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	<0.2	<0.2	<0.2	0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	0.3	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	5.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	4.8	<0.8

PARAMETER	UOM	LOR	BH6 1.0-1.3	BH6 1.5-1.8	BH7 0.15-0.25	BH7 0.25-0.35	BH7 0.35-0.65
			SOIL - 20/10/2016 SE158465.016	SOIL - 20/10/2016 SE158465.017	SOIL - 20/10/2016 SE158465.018	SOIL - 20/10/2016 SE158465.019	SOIL - 20/10/2016 SE158465.020
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	0.2	<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	0.2	0.4	0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH8 0.15-0.25	BH8 0.25-0.5	BH8 0.5-0.8	BH9 0.15-0.25	BH9 0.25-0.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.022	20/10/2016 SE158465.023	20/10/2016 SE158465.024	20/10/2016 SE158465.026	20/10/2016 SE158465.027
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	0.6	0.1	<0.1	0.3
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	0.9	<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	BH9 0.5-0.8	BH9 1.0-1.3	BH9 1.5-1.8	BH9 2.0-2.3	BH9 2.5-2.7
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.028	20/10/2016 SE158465.029	20/10/2016 SE158465.030	20/10/2016 SE158465.031	20/10/2016 SE158465.032
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	0.4
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	0.2	<0.1	<0.1	<0.1	0.8
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.2
Fluoranthene	mg/kg	0.1	0.8	<0.1	0.2	0.1	3.2
Pyrene	mg/kg	0.1	0.8	<0.1	0.2	0.2	3.0
Benzo(a)anthracene	mg/kg	0.1	0.8	<0.1	0.1	0.1	2.9
Chrysene	mg/kg	0.1	0.6	<0.1	0.1	0.1	2.2
Benzo(b&j)fluoranthene	mg/kg	0.1	0.6	<0.1	0.1	0.1	4.4
Benzo(k)fluoranthene	mg/kg	0.1	0.3	<0.1	<0.1	<0.1	1.2
Benzo(a)pyrene	mg/kg	0.1	0.5	<0.1	<0.1	<0.1	3.3
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.4	<0.1	0.1	<0.1	2.8
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.5
Benzo(ghi)perylene	mg/kg	0.1	0.4	<0.1	0.1	<0.1	2.6
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	0.7	<0.2	<0.2	<0.2	4.9
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	0.8	<0.3	<0.3	<0.3	4.9
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	0.7	<0.2	<0.2	<0.2	4.9
Total PAH (18)	mg/kg	0.8	5.3	<0.8	<0.8	<0.8	27
Total PAH (NEPM/WHO 16)	mg/kg	0.8	5.3	<0.8	<0.8	<0.8	27

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH10 0.15-0.45	BH10 0.5-0.8	BH10 1.0-1.3	BH10 1.5-1.8	BH10 2.0-2.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.033	20/10/2016 SE158465.034	20/10/2016 SE158465.035	20/10/2016 SE158465.036	20/10/2016 SE158465.037
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	0.5	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	1.0	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	0.9	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BH10 2.7-3.0	BH11 0.15-0.25	BH11 0.25-0.55	BH11 0.8-1.1	BH11 1.2-1.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.038	20/10/2016 SE158465.039	20/10/2016 SE158465.040	20/10/2016 SE158465.041	20/10/2016 SE158465.042
Naphthalene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	0.2	0.4	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	0.2	0.3	<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	1.0	1.5	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	0.2	<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	0.3	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	0.3	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	0.1	0.2	<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	0.2	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	1.5	3.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	1.2	3.1	<0.8	<0.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH11 1.7-2.2	BH11 2.5-2.8	BH12 0.15-0.45	BH12 1.0-1.3	BH13 0.2-0.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.043	20/10/2016 SE158465.044	20/10/2016 SE158465.045	20/10/2016 SE158465.046	20/10/2016 SE158465.048
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	0.2	<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	0.5	<0.1	0.2	<0.1
Anthracene	mg/kg	0.1	<0.1	0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	0.1	1.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	0.1	1.3	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	0.7	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	0.8	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	0.1	1.0	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	0.5	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	0.1	0.9	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	0.7	<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	0.7	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	<0.2	1.3	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	1.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	1.3	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	8.5	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	8.5	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BH13 1.0-1.3	BH13 2.0-2.3	BH14 0.5-0.8	Duplicate D1	Duplicate D3
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.049	20/10/2016 SE158465.050	20/10/2016 SE158465.052	20/10/2016 SE158465.054	20/10/2016 SE158465.055
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	0.2	<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	0.2	<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	1.8	0.3	0.7	0.3
Anthracene	mg/kg	0.1	<0.1	0.4	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	2.2	0.2	0.2	0.9
Pyrene	mg/kg	0.1	<0.1	2.5	0.2	0.1	0.9
Benzo(a)anthracene	mg/kg	0.1	<0.1	1.2	0.1	0.2	0.5
Chrysene	mg/kg	0.1	<0.1	1.2	0.1	0.2	0.4
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	1.3	0.1	0.2	0.5
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	0.7	<0.1	<0.1	0.3
Benzo(a)pyrene	mg/kg	0.1	<0.1	1.3	0.1	<0.1	0.5
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	0.8	<0.1	<0.1	0.3
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	0.8	<0.1	0.1	0.3
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	<0.2	1.8	<0.2	<0.2	0.6
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	1.8	<0.3	<0.3	0.7
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	1.8	<0.2	<0.2	0.7
Total PAH (18)	mg/kg	0.8	<0.8	15	0.9	2.0	4.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	15	0.9	1.7	4.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 27/10/2016 (continued)

			Duplicate D6	BH14 2.05-2.15
			SOIL	SOIL
			-	-
			20/10/2016	20/10/2016
			SE158465.056	SE158465.059
PARAMETER	UOM	LOR		
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	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 [AN400/AN420] Tested: 27/10/2016

PARAMETER	UOM	LOR	BH1 0.15-0.45	BH2 0.15-0.45	BH3 0.13-0.43	BH4 0.15-0.25	BH4 0.25-0.35
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.001	20/10/2016 SE158465.002	20/10/2016 SE158465.003	20/10/2016 SE158465.004	20/10/2016 SE158465.005
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 [AN400/AN420] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH4 1.0-1.3	BH5 0.15-0.45	BH6 0.15-0.25	BH6 0.25-0.4	BH6 1.0-1.3
			SOIL - 20/10/2016 SE158465.007	SOIL - 20/10/2016 SE158465.010	SOIL - 20/10/2016 SE158465.013	SOIL - 20/10/2016 SE158465.014	SOIL - 20/10/2016 SE158465.016
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 [AN400/AN420] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH7 0.15-0.25	BH7 0.25-0.35	BH7 0.35-0.65	BH8 0.15-0.25	BH8 0.5-0.8
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.018	20/10/2016 SE158465.019	20/10/2016 SE158465.020	20/10/2016 SE158465.022	20/10/2016 SE158465.024
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 [AN400/AN420] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH9 0.15-0.25	BH9 0.25-0.5	BH9 1.0-1.3	BH9 2.0-2.3	BH9 2.5-2.7
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.026	20/10/2016 SE158465.027	20/10/2016 SE158465.029	20/10/2016 SE158465.031	20/10/2016 SE158465.032
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 [AN400/AN420] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH10 0.15-0.45	BH10 0.5-0.8	BH10 1.5-1.8	BH10 2.7-3.0	BH11 0.15-0.25
			SOIL - 20/10/2016 SE158465.033	SOIL - 20/10/2016 SE158465.034	SOIL - 20/10/2016 SE158465.036	SOIL - 20/10/2016 SE158465.038	SOIL - 20/10/2016 SE158465.039
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 [AN400/AN420] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH11 1.2-1.5	BH11 2.5-2.8	BH12 0.15-0.45	BH13 0.2-0.5	BH13 2.0-2.3
			SOIL - 20/10/2016 SE158465.042	SOIL - 20/10/2016 SE158465.044	SOIL - 20/10/2016 SE158465.045	SOIL - 20/10/2016 SE158465.048	SOIL - 20/10/2016 SE158465.050
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 [AN400/AN420] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH14 0.5-0.8	Duplicate D1	Duplicate D6
			SOIL - 20/10/2016 SE158465.052	SOIL - 20/10/2016 SE158465.054	SOIL - 20/10/2016 SE158465.056
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 [AN400/AN420] Tested: 27/10/2016

PARAMETER	UOM	LOR	BH1 0.15-0.45	BH2 0.15-0.45	BH3 0.13-0.43	BH4 0.15-0.25	BH4 0.25-0.35
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.001	20/10/2016 SE158465.002	20/10/2016 SE158465.003	20/10/2016 SE158465.004	20/10/2016 SE158465.005
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	BH4 1.0-1.3	BH5 0.15-0.45	BH6 0.15-0.25	BH6 0.25-0.4	BH6 1.0-1.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.007	20/10/2016 SE158465.010	20/10/2016 SE158465.013	20/10/2016 SE158465.014	20/10/2016 SE158465.016
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	BH7 0.15-0.25	BH7 0.25-0.35	BH7 0.35-0.65	BH8 0.15-0.25	BH8 0.5-0.8
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.018	20/10/2016 SE158465.019	20/10/2016 SE158465.020	20/10/2016 SE158465.022	20/10/2016 SE158465.024
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 [AN400/AN420] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH9 0.15-0.25	BH9 0.25-0.5	BH9 1.0-1.3	BH9 2.0-2.3	BH9 2.5-2.7
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.026	20/10/2016 SE158465.027	20/10/2016 SE158465.029	20/10/2016 SE158465.031	20/10/2016 SE158465.032
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	BH10 0.15-0.45	BH10 0.5-0.8	BH10 1.5-1.8	BH10 2.7-3.0	BH11 0.15-0.25
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.033	20/10/2016 SE158465.034	20/10/2016 SE158465.036	20/10/2016 SE158465.038	20/10/2016 SE158465.039
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	BH11 1.2-1.5	BH11 2.5-2.8	BH12 0.15-0.45	BH13 0.2-0.5	BH13 2.0-2.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.042	20/10/2016 SE158465.044	20/10/2016 SE158465.045	20/10/2016 SE158465.048	20/10/2016 SE158465.050
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 [AN400/AN420] Tested: 27/10/2016 (continued)

			BH14 0.5-0.8	Duplicate D1	Duplicate D6
			SOIL	SOIL	SOIL
			-	-	-
			20/10/2016	20/10/2016	20/10/2016
			SE158465.052	SE158465.054	SE158465.056
PARAMETER	UOM	LOR			
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: 28/10/2016

PARAMETER	UOM	LOR	BH1 0.15-0.45	BH2 0.15-0.45	BH3 0.13-0.43	BH4 0.15-0.25	BH4 0.25-0.35
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016 SE158465.001	20/10/2016 SE158465.002	20/10/2016 SE158465.003	20/10/2016 SE158465.004	20/10/2016 SE158465.005
Total Phenols	mg/kg	5	<5	<5	<5	<5	<5

PARAMETER	UOM	LOR	BH4 1.0-1.3	BH5 0.15-0.45	BH6 0.15-0.25	BH6 1.0-1.3	BH7 0.15-0.25
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016 SE158465.007	20/10/2016 SE158465.010	20/10/2016 SE158465.013	20/10/2016 SE158465.016	20/10/2016 SE158465.018
Total Phenols	mg/kg	5	<5	<5	<5	<5	<5

PARAMETER	UOM	LOR	BH7 0.25-0.35	BH7 0.35-0.65	BH8 0.15-0.25	BH8 0.5-0.8	BH9 0.15-0.25
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016 SE158465.019	20/10/2016 SE158465.020	20/10/2016 SE158465.022	20/10/2016 SE158465.024	20/10/2016 SE158465.026
Total Phenols	mg/kg	5	<5	<5	<5	<5	<5

PARAMETER	UOM	LOR	BH9 0.25-0.5	BH9 1.0-1.3	BH9 2.5-2.7	BH10 0.15-0.45	BH10 0.5-0.8
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016 SE158465.027	20/10/2016 SE158465.029	20/10/2016 SE158465.032	20/10/2016 SE158465.033	20/10/2016 SE158465.034
Total Phenols	mg/kg	5	<5	<5	<5	<5	<5

PARAMETER	UOM	LOR	BH10 2.7-3.0	BH11 0.15-0.25	BH11 1.2-1.5	BH11 2.5-2.8	BH12 0.15-0.45
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016 SE158465.038	20/10/2016 SE158465.039	20/10/2016 SE158465.042	20/10/2016 SE158465.044	20/10/2016 SE158465.045
Total Phenols	mg/kg	5	<5	<5	<5	<5	<5

PARAMETER	UOM	LOR	BH13 0.2-0.5	BH13 2.0-2.3	BH14 0.5-0.8	Duplicate D1	Duplicate D6
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016 SE158465.048	20/10/2016 SE158465.050	20/10/2016 SE158465.052	20/10/2016 SE158465.054	20/10/2016 SE158465.056
Total Phenols	mg/kg	5	<5	<5	<5	<5	<5

Total Cyanide in soil by Discrete Analyser (Aquakem) [AN077/AN287] Tested: 27/10/2016

PARAMETER	UOM	LOR	BH1 0.15-0.45	BH2 0.15-0.45	BH3 0.13-0.43	BH4 0.15-0.25	BH4 0.25-0.35
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
			SE158465.001	SE158465.002	SE158465.003	SE158465.004	SE158465.005
Total Cyanide	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide Post Chlorination	mg/kg	0.5	-	-	-	-	-
Cyanide Amenable to Chlorination	mg/kg	0.5	-	-	-	-	-

PARAMETER	UOM	LOR	BH4 1.0-1.3	BH5 0.15-0.45	BH6 0.15-0.25	BH6 1.0-1.3	BH7 0.15-0.25
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
			SE158465.007	SE158465.010	SE158465.013	SE158465.016	SE158465.018
Total Cyanide	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide Post Chlorination	mg/kg	0.5	-	-	-	-	-
Cyanide Amenable to Chlorination	mg/kg	0.5	-	-	-	-	-

PARAMETER	UOM	LOR	BH7 0.25-0.35	BH7 0.35-0.65	BH8 0.15-0.25	BH8 0.5-0.8	BH9 0.15-0.25
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
			SE158465.019	SE158465.020	SE158465.022	SE158465.024	SE158465.026
Total Cyanide	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide Post Chlorination	mg/kg	0.5	-	-	-	-	-
Cyanide Amenable to Chlorination	mg/kg	0.5	-	-	-	-	-

PARAMETER	UOM	LOR	BH9 0.25-0.5	BH9 1.0-1.3	BH9 2.5-2.7	BH10 0.15-0.45	BH10 0.5-0.8
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
			SE158465.027	SE158465.029	SE158465.032	SE158465.033	SE158465.034
Total Cyanide	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide Post Chlorination	mg/kg	0.5	-	-	-	-	-
Cyanide Amenable to Chlorination	mg/kg	0.5	-	-	-	-	-

PARAMETER	UOM	LOR	BH10 2.7-3.0	BH11 0.15-0.25	BH11 1.2-1.5	BH11 2.5-2.8	BH12 0.15-0.45
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
			SE158465.038	SE158465.039	SE158465.042	SE158465.044	SE158465.045
Total Cyanide	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide Post Chlorination	mg/kg	0.5	-	-	-	-	-
Cyanide Amenable to Chlorination	mg/kg	0.5	-	-	-	-	-

PARAMETER	UOM	LOR	BH13 0.2-0.5	BH13 2.0-2.3	BH14 0.5-0.8	Duplicate D1	Duplicate D6
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
			SE158465.048	SE158465.050	SE158465.052	SE158465.054	SE158465.056
Total Cyanide	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide Post Chlorination	mg/kg	0.5	-	-	-	-	-
Cyanide Amenable to Chlorination	mg/kg	0.5	-	-	-	-	-

pH in soil (1:5) [AN101] Tested: 27/10/2016

			BH1 0.15-0.45	BH4 0.15-0.25	BH4 0.25-0.35	BH4 1.0-1.3	BH5 0.15-0.45
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.001	SE158465.004	SE158465.005	SE158465.007	SE158465.010
pH	pH Units	-	8.4	9.0	8.9	8.2	8.5

			BH7 0.15-0.25	BH7 0.25-0.35	BH7 1.4-1.7	BH8 0.15-0.25	BH9 0.25-0.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.018	SE158465.019	SE158465.021	SE158465.022	SE158465.027
pH	pH Units	-	8.9	8.9	8.4	8.3	8.8

			BH9 1.0-1.3	BH10 2.0-2.3	BH10 2.7-3.0	BH11 0.15-0.25	BH12 0.15-0.45
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.029	SE158465.037	SE158465.038	SE158465.039	SE158465.045
pH	pH Units	-	8.2	8.1	7.6	8.7	8.4

			BH13 1.0-1.3	BH14 0.5-0.8
			SOIL	SOIL
			-	-
			20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.049	SE158465.052
pH	pH Units	-	9.0	8.5

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122] Tested: 28/10/2016

PARAMETER	UOM	LOR	BH1 0.15-0.45	BH4 0.15-0.25	BH4 0.25-0.35	BH4 1.0-1.3	BH5 0.15-0.45
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.001	20/10/2016 SE158465.004	20/10/2016 SE158465.005	20/10/2016 SE158465.007	20/10/2016 SE158465.010
Exchangeable Sodium, Na	mg/kg	2	150	24	53	66	120
Exchangeable Sodium, Na	meq/100g	0.01	0.64	0.10	0.23	0.29	0.51
Exchangeable Sodium Percentage*	%	0.1	1.9	0.4	1.1	1.0	2.3
Exchangeable Potassium, K	mg/kg	2	130	73	130	190	260
Exchangeable Potassium, K	meq/100g	0.01	0.34	0.19	0.33	0.48	0.66
Exchangeable Potassium Percentage*	%	0.1	1.0	0.6	1.6	1.6	3.1
Exchangeable Calcium, Ca	mg/kg	2	5600	5600	3600	5200	2900
Exchangeable Calcium, Ca	meq/100g	0.01	28	28	18	26	14
Exchangeable Calcium Percentage*	%	0.1	83.7	96.2	88.3	89.1	65.9
Exchangeable Magnesium, Mg	mg/kg	2	550	100	220	300	760
Exchangeable Magnesium, Mg	meq/100g	0.02	4.5	0.82	1.8	2.4	6.2
Exchangeable Magnesium Percentage*	%	0.1	13.4	2.8	9.0	8.3	28.7
Cation Exchange Capacity	meq/100g	0.02	34	29	20	29	22

PARAMETER	UOM	LOR	BH7 0.15-0.25	BH7 0.25-0.35	BH7 1.4-1.7	BH8 0.15-0.25	BH9 0.25-0.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.018	20/10/2016 SE158465.019	20/10/2016 SE158465.021	20/10/2016 SE158465.022	20/10/2016 SE158465.027
Exchangeable Sodium, Na	mg/kg	2	20	62	150	21	200
Exchangeable Sodium, Na	meq/100g	0.01	0.09	0.27	0.67	0.09	0.89
Exchangeable Sodium Percentage*	%	0.1	3.3	2.0	5.1	8.7	4.4
Exchangeable Potassium, K	mg/kg	2	12	73	150	8	190
Exchangeable Potassium, K	meq/100g	0.01	0.03	0.19	0.37	0.02	0.48
Exchangeable Potassium Percentage*	%	0.1	1.2	1.4	2.9	1.9	2.4
Exchangeable Calcium, Ca	mg/kg	2	420	2300	2100	150	2700
Exchangeable Calcium, Ca	meq/100g	0.01	2.1	11	10	0.73	14
Exchangeable Calcium Percentage*	%	0.1	77.4	82.2	80.1	68.0	67.6
Exchangeable Magnesium, Mg	mg/kg	2	60	240	190	28	630
Exchangeable Magnesium, Mg	meq/100g	0.02	0.49	2.0	1.6	0.23	5.2
Exchangeable Magnesium Percentage*	%	0.1	18.2	14.4	12.0	21.4	25.8
Cation Exchange Capacity	meq/100g	0.02	2.7	14	13	1.1	20

PARAMETER	UOM	LOR	BH9 1.0-1.3	BH10 2.0-2.3	BH10 2.7-3.0	BH11 0.15-0.25	BH12 0.15-0.45
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.029	20/10/2016 SE158465.037	20/10/2016 SE158465.038	20/10/2016 SE158465.039	20/10/2016 SE158465.045
Exchangeable Sodium, Na	mg/kg	2	290	280	190	26	210
Exchangeable Sodium, Na	meq/100g	0.01	1.3	1.2	0.81	0.11	0.93
Exchangeable Sodium Percentage*	%	0.1	8.4	13.4	6.2	5.1	8.8
Exchangeable Potassium, K	mg/kg	2	180	110	150	13	140
Exchangeable Potassium, K	meq/100g	0.01	0.45	0.28	0.37	0.03	0.37
Exchangeable Potassium Percentage*	%	0.1	2.9	3.1	2.9	1.5	3.4
Exchangeable Calcium, Ca	mg/kg	2	1600	620	2000	300	990
Exchangeable Calcium, Ca	meq/100g	0.01	8.0	3.1	9.8	1.5	5.0
Exchangeable Calcium Percentage*	%	0.1	52.1	34.6	75.8	70.0	46.8
Exchangeable Magnesium, Mg	mg/kg	2	680	540	240	62	530
Exchangeable Magnesium, Mg	meq/100g	0.02	5.6	4.4	2.0	0.50	4.3
Exchangeable Magnesium Percentage*	%	0.1	36.6	49.0	15.1	23.3	41.0
Cation Exchange Capacity	meq/100g	0.02	15	9.0	13	2.2	11

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122] Tested: 28/10/2016 (continued)

PARAMETER	UOM	LOR	BH13 1.0-1.3	BH14 0.5-0.8
			SOIL - 20/10/2016 SE158465.049	SOIL - 20/10/2016 SE158465.052
Exchangeable Sodium, Na	mg/kg	2	140	45
Exchangeable Sodium, Na	meq/100g	0.01	0.63	0.19
Exchangeable Sodium Percentage*	%	0.1	2.0	0.9
Exchangeable Potassium, K	mg/kg	2	41	230
Exchangeable Potassium, K	meq/100g	0.01	0.10	0.60
Exchangeable Potassium Percentage*	%	0.1	0.3	2.8
Exchangeable Calcium, Ca	mg/kg	2	5600	3300
Exchangeable Calcium, Ca	meq/100g	0.01	28	17
Exchangeable Calcium Percentage*	%	0.1	87.4	76.7
Exchangeable Magnesium, Mg	mg/kg	2	410	510
Exchangeable Magnesium, Mg	meq/100g	0.02	3.3	4.2
Exchangeable Magnesium Percentage*	%	0.1	10.3	19.6
Cation Exchange Capacity	meq/100g	0.02	32	22

Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 28/10/2016

PARAMETER	UOM	LOR	BH1 0.15-0.45	BH2 0.15-0.45	BH3 0.13-0.43	BH4 0.15-0.25	BH4 0.25-0.35
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.001	20/10/2016 SE158465.002	20/10/2016 SE158465.003	20/10/2016 SE158465.004	20/10/2016 SE158465.005
Arsenic, As	mg/kg	3	10	4	24	4	<3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	0.4	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	7.5	3.9	13	2.9	2.5
Copper, Cu	mg/kg	0.5	17	14	23	12	17
Lead, Pb	mg/kg	1	24	12	32	11	19
Nickel, Ni	mg/kg	0.5	10	5.8	9.3	12	15
Zinc, Zn	mg/kg	0.5	49	27	270	26	30

PARAMETER	UOM	LOR	BH4 0.35-0.65	BH4 1.0-1.3	BH4 1.5-1.8	BH4 2.0-2.3	BH5 0.15-0.45
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.006	20/10/2016 SE158465.007	20/10/2016 SE158465.008	20/10/2016 SE158465.009	20/10/2016 SE158465.010
Arsenic, As	mg/kg	3	8	12	15	<3	7
Cadmium, Cd	mg/kg	0.3	0.3	0.4	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	6.2	13	7.8	3.0	11
Copper, Cu	mg/kg	0.5	20	43	13	2.0	19
Lead, Pb	mg/kg	1	34	310	39	5	37
Nickel, Ni	mg/kg	0.5	13	9.4	7.5	1.6	4.5
Zinc, Zn	mg/kg	0.5	71	270	41	3.4	50

PARAMETER	UOM	LOR	BH5 1.0-1.3	BH5 1.5-1.8	BH6 0.15-0.25	BH6 0.25-0.4	BH6 0.4-0.7
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.011	20/10/2016 SE158465.012	20/10/2016 SE158465.013	20/10/2016 SE158465.014	20/10/2016 SE158465.015
Arsenic, As	mg/kg	3	10	<3	3	5	5
Cadmium, Cd	mg/kg	0.3	1.4	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	20	2.7	1.2	2.2	3.5
Copper, Cu	mg/kg	0.5	34	3.2	2.7	22	25
Lead, Pb	mg/kg	1	76	7	3	18	17
Nickel, Ni	mg/kg	0.5	5.9	2.0	2.1	19	12
Zinc, Zn	mg/kg	0.5	240	6.4	6.4	50	55

PARAMETER	UOM	LOR	BH6 1.0-1.3	BH6 1.5-1.8	BH7 0.15-0.25	BH7 0.25-0.35	BH7 0.35-0.65
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.016	20/10/2016 SE158465.017	20/10/2016 SE158465.018	20/10/2016 SE158465.019	20/10/2016 SE158465.020
Arsenic, As	mg/kg	3	16	15	4	5	26
Cadmium, Cd	mg/kg	0.3	<0.3	0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	12	11	1.6	2.6	7.5
Copper, Cu	mg/kg	0.5	15	20	6.5	14	13
Lead, Pb	mg/kg	1	18	52	9	16	58
Nickel, Ni	mg/kg	0.5	3.8	5.7	2.9	9.5	3.2
Zinc, Zn	mg/kg	0.5	20	54	11	25	30

Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 28/10/2016 (continued)

PARAMETER	UOM	LOR	BH7 1.4-1.7	BH8 0.15-0.25	BH8 0.25-0.5	BH8 0.5-0.8	BH8 0.9-1.2
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.021	20/10/2016 SE158465.022	20/10/2016 SE158465.023	20/10/2016 SE158465.024	20/10/2016 SE158465.025
Arsenic, As	mg/kg	3	65	<3	<3	7	<3
Cadmium, Cd	mg/kg	0.3	1.5	<0.3	<0.3	0.3	<0.3
Chromium, Cr	mg/kg	0.3	8.0	1.1	2.2	11	9.3
Copper, Cu	mg/kg	0.5	41	0.8	18	23	67
Lead, Pb	mg/kg	1	37	2	17	76	7
Nickel, Ni	mg/kg	0.5	12	0.6	5.7	6.6	7.1
Zinc, Zn	mg/kg	0.5	97	3.2	28	84	48

PARAMETER	UOM	LOR	BH9 0.15-0.25	BH9 0.25-0.5	BH9 0.5-0.8	BH9 1.0-1.3	BH9 1.5-1.8
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.026	20/10/2016 SE158465.027	20/10/2016 SE158465.028	20/10/2016 SE158465.029	20/10/2016 SE158465.030
Arsenic, As	mg/kg	3	<3	8	8	8	8
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	0.5	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	2.5	5.1	11	5.0	4.3
Copper, Cu	mg/kg	0.5	5.1	19	37	16	28
Lead, Pb	mg/kg	1	2	21	170	12	23
Nickel, Ni	mg/kg	0.5	1.4	9.6	11	4.0	13
Zinc, Zn	mg/kg	0.5	4.6	42	200	22	66

PARAMETER	UOM	LOR	BH9 2.0-2.3	BH9 2.5-2.7	BH10 0.15-0.45	BH10 0.5-0.8	BH10 1.0-1.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.031	20/10/2016 SE158465.032	20/10/2016 SE158465.033	20/10/2016 SE158465.034	20/10/2016 SE158465.035
Arsenic, As	mg/kg	3	13	14	4	9	14
Cadmium, Cd	mg/kg	0.3	0.4	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	9.9	6.3	1.7	5.8	7.7
Copper, Cu	mg/kg	0.5	29	23	13	21	36
Lead, Pb	mg/kg	1	95	110	13	18	16
Nickel, Ni	mg/kg	0.5	12	4.8	7.8	6.9	10
Zinc, Zn	mg/kg	0.5	150	200	27	44	66

PARAMETER	UOM	LOR	BH10 1.5-1.8	BH10 2.0-2.3	BH10 2.7-3.0	BH11 0.15-0.25	BH11 0.25-0.55
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.036	20/10/2016 SE158465.037	20/10/2016 SE158465.038	20/10/2016 SE158465.039	20/10/2016 SE158465.040
Arsenic, As	mg/kg	3	6	4	<3	6	<3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	7.0	2.7	1.8	1.4	2.3
Copper, Cu	mg/kg	0.5	19	14	13	10	13
Lead, Pb	mg/kg	1	14	10	9	9	18
Nickel, Ni	mg/kg	0.5	6.9	14	2.8	6.7	5.7
Zinc, Zn	mg/kg	0.5	43	69	130	20	20

Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 28/10/2016 (continued)

PARAMETER	UOM	LOR	BH11 0.8-1.1	BH11 1.2-1.5	BH11 1.7-2.2	BH11 2.5-2.8	BH12 0.15-0.45
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.041	20/10/2016 SE158465.042	20/10/2016 SE158465.043	20/10/2016 SE158465.044	20/10/2016 SE158465.045
Arsenic, As	mg/kg	3	10	5	11	32	5
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	0.6	0.4	<0.3
Chromium, Cr	mg/kg	0.3	8.0	7.8	31	18	3.2
Copper, Cu	mg/kg	0.5	28	15	23	40	17
Lead, Pb	mg/kg	1	41	15	51	130	14
Nickel, Ni	mg/kg	0.5	14	5.3	11	11	11
Zinc, Zn	mg/kg	0.5	69	34	98	200	61

PARAMETER	UOM	LOR	BH12 1.0-1.3	BH13 0-0.15	BH13 0.2-0.5	BH13 1.0-1.3	BH13 2.0-2.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.046	20/10/2016 SE158465.047	20/10/2016 SE158465.048	20/10/2016 SE158465.049	20/10/2016 SE158465.050
Arsenic, As	mg/kg	3	4	8	<3	5	7
Cadmium, Cd	mg/kg	0.3	0.4	<0.3	<0.3	<0.3	0.5
Chromium, Cr	mg/kg	0.3	48	6.9	2.7	14	13
Copper, Cu	mg/kg	0.5	27	14	14	9.3	32
Lead, Pb	mg/kg	1	14	24	8	15	36
Nickel, Ni	mg/kg	0.5	59	7.8	5.4	15	23
Zinc, Zn	mg/kg	0.5	51	47	22	25	68

PARAMETER	UOM	LOR	BH14 0-0.15	BH14 0.5-0.8	BH14 1.0-1.3	Duplicate D1	Duplicate D3
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.051	20/10/2016 SE158465.052	20/10/2016 SE158465.053	20/10/2016 SE158465.054	20/10/2016 SE158465.055
Arsenic, As	mg/kg	3	13	15	5	8	5
Cadmium, Cd	mg/kg	0.3	<0.3	0.4	<0.3	0.5	0.3
Chromium, Cr	mg/kg	0.3	8.4	8.6	4.3	14	6.5
Copper, Cu	mg/kg	0.5	23	26	10	29	200
Lead, Pb	mg/kg	1	32	38	6	90	86
Nickel, Ni	mg/kg	0.5	8.4	13	3.5	6.5	9.4
Zinc, Zn	mg/kg	0.5	62	70	12	95	85

PARAMETER	UOM	LOR	Duplicate D6
			SOIL
			20/10/2016 SE158465.056
Arsenic, As	mg/kg	3	6
Cadmium, Cd	mg/kg	0.3	<0.3
Chromium, Cr	mg/kg	0.3	4.5
Copper, Cu	mg/kg	0.5	25
Lead, Pb	mg/kg	1	13
Nickel, Ni	mg/kg	0.5	6.9
Zinc, Zn	mg/kg	0.5	43

Mercury in Soil [AN312] Tested: 28/10/2016

			BH1 0.15-0.45	BH2 0.15-0.45	BH3 0.13-0.43	BH4 0.15-0.25	BH4 0.25-0.35
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.001	SE158465.002	SE158465.003	SE158465.004	SE158465.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

			BH4 0.35-0.65	BH4 1.0-1.3	BH4 1.5-1.8	BH4 2.0-2.3	BH5 0.15-0.45
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.006	SE158465.007	SE158465.008	SE158465.009	SE158465.010
Mercury	mg/kg	0.05	<0.05	0.27	<0.05	<0.05	<0.05

			BH5 1.0-1.3	BH5 1.5-1.8	BH6 0.15-0.25	BH6 0.25-0.4	BH6 0.4-0.7
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.011	SE158465.012	SE158465.013	SE158465.014	SE158465.015
Mercury	mg/kg	0.05	0.13	<0.05	<0.05	<0.05	0.08

			BH6 1.0-1.3	BH6 1.5-1.8	BH7 0.15-0.25	BH7 0.25-0.35	BH7 0.35-0.65
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.016	SE158465.017	SE158465.018	SE158465.019	SE158465.020
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

			BH7 1.4-1.7	BH8 0.15-0.25	BH8 0.25-0.5	BH8 0.5-0.8	BH8 0.9-1.2
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.021	SE158465.022	SE158465.023	SE158465.024	SE158465.025
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	0.07	<0.05

			BH9 0.15-0.25	BH9 0.25-0.5	BH9 0.5-0.8	BH9 1.0-1.3	BH9 1.5-1.8
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.026	SE158465.027	SE158465.028	SE158465.029	SE158465.030
Mercury	mg/kg	0.05	<0.05	<0.05	0.14	<0.05	0.06

			BH9 2.0-2.3	BH9 2.5-2.7	BH10 0.15-0.45	BH10 0.5-0.8	BH10 1.0-1.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.031	SE158465.032	SE158465.033	SE158465.034	SE158465.035
Mercury	mg/kg	0.05	0.13	<0.05	<0.05	<0.05	<0.05

Mercury in Soil [AN312] Tested: 28/10/2016 (continued)

			BH10 1.5-1.8	BH10 2.0-2.3	BH10 2.7-3.0	BH11 0.15-0.25	BH11 0.25-0.55
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.036	SE158465.037	SE158465.038	SE158465.039	SE158465.040
Mercury	mg/kg	0.05	<0.05	0.05	<0.05	<0.05	<0.05

			BH11 0.8-1.1	BH11 1.2-1.5	BH11 1.7-2.2	BH11 2.5-2.8	BH12 0.15-0.45
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.041	SE158465.042	SE158465.043	SE158465.044	SE158465.045
Mercury	mg/kg	0.05	0.05	<0.05	<0.05	0.19	<0.05

			BH12 1.0-1.3	BH13 0-0.15	BH13 0.2-0.5	BH13 1.0-1.3	BH13 2.0-2.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.046	SE158465.047	SE158465.048	SE158465.049	SE158465.050
Mercury	mg/kg	0.05	<0.05	<0.05	0.07	<0.05	<0.05

			BH14 0-0.15	BH14 0.5-0.8	BH14 1.0-1.3	Duplicate D1	Duplicate D3
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.051	SE158465.052	SE158465.053	SE158465.054	SE158465.055
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	0.09	0.08

			Duplicate D6
			SOIL
			-
			20/10/2016
PARAMETER	UOM	LOR	SE158465.056
Mercury	mg/kg	0.05	<0.05

Moisture Content [AN002] Tested: 27/10/2016

			BH1 0.15-0.45	BH2 0.15-0.45	BH3 0.13-0.43	BH4 0.15-0.25	BH4 0.25-0.35
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.001	SE158465.002	SE158465.003	SE158465.004	SE158465.005
% Moisture	%w/w	0.5	18	14	14	9.4	8.9

			BH4 0.35-0.65	BH4 1.0-1.3	BH4 1.5-1.8	BH4 2.0-2.3	BH5 0.15-0.45
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.006	SE158465.007	SE158465.008	SE158465.009	SE158465.010
% Moisture	%w/w	0.5	12	19	15	11	15

			BH5 1.0-1.3	BH5 1.5-1.8	BH6 0.15-0.25	BH6 0.25-0.4	BH6 0.4-0.7
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.011	SE158465.012	SE158465.013	SE158465.014	SE158465.015
% Moisture	%w/w	0.5	16	10	2.3	6.4	13

			BH6 1.0-1.3	BH6 1.5-1.8	BH7 0.15-0.25	BH7 0.25-0.35	BH7 0.35-0.65
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.016	SE158465.017	SE158465.018	SE158465.019	SE158465.020
% Moisture	%w/w	0.5	19	17	3.9	6.8	15

			BH7 1.4-1.7	BH8 0.15-0.25	BH8 0.25-0.5	BH8 0.5-0.8	BH8 0.9-1.2
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.021	SE158465.022	SE158465.023	SE158465.024	SE158465.025
% Moisture	%w/w	0.5	10	4.1	11	12	9.9

			BH9 0.15-0.25	BH9 0.25-0.5	BH9 0.5-0.8	BH9 1.0-1.3	BH9 1.5-1.8
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.026	SE158465.027	SE158465.028	SE158465.029	SE158465.030
% Moisture	%w/w	0.5	2.3	11	19	17	17

			BH9 2.0-2.3	BH9 2.5-2.7	BH10 0.15-0.45	BH10 0.5-0.8	BH10 1.0-1.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016	20/10/2016	20/10/2016	20/10/2016	20/10/2016
PARAMETER	UOM	LOR	SE158465.031	SE158465.032	SE158465.033	SE158465.034	SE158465.035
% Moisture	%w/w	0.5	13	18	5.4	17	16

Moisture Content [AN002] Tested: 27/10/2016 (continued)

PARAMETER	UOM	LOR	BH10 1.5-1.8	BH10 2.0-2.3	BH10 2.7-3.0	BH11 0.15-0.25	BH11 0.25-0.55
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016 SE158465.036	20/10/2016 SE158465.037	20/10/2016 SE158465.038	20/10/2016 SE158465.039	20/10/2016 SE158465.040
% Moisture	%w/w	0.5	17	13	37	3.5	6.3

PARAMETER	UOM	LOR	BH11 0.8-1.1	BH11 1.2-1.5	BH11 1.7-2.2	BH11 2.5-2.8	BH12 0.15-0.45
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016 SE158465.041	20/10/2016 SE158465.042	20/10/2016 SE158465.043	20/10/2016 SE158465.044	20/10/2016 SE158465.045
% Moisture	%w/w	0.5	17	16	20	28	11

PARAMETER	UOM	LOR	BH12 1.0-1.3	BH13 0-0.15	BH13 0.2-0.5	BH13 1.0-1.3	BH13 2.0-2.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016 SE158465.046	20/10/2016 SE158465.047	20/10/2016 SE158465.048	20/10/2016 SE158465.049	20/10/2016 SE158465.050
% Moisture	%w/w	0.5	7.4	7.7	9.6	5.7	9.0

PARAMETER	UOM	LOR	BH14 0-0.15	BH14 0.5-0.8	BH14 1.0-1.3	Duplicate D1	Duplicate D3
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			20/10/2016 SE158465.051	20/10/2016 SE158465.052	20/10/2016 SE158465.053	20/10/2016 SE158465.054	20/10/2016 SE158465.055
% Moisture	%w/w	0.5	8.8	12	17	19	39

PARAMETER	UOM	LOR	Duplicate D6	BH14 2.05-2.15
			SOIL	SOIL
			-	-
			20/10/2016 SE158465.056	20/10/2016 SE158465.059
% Moisture	%w/w	0.5	9.0	20

Gravimetric Determination of Asbestos in Soil [AN605] Tested: 28/10/2016

PARAMETER	UOM	LOR	BH1 0.15-0.45	BH2 0.15-0.45	BH3 0.13-0.43	BH4 0.15-0.25	BH4 0.25-0.35
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.001	20/10/2016 SE158465.002	20/10/2016 SE158465.003	20/10/2016 SE158465.004	20/10/2016 SE158465.005
Total Sample Weight	g	1	440	440	422	400	422
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	-	NAD	NAD	NAD	NAD	NAD

PARAMETER	UOM	LOR	BH4 0.35-0.65	BH4 1.0-1.3	BH4 1.5-1.8	BH4 2.0-2.3	BH5 0.15-0.45
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.006	20/10/2016 SE158465.007	20/10/2016 SE158465.008	20/10/2016 SE158465.009	20/10/2016 SE158465.010
Total Sample Weight	g	1	440	492	422	369	535
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	-	NAD	NAD	NAD	NAD	NAD

PARAMETER	UOM	LOR	BH5 1.0-1.3	BH5 1.5-1.8	BH6 0.15-0.25	BH6 0.25-0.4	BH6 0.4-0.7
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.011	20/10/2016 SE158465.012	20/10/2016 SE158465.013	20/10/2016 SE158465.014	20/10/2016 SE158465.015
Total Sample Weight	g	1	600	495	430	392	560
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	-	NAD	NAD	NAD	NAD	NAD

PARAMETER	UOM	LOR	BH6 1.0-1.3	BH6 1.5-1.8	BH7 0.15-0.25	BH7 0.25-0.35	BH7 0.35-0.65
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.016	20/10/2016 SE158465.017	20/10/2016 SE158465.018	20/10/2016 SE158465.019	20/10/2016 SE158465.020
Total Sample Weight	g	1	501	546	540	532	566
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	-	NAD	NAD	NAD	NAD	NAD

Gravimetric Determination of Asbestos in Soil [AN605] Tested: 28/10/2016 (continued)

PARAMETER	UOM	LOR	BH7 1.4-1.7	BH8 0.15-0.25	BH8 0.25-0.5	BH8 0.5-0.8	BH8 0.9-1.2
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.021	20/10/2016 SE158465.022	20/10/2016 SE158465.023	20/10/2016 SE158465.024	20/10/2016 SE158465.025
Total Sample Weight	g	1	413	577	609	532	452
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	-	NAD,ORG	NAD	NAD,ORG	NAD,ORG	NAD,ORG

PARAMETER	UOM	LOR	BH9 0.15-0.25	BH9 0.25-0.5	BH9 0.5-0.8	BH9 1.0-1.3	BH9 1.5-1.8
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.026	20/10/2016 SE158465.027	20/10/2016 SE158465.028	20/10/2016 SE158465.029	20/10/2016 SE158465.030
Total Sample Weight	g	1	450	450	374	430	499
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	-	NAD	NAD	NAD	NAD	NAD

PARAMETER	UOM	LOR	BH9 2.0-2.3	BH9 2.5-2.7	BH10 0.15-0.45	BH10 0.5-0.8	BH10 1.0-1.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.031	20/10/2016 SE158465.032	20/10/2016 SE158465.033	20/10/2016 SE158465.034	20/10/2016 SE158465.035
Total Sample Weight	g	1	460	300	506	379	465
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	-	NAD	NAD	NAD	NAD	NAD

PARAMETER	UOM	LOR	BH10 1.5-1.8	BH10 2.0-2.3	BH10 2.7-3.0	BH11 0.15-0.25	BH11 0.25-0.55
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.036	20/10/2016 SE158465.037	20/10/2016 SE158465.038	20/10/2016 SE158465.039	20/10/2016 SE158465.040
Total Sample Weight	g	1	433	406	300	609	616
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	-	NAD	NAD	NAD	NAD	NAD

Gravimetric Determination of Asbestos in Soil [AN605] Tested: 28/10/2016 (continued)

PARAMETER	UOM	LOR	BH11 0.8-1.1	BH11 1.2-1.5	BH11 1.7-2.2	BH11 2.5-2.8	BH12 0.15-0.45
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.041	20/10/2016 SE158465.042	20/10/2016 SE158465.043	20/10/2016 SE158465.044	20/10/2016 SE158465.045
Total Sample Weight	g	1	377	439	353	350	564
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	-	NAD	NAD	NAD	NAD	NAD

PARAMETER	UOM	LOR	BH12 1.0-1.3	BH13 0-0.15	BH13 0.2-0.5	BH13 1.0-1.3	BH13 2.0-2.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/10/2016 SE158465.046	20/10/2016 SE158465.047	20/10/2016 SE158465.048	20/10/2016 SE158465.049	20/10/2016 SE158465.050
Total Sample Weight	g	1	527	523	432	405	473
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	-	NAD	NAD,ORG	NAD	NAD	NAD

PARAMETER	UOM	LOR	BH14 0-0.15	BH14 0.5-0.8	BH14 1.0-1.3
			SOIL	SOIL	SOIL
			20/10/2016 SE158465.051	20/10/2016 SE158465.052	20/10/2016 SE158465.053
Total Sample Weight	g	1	389	465	501
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	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
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001
Fibre Type	No unit	-	NAD	NAD	NAD



ANALYTICAL RESULTS

SE158465 R0

VOCs in Water [AN433] Tested: 27/10/2016

			Rinsate R1
			WATER
			-
			20/10/2016
			SE158465.057
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: 27/10/2016

			Rinsate R1
			WATER
			-
			20/10/2016
			SE158465.057
PARAMETER	UOM	LOR	
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



ANALYTICAL RESULTS

SE158465 R0

TRH (Total Recoverable Hydrocarbons) in Water [AN403] Tested: 27/10/2016

			Rinsate R1
			WATER
			-
			20/10/2016
			SE158465.057
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 (F2)	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: 27/10/2016

			Rinsate R1
			WATER
			-
			20/10/2016
			SE158465.057
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



ANALYTICAL RESULTS

SE158465 R0

Metals in Water (Dissolved) by ICPOES [AN320/AN321] Tested: 28/10/2016

			Rinsate R1
			WATER
			-
			20/10/2016
			SE158465.057
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

SE158465 R0

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 27/10/2016

			Rinsate R1
			WATER
			-
			20/10/2016
			SE158465.057
PARAMETER	UOM	LOR	
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.
- AN077** Hydrogen cyanide is liberated from an acidified alkali soil extract by distillation and purging with air. The hydrogen cyanide gas is then collected by passing it through a sodium hydroxide scrubbing solution. The scrubbing solution will then be analysed for cyanide by the appropriate method.
- AN101** pH in Soil Sludge Sediment and Water: pH is measured electrometrically using a combination electrode and is calibrated against 3 buffers purchased commercially. For soils, sediments and sludges, an extract with water (or 0.01M CaCl₂) is made at a ratio of 1:5 and the pH determined and reported on the extract. Reference APHA 4500-H⁺.
- 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 Higginson, 1992, sections 15D3 and 15N1.-
- AN287** A buffered distillate or water sample is treated with chloramine/barbituric acid reagents and the intensity of the colour developed is proportional to the cyanide concentration by Aquakem DA.
- AN289** Analysis of Total Phenols in Soil Sediment and Water: Steam distillable phenols react with 4-aminoantipyrine at pH 7.9±0.1 in the presence of potassium ferricyanide to form a coloured antipyrine dye analysed by Discrete Analyser. Reference APHA 5530 B/D.
- 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/AN321** 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/AN321** 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.
- AN400** OC and OP Pesticides by GC-ECD: The determination of organochlorine (OC) and organophosphorus (OP) pesticides and polychlorinated biphenyls (PCBs) in soils, sludges and groundwater. (Based on USEPA methods 3510, 3550, 8140 and 8080.)
- AN403** Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.

AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Petroleum Hydrocarbons (TPH) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC's are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
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	AMO = Amosite Detected CRY = Chrysotile Detected CRO = Crocidolite Detected ORG = Organic Fibres Detected SMF = Synthetic Mineral Fibres Detected UMF = Unknown Mineral Fibres Detected NAD = No Asbestos Detected
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.		

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

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

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

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

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

Note that in terms of units of radioactivity:

- 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 criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : <http://www.sgs.com.au/~media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf>

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STATEMENT OF QA/QC PERFORMANCE

SE158465 R0

CLIENT DETAILS

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Project **13603-3 Liverpool**
Order Number (Not specified)
Samples 59

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SGS Reference **SE158465 R0**
Date Received 21 Oct 2016
Date Reported 02 Nov 2016

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 and was supplied by the Client.
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
	Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES	2 items
	Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES	4 items
	Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES	2 items
Matrix Spike	Mercury in Soil	1 item
	Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES	2 items
	TRH (Total Recoverable Hydrocarbons) in Soil	2 items
	TRH (Total Recoverable Hydrocarbons) in Soil	2 items

SAMPLE SUMMARY

Sample counts by matrix	57 Soil, 1 Water	Type of documentation received	COC
Date documentation received	24/10/16@3:55pm	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	7.8°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		



HOLDING TIME SUMMARY

SE158465 R0

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
BH1 0.15-0.45	SE158465.001	LB112666	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH4 0.15-0.25	SE158465.004	LB112666	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH4 0.25-0.35	SE158465.005	LB112666	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH4 1.0-1.3	SE158465.007	LB112666	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH5 0.15-0.45	SE158465.010	LB112666	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH7 0.15-0.25	SE158465.018	LB112666	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH7 0.25-0.35	SE158465.019	LB112666	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH7 1.4-1.7	SE158465.021	LB112666	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH8 0.15-0.25	SE158465.022	LB112666	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH9 0.25-0.5	SE158465.027	LB112666	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH9 1.0-1.3	SE158465.029	LB112666	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH10 2.0-2.3	SE158465.037	LB112666	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH10 2.7-3.0	SE158465.038	LB112666	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH11 0.15-0.25	SE158465.039	LB112666	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH12 0.15-0.45	SE158465.045	LB112666	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH13 1.0-1.3	SE158465.049	LB112666	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH14 0.5-0.8	SE158465.052	LB112666	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016

Gravimetric Determination of Asbestos in Soil

Method: ME-(AU)-ENVJAN605

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.15-0.45	SE158465.001	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH2 0.15-0.45	SE158465.002	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH3 0.13-0.43	SE158465.003	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH4 0.15-0.25	SE158465.004	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH4 0.25-0.35	SE158465.005	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH4 0.35-0.65	SE158465.006	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH4 1.0-1.3	SE158465.007	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH4 1.5-1.8	SE158465.008	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH4 2.0-2.3	SE158465.009	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH5 0.15-0.45	SE158465.010	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH5 1.0-1.3	SE158465.011	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH5 1.5-1.8	SE158465.012	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH6 0.15-0.25	SE158465.013	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH6 0.25-0.4	SE158465.014	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH6 0.4-0.7	SE158465.015	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH6 1.0-1.3	SE158465.016	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH6 1.5-1.8	SE158465.017	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH7 0.15-0.25	SE158465.018	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH7 0.25-0.35	SE158465.019	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH7 0.35-0.65	SE158465.020	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH7 1.4-1.7	SE158465.021	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH8 0.15-0.25	SE158465.022	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH8 0.25-0.5	SE158465.023	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH8 0.5-0.8	SE158465.024	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH8 0.9-1.2	SE158465.025	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH9 0.15-0.25	SE158465.026	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH9 0.25-0.5	SE158465.027	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH9 0.5-0.8	SE158465.028	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH9 1.0-1.3	SE158465.029	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH9 1.5-1.8	SE158465.030	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH9 2.0-2.3	SE158465.031	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH9 2.5-2.7	SE158465.032	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH10 0.15-0.45	SE158465.033	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH10 0.5-0.8	SE158465.034	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH10 1.0-1.3	SE158465.035	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH10 1.5-1.8	SE158465.036	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH10 2.0-2.3	SE158465.037	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH10 2.7-3.0	SE158465.038	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH11 0.15-0.25	SE158465.039	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH11 0.25-0.55	SE158465.040	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016



HOLDING TIME SUMMARY

SE158465 R0

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)-[ENV]AN605

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH11 0.8-1.1	SE158465.041	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH11 1.2-1.5	SE158465.042	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH11 1.7-2.2	SE158465.043	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH11 2.5-2.8	SE158465.044	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH12 0.15-0.45	SE158465.045	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH12 1.0-1.3	SE158465.046	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH13 0-0.15	SE158465.047	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH13 0.2-0.5	SE158465.048	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH13 1.0-1.3	SE158465.049	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH13 2.0-2.3	SE158465.050	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH14 0-0.15	SE158465.051	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH14 0.5-0.8	SE158465.052	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016
BH14 1.0-1.3	SE158465.053	LB112737	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	02 Nov 2016

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
Rinsate R1	SE158465.057	LB112579	20 Oct 2016	21 Oct 2016	17 Nov 2016	27 Oct 2016	17 Nov 2016	28 Oct 2016

Mercury in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.15-0.45	SE158465.001	LB112652	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH2 0.15-0.45	SE158465.002	LB112652	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH3 0.13-0.43	SE158465.003	LB112652	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH4 0.15-0.25	SE158465.004	LB112652	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH4 0.25-0.35	SE158465.005	LB112652	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH4 0.35-0.65	SE158465.006	LB112652	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH4 1.0-1.3	SE158465.007	LB112652	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH4 1.5-1.8	SE158465.008	LB112652	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH4 2.0-2.3	SE158465.009	LB112652	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH5 0.15-0.45	SE158465.010	LB112652	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH5 1.0-1.3	SE158465.011	LB112652	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH5 1.5-1.8	SE158465.012	LB112652	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH6 0.15-0.25	SE158465.013	LB112652	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH6 0.25-0.4	SE158465.014	LB112652	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH6 0.4-0.7	SE158465.015	LB112652	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH6 1.0-1.3	SE158465.016	LB112652	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH6 1.5-1.8	SE158465.017	LB112653	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH7 0.15-0.25	SE158465.018	LB112653	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH7 0.25-0.35	SE158465.019	LB112653	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH7 0.35-0.65	SE158465.020	LB112653	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH7 1.4-1.7	SE158465.021	LB112653	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH8 0.15-0.25	SE158465.022	LB112653	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH8 0.25-0.5	SE158465.023	LB112653	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH8 0.5-0.8	SE158465.024	LB112653	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH8 0.9-1.2	SE158465.025	LB112653	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH9 0.15-0.25	SE158465.026	LB112653	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH9 0.25-0.5	SE158465.027	LB112653	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH9 0.5-0.8	SE158465.028	LB112653	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH9 1.0-1.3	SE158465.029	LB112653	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH9 1.5-1.8	SE158465.030	LB112653	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH9 2.0-2.3	SE158465.031	LB112653	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH9 2.5-2.7	SE158465.032	LB112653	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH10 0.15-0.45	SE158465.033	LB112653	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH10 0.5-0.8	SE158465.034	LB112653	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH10 1.0-1.3	SE158465.035	LB112653	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH10 1.5-1.8	SE158465.036	LB112654	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH10 2.0-2.3	SE158465.037	LB112654	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH10 2.7-3.0	SE158465.038	LB112654	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH11 0.15-0.25	SE158465.039	LB112654	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH11 0.25-0.55	SE158465.040	LB112654	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016

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
BH11 0.8-1.1	SE158465.041	LB112654	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH11 1.2-1.5	SE158465.042	LB112654	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH11 1.7-2.2	SE158465.043	LB112654	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH11 2.5-2.8	SE158465.044	LB112654	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH12 0.15-0.45	SE158465.045	LB112654	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH12 1.0-1.3	SE158465.046	LB112654	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH13 0-0.15	SE158465.047	LB112654	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH13 0.2-0.5	SE158465.048	LB112654	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH13 1.0-1.3	SE158465.049	LB112654	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH13 2.0-2.3	SE158465.050	LB112654	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH14 0-0.15	SE158465.051	LB112654	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH14 0.5-0.8	SE158465.052	LB112654	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
BH14 1.0-1.3	SE158465.053	LB112654	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
Duplicate D1	SE158465.054	LB112654	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
Duplicate D3	SE158465.055	LB112655	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016
Duplicate D6	SE158465.056	LB112655	20 Oct 2016	21 Oct 2016	17 Nov 2016	28 Oct 2016	17 Nov 2016	31 Oct 2016

Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320/AN321

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Rinsate R1	SE158465.057	LB112682	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016

Moisture Content

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.15-0.45	SE158465.001	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	28 Oct 2016
BH2 0.15-0.45	SE158465.002	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH3 0.13-0.43	SE158465.003	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH4 0.15-0.25	SE158465.004	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	28 Oct 2016
BH4 0.25-0.35	SE158465.005	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	28 Oct 2016
BH4 0.35-0.65	SE158465.006	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH4 1.0-1.3	SE158465.007	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	28 Oct 2016
BH4 1.5-1.8	SE158465.008	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH4 2.0-2.3	SE158465.009	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH5 0.15-0.45	SE158465.010	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	28 Oct 2016
BH5 1.0-1.3	SE158465.011	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH5 1.5-1.8	SE158465.012	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH6 0.15-0.25	SE158465.013	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH6 0.25-0.4	SE158465.014	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH6 0.4-0.7	SE158465.015	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH6 1.0-1.3	SE158465.016	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH6 1.5-1.8	SE158465.017	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH7 0.15-0.25	SE158465.018	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	28 Oct 2016
BH7 0.25-0.35	SE158465.019	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	28 Oct 2016
BH7 0.35-0.65	SE158465.020	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH7 1.4-1.7	SE158465.021	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	28 Oct 2016
BH8 0.15-0.25	SE158465.022	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	28 Oct 2016
BH8 0.25-0.5	SE158465.023	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH8 0.5-0.8	SE158465.024	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH8 0.9-1.2	SE158465.025	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH9 0.15-0.25	SE158465.026	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH9 0.25-0.5	SE158465.027	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	28 Oct 2016
BH9 0.5-0.8	SE158465.028	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH9 1.0-1.3	SE158465.029	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	28 Oct 2016
BH9 1.5-1.8	SE158465.030	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH9 2.0-2.3	SE158465.031	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH9 2.5-2.7	SE158465.032	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH10 0.15-0.45	SE158465.033	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH10 0.5-0.8	SE158465.034	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH10 1.0-1.3	SE158465.035	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH10 1.5-1.8	SE158465.036	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH10 2.0-2.3	SE158465.037	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	28 Oct 2016

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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)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH10 2.7-3.0	SE158465.038	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	28 Oct 2016
BH11 0.15-0.25	SE158465.039	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	28 Oct 2016
BH11 0.25-0.55	SE158465.040	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH11 0.8-1.1	SE158465.041	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH11 1.2-1.5	SE158465.042	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH11 1.7-2.2	SE158465.043	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH11 2.5-2.8	SE158465.044	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH12 0.15-0.45	SE158465.045	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	28 Oct 2016
BH12 1.0-1.3	SE158465.046	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH13 0-0.15	SE158465.047	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH13 0.2-0.5	SE158465.048	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH13 1.0-1.3	SE158465.049	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	28 Oct 2016
BH13 2.0-2.3	SE158465.050	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH14 0-0.15	SE158465.051	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH14 0.5-0.8	SE158465.052	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	28 Oct 2016
BH14 1.0-1.3	SE158465.053	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
Duplicate D1	SE158465.054	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
Duplicate D3	SE158465.055	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
Duplicate D6	SE158465.056	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016
BH14 2.05-2.15	SE158465.059	LB112570	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	01 Nov 2016	31 Oct 2016

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.15-0.45	SE158465.001	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH2 0.15-0.45	SE158465.002	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH3 0.13-0.43	SE158465.003	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH4 0.15-0.25	SE158465.004	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH4 0.25-0.35	SE158465.005	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH4 0.35-0.65	SE158465.006	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH4 1.0-1.3	SE158465.007	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH4 1.5-1.8	SE158465.008	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH4 2.0-2.3	SE158465.009	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH5 0.15-0.45	SE158465.010	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH5 1.0-1.3	SE158465.011	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH5 1.5-1.8	SE158465.012	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH6 0.15-0.25	SE158465.013	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH6 0.25-0.4	SE158465.014	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH6 0.4-0.7	SE158465.015	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH6 1.0-1.3	SE158465.016	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH6 1.5-1.8	SE158465.017	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH7 0.15-0.25	SE158465.018	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH7 0.25-0.35	SE158465.019	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH7 0.35-0.65	SE158465.020	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH8 0.15-0.25	SE158465.022	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH8 0.25-0.5	SE158465.023	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH8 0.5-0.8	SE158465.024	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH9 0.15-0.25	SE158465.026	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH9 0.25-0.5	SE158465.027	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH9 0.5-0.8	SE158465.028	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH9 1.0-1.3	SE158465.029	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH9 1.5-1.8	SE158465.030	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH9 2.0-2.3	SE158465.031	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH9 2.5-2.7	SE158465.032	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH10 0.15-0.45	SE158465.033	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH10 0.5-0.8	SE158465.034	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH10 1.0-1.3	SE158465.035	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH10 1.5-1.8	SE158465.036	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH10 2.0-2.3	SE158465.037	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH10 2.7-3.0	SE158465.038	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH11 0.15-0.25	SE158465.039	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016



HOLDING TIME SUMMARY

SE158465 R0

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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]AN400/AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH11 0.25-0.55	SE158465.040	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH11 0.8-1.1	SE158465.041	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH11 1.2-1.5	SE158465.042	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH11 1.7-2.2	SE158465.043	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH11 2.5-2.8	SE158465.044	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH12 0.15-0.45	SE158465.045	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH12 1.0-1.3	SE158465.046	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH13 0.2-0.5	SE158465.048	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH13 1.0-1.3	SE158465.049	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH13 2.0-2.3	SE158465.050	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH14 0.5-0.8	SE158465.052	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
Duplicate D1	SE158465.054	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
Duplicate D3	SE158465.055	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
Duplicate D6	SE158465.056	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH14 2.05-2.15	SE158465.059	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016

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
BH1 0.15-0.45	SE158465.001	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH2 0.15-0.45	SE158465.002	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH3 0.13-0.43	SE158465.003	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH4 0.15-0.25	SE158465.004	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH4 0.25-0.35	SE158465.005	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH4 0.35-0.65	SE158465.006	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH4 1.0-1.3	SE158465.007	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH4 1.5-1.8	SE158465.008	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH4 2.0-2.3	SE158465.009	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH5 0.15-0.45	SE158465.010	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH5 1.0-1.3	SE158465.011	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH5 1.5-1.8	SE158465.012	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH6 0.15-0.25	SE158465.013	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH6 0.25-0.4	SE158465.014	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH6 0.4-0.7	SE158465.015	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH6 1.0-1.3	SE158465.016	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH6 1.5-1.8	SE158465.017	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH7 0.15-0.25	SE158465.018	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH7 0.25-0.35	SE158465.019	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH7 0.35-0.65	SE158465.020	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH8 0.15-0.25	SE158465.022	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH8 0.25-0.5	SE158465.023	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH8 0.5-0.8	SE158465.024	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH9 0.15-0.25	SE158465.026	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH9 0.25-0.5	SE158465.027	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH9 0.5-0.8	SE158465.028	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH9 1.0-1.3	SE158465.029	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH9 1.5-1.8	SE158465.030	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH9 2.0-2.3	SE158465.031	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH9 2.5-2.7	SE158465.032	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH10 0.15-0.45	SE158465.033	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH10 0.5-0.8	SE158465.034	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH10 1.0-1.3	SE158465.035	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH10 1.5-1.8	SE158465.036	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH10 2.0-2.3	SE158465.037	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH10 2.7-3.0	SE158465.038	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH11 0.15-0.25	SE158465.039	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH11 0.25-0.55	SE158465.040	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH11 0.8-1.1	SE158465.041	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH11 1.2-1.5	SE158465.042	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH11 1.7-2.2	SE158465.043	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH11 2.5-2.8	SE158465.044	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016

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]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH12 0.15-0.45	SE158465.045	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH12 1.0-1.3	SE158465.046	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH13 0.2-0.5	SE158465.048	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH13 1.0-1.3	SE158465.049	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH13 2.0-2.3	SE158465.050	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH14 0.5-0.8	SE158465.052	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
Duplicate D1	SE158465.054	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
Duplicate D3	SE158465.055	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
Duplicate D6	SE158465.056	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH14 2.05-2.15	SE158465.059	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016

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
Rinsate R1	SE158465.057	LB112591	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	06 Dec 2016	28 Oct 2016

PCBs in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.15-0.45	SE158465.001	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH2 0.15-0.45	SE158465.002	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH3 0.13-0.43	SE158465.003	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH4 0.15-0.25	SE158465.004	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH4 0.25-0.35	SE158465.005	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH4 0.35-0.65	SE158465.006	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH4 1.0-1.3	SE158465.007	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH4 1.5-1.8	SE158465.008	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH4 2.0-2.3	SE158465.009	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH5 0.15-0.45	SE158465.010	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH5 1.0-1.3	SE158465.011	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH5 1.5-1.8	SE158465.012	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH6 0.15-0.25	SE158465.013	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH6 0.25-0.4	SE158465.014	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH6 0.4-0.7	SE158465.015	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH6 1.0-1.3	SE158465.016	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH6 1.5-1.8	SE158465.017	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH7 0.15-0.25	SE158465.018	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH7 0.25-0.35	SE158465.019	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH7 0.35-0.65	SE158465.020	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH8 0.15-0.25	SE158465.022	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH8 0.25-0.5	SE158465.023	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH8 0.5-0.8	SE158465.024	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH9 0.15-0.25	SE158465.026	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH9 0.25-0.5	SE158465.027	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH9 0.5-0.8	SE158465.028	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH9 1.0-1.3	SE158465.029	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH9 1.5-1.8	SE158465.030	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH9 2.0-2.3	SE158465.031	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH9 2.5-2.7	SE158465.032	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH10 0.15-0.45	SE158465.033	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH10 0.5-0.8	SE158465.034	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH10 1.0-1.3	SE158465.035	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH10 1.5-1.8	SE158465.036	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH10 2.0-2.3	SE158465.037	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH10 2.7-3.0	SE158465.038	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH11 0.15-0.25	SE158465.039	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH11 0.25-0.55	SE158465.040	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH11 0.8-1.1	SE158465.041	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH11 1.2-1.5	SE158465.042	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH11 1.7-2.2	SE158465.043	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH11 2.5-2.8	SE158465.044	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH12 0.15-0.45	SE158465.045	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016

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]AN400/AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH12 1.0-1.3	SE158465.046	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH13 0.2-0.5	SE158465.048	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH13 1.0-1.3	SE158465.049	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH13 2.0-2.3	SE158465.050	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH14 0.5-0.8	SE158465.052	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
Duplicate D1	SE158465.054	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
Duplicate D3	SE158465.055	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
Duplicate D6	SE158465.056	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016
BH14 2.05-2.15	SE158465.059	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016

pH in soil (1:5)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.15-0.45	SE158465.001	LB112549	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	28 Oct 2016	28 Oct 2016
BH4 0.15-0.25	SE158465.004	LB112549	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	28 Oct 2016	28 Oct 2016
BH4 0.25-0.35	SE158465.005	LB112549	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	28 Oct 2016	28 Oct 2016
BH4 1.0-1.3	SE158465.007	LB112549	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	28 Oct 2016	28 Oct 2016
BH5 0.15-0.45	SE158465.010	LB112549	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	28 Oct 2016	28 Oct 2016
BH7 0.15-0.25	SE158465.018	LB112549	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	28 Oct 2016	28 Oct 2016
BH7 0.25-0.35	SE158465.019	LB112549	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	28 Oct 2016	28 Oct 2016
BH7 1.4-1.7	SE158465.021	LB112558	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	28 Oct 2016	28 Oct 2016
BH8 0.15-0.25	SE158465.022	LB112558	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	28 Oct 2016	28 Oct 2016
BH9 0.25-0.5	SE158465.027	LB112558	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	28 Oct 2016	28 Oct 2016
BH9 1.0-1.3	SE158465.029	LB112558	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	28 Oct 2016	28 Oct 2016
BH10 2.0-2.3	SE158465.037	LB112558	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	28 Oct 2016	28 Oct 2016
BH10 2.7-3.0	SE158465.038	LB112558	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	28 Oct 2016	28 Oct 2016
BH11 0.15-0.25	SE158465.039	LB112558	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	28 Oct 2016	28 Oct 2016
BH12 0.15-0.45	SE158465.045	LB112558	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	28 Oct 2016	28 Oct 2016
BH13 1.0-1.3	SE158465.049	LB112558	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	28 Oct 2016	28 Oct 2016
BH14 0.5-0.8	SE158465.052	LB112558	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	28 Oct 2016	28 Oct 2016

Total Cyanide in soil by Discrete Analyser (AquaChem)

Method: ME-(AU)-[ENV]AN077/AN287

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.15-0.45	SE158465.001	LB112619	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	03 Nov 2016	28 Oct 2016
BH2 0.15-0.45	SE158465.002	LB112619	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	03 Nov 2016	31 Oct 2016
BH3 0.13-0.43	SE158465.003	LB112619	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	03 Nov 2016	31 Oct 2016
BH4 0.15-0.25	SE158465.004	LB112619	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	03 Nov 2016	28 Oct 2016
BH4 0.25-0.35	SE158465.005	LB112619	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	03 Nov 2016	28 Oct 2016
BH4 1.0-1.3	SE158465.007	LB112619	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	03 Nov 2016	28 Oct 2016
BH5 0.15-0.45	SE158465.010	LB112619	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	03 Nov 2016	28 Oct 2016
BH6 0.15-0.25	SE158465.013	LB112619	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	03 Nov 2016	31 Oct 2016
BH6 1.0-1.3	SE158465.016	LB112619	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	03 Nov 2016	31 Oct 2016
BH7 0.15-0.25	SE158465.018	LB112619	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	03 Nov 2016	28 Oct 2016
BH7 0.25-0.35	SE158465.019	LB112619	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	03 Nov 2016	28 Oct 2016
BH7 0.35-0.65	SE158465.020	LB112619	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	03 Nov 2016	31 Oct 2016
BH8 0.15-0.25	SE158465.022	LB112619	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	03 Nov 2016	28 Oct 2016
BH8 0.5-0.8	SE158465.024	LB112619	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	03 Nov 2016	31 Oct 2016
BH9 0.15-0.25	SE158465.026	LB112619	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	03 Nov 2016	31 Oct 2016
BH9 0.25-0.5	SE158465.027	LB112619	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	03 Nov 2016	28 Oct 2016
BH9 1.0-1.3	SE158465.029	LB112679	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	28 Oct 2016
BH9 2.5-2.7	SE158465.032	LB112679	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016
BH10 0.15-0.45	SE158465.033	LB112679	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016
BH10 0.5-0.8	SE158465.034	LB112679	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016
BH10 2.7-3.0	SE158465.038	LB112679	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	28 Oct 2016
BH11 0.15-0.25	SE158465.039	LB112679	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	28 Oct 2016
BH11 1.2-1.5	SE158465.042	LB112679	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016
BH11 2.5-2.8	SE158465.044	LB112679	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016
BH12 0.15-0.45	SE158465.045	LB112679	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	28 Oct 2016
BH13 0.2-0.5	SE158465.048	LB112679	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016
BH13 2.0-2.3	SE158465.050	LB112679	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016
BH14 0.5-0.8	SE158465.052	LB112722	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016
Duplicate D1	SE158465.054	LB112722	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016



HOLDING TIME SUMMARY

SE158465 R0

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 Cyanide in soil by Discrete Analyser (Aquakem) (continued)

Method: ME-(AU)-[ENV]AN077/AN287

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Duplicate D6	SE158465.056	LB112722	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016

Total Phenolics in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.15-0.45	SE158465.001	LB112681	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	28 Oct 2016
BH2 0.15-0.45	SE158465.002	LB112681	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016
BH3 0.13-0.43	SE158465.003	LB112681	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016
BH4 0.15-0.25	SE158465.004	LB112681	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	28 Oct 2016
BH4 0.25-0.35	SE158465.005	LB112681	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	28 Oct 2016
BH4 1.0-1.3	SE158465.007	LB112681	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	28 Oct 2016
BH5 0.15-0.45	SE158465.010	LB112681	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	28 Oct 2016
BH6 0.15-0.25	SE158465.013	LB112681	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016
BH6 1.0-1.3	SE158465.016	LB112681	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016
BH7 0.15-0.25	SE158465.018	LB112681	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	28 Oct 2016
BH7 0.25-0.35	SE158465.019	LB112681	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	28 Oct 2016
BH7 0.35-0.65	SE158465.020	LB112681	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016
BH8 0.15-0.25	SE158465.022	LB112681	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	28 Oct 2016
BH8 0.5-0.8	SE158465.024	LB112681	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016
BH9 0.15-0.25	SE158465.026	LB112681	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016
BH9 0.25-0.5	SE158465.027	LB112723	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016
BH9 1.0-1.3	SE158465.029	LB112723	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016
BH9 2.5-2.7	SE158465.032	LB112723	20 Oct 2016	21 Oct 2016	03 Nov 2016	28 Oct 2016	03 Nov 2016	31 Oct 2016
BH10 0.15-0.45	SE158465.033	LB112876	20 Oct 2016	21 Oct 2016	03 Nov 2016	01 Nov 2016	03 Nov 2016	01 Nov 2016
BH10 0.5-0.8	SE158465.034	LB112876	20 Oct 2016	21 Oct 2016	03 Nov 2016	01 Nov 2016	03 Nov 2016	01 Nov 2016
BH10 2.7-3.0	SE158465.038	LB112876	20 Oct 2016	21 Oct 2016	03 Nov 2016	01 Nov 2016	03 Nov 2016	01 Nov 2016
BH11 0.15-0.25	SE158465.039	LB112876	20 Oct 2016	21 Oct 2016	03 Nov 2016	01 Nov 2016	03 Nov 2016	01 Nov 2016
BH11 1.2-1.5	SE158465.042	LB112876	20 Oct 2016	21 Oct 2016	03 Nov 2016	01 Nov 2016	03 Nov 2016	01 Nov 2016
BH11 2.5-2.8	SE158465.044	LB112876	20 Oct 2016	21 Oct 2016	03 Nov 2016	01 Nov 2016	03 Nov 2016	01 Nov 2016
BH12 0.15-0.45	SE158465.045	LB112924	20 Oct 2016	21 Oct 2016	03 Nov 2016	01 Nov 2016	03 Nov 2016	02 Nov 2016
BH13 0.2-0.5	SE158465.048	LB112924	20 Oct 2016	21 Oct 2016	03 Nov 2016	01 Nov 2016	03 Nov 2016	02 Nov 2016
BH13 2.0-2.3	SE158465.050	LB112924	20 Oct 2016	21 Oct 2016	03 Nov 2016	01 Nov 2016	03 Nov 2016	02 Nov 2016
BH14 0.5-0.8	SE158465.052	LB112924	20 Oct 2016	21 Oct 2016	03 Nov 2016	01 Nov 2016	03 Nov 2016	02 Nov 2016
Duplicate D1	SE158465.054	LB112924	20 Oct 2016	21 Oct 2016	03 Nov 2016	01 Nov 2016	03 Nov 2016	02 Nov 2016
Duplicate D6	SE158465.056	LB112924	20 Oct 2016	21 Oct 2016	03 Nov 2016	01 Nov 2016	03 Nov 2016	02 Nov 2016

Total Recoverable Metals 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
BH1 0.15-0.45	SE158465.001	LB112698	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH2 0.15-0.45	SE158465.002	LB112698	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH3 0.13-0.43	SE158465.003	LB112698	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH4 0.15-0.25	SE158465.004	LB112698	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH4 0.25-0.35	SE158465.005	LB112698	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH4 0.35-0.65	SE158465.006	LB112698	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH4 1.0-1.3	SE158465.007	LB112698	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH4 1.5-1.8	SE158465.008	LB112699	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH4 2.0-2.3	SE158465.009	LB112699	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH5 0.15-0.45	SE158465.010	LB112699	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH5 1.0-1.3	SE158465.011	LB112699	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH5 1.5-1.8	SE158465.012	LB112699	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH6 0.15-0.25	SE158465.013	LB112699	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH6 0.25-0.4	SE158465.014	LB112699	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH6 0.4-0.7	SE158465.015	LB112699	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH6 1.0-1.3	SE158465.016	LB112699	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH6 1.5-1.8	SE158465.017	LB112699	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH7 0.15-0.25	SE158465.018	LB112699	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH7 0.25-0.35	SE158465.019	LB112699	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH7 0.35-0.65	SE158465.020	LB112699	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH7 1.4-1.7	SE158465.021	LB112699	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH8 0.15-0.25	SE158465.022	LB112699	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH8 0.25-0.5	SE158465.023	LB112699	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH8 0.5-0.8	SE158465.024	LB112699	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016

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 Metals 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
BH8 0.9-1.2	SE158465.025	LB112699	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH9 0.15-0.25	SE158465.026	LB112699	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH9 0.25-0.5	SE158465.027	LB112700	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH9 0.5-0.8	SE158465.028	LB112700	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH9 1.0-1.3	SE158465.029	LB112700	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH9 1.5-1.8	SE158465.030	LB112700	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH9 2.0-2.3	SE158465.031	LB112700	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH9 2.5-2.7	SE158465.032	LB112700	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH10 0.15-0.45	SE158465.033	LB112700	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH10 0.5-0.8	SE158465.034	LB112700	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH10 1.0-1.3	SE158465.035	LB112700	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH10 1.5-1.8	SE158465.036	LB112700	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH10 2.0-2.3	SE158465.037	LB112700	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH10 2.7-3.0	SE158465.038	LB112700	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH11 0.15-0.25	SE158465.039	LB112700	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH11 0.25-0.55	SE158465.040	LB112700	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH11 0.8-1.1	SE158465.041	LB112700	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH11 1.2-1.5	SE158465.042	LB112700	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH11 1.7-2.2	SE158465.043	LB112700	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH11 2.5-2.8	SE158465.044	LB112700	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH12 0.15-0.45	SE158465.045	LB112700	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH12 1.0-1.3	SE158465.046	LB112701	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH13 0-0.15	SE158465.047	LB112701	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH13 0.2-0.5	SE158465.048	LB112701	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH13 1.0-1.3	SE158465.049	LB112701	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH13 2.0-2.3	SE158465.050	LB112701	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH14 0-0.15	SE158465.051	LB112701	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH14 0.5-0.8	SE158465.052	LB112701	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
BH14 1.0-1.3	SE158465.053	LB112701	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
Duplicate D1	SE158465.054	LB112701	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
Duplicate D3	SE158465.055	LB112701	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016
Duplicate D6	SE158465.056	LB112701	20 Oct 2016	21 Oct 2016	18 Apr 2017	28 Oct 2016	18 Apr 2017	31 Oct 2016

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
BH1 0.15-0.45	SE158465.001	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH2 0.15-0.45	SE158465.002	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH3 0.13-0.43	SE158465.003	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH4 0.15-0.25	SE158465.004	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH4 0.25-0.35	SE158465.005	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH4 0.35-0.65	SE158465.006	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH4 1.0-1.3	SE158465.007	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH4 1.5-1.8	SE158465.008	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH4 2.0-2.3	SE158465.009	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH5 0.15-0.45	SE158465.010	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH5 1.0-1.3	SE158465.011	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH5 1.5-1.8	SE158465.012	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH6 0.15-0.25	SE158465.013	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH6 0.25-0.4	SE158465.014	LB112541	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH6 0.4-0.7	SE158465.015	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH6 1.0-1.3	SE158465.016	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH6 1.5-1.8	SE158465.017	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH7 0.15-0.25	SE158465.018	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH7 0.25-0.35	SE158465.019	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH7 0.35-0.65	SE158465.020	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH8 0.15-0.25	SE158465.022	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH8 0.25-0.5	SE158465.023	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH8 0.5-0.8	SE158465.024	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH9 0.15-0.25	SE158465.026	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH9 0.25-0.5	SE158465.027	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016

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
BH9 0.5-0.8	SE158465.028	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH9 1.0-1.3	SE158465.029	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH9 1.5-1.8	SE158465.030	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH9 2.0-2.3	SE158465.031	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH9 2.5-2.7	SE158465.032	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH10 0.15-0.45	SE158465.033	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH10 0.5-0.8	SE158465.034	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH10 1.0-1.3	SE158465.035	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH10 1.5-1.8	SE158465.036	LB112542	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH10 2.0-2.3	SE158465.037	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH10 2.7-3.0	SE158465.038	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH11 0.15-0.25	SE158465.039	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH11 0.25-0.55	SE158465.040	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH11 0.8-1.1	SE158465.041	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH11 1.2-1.5	SE158465.042	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH11 1.7-2.2	SE158465.043	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH11 2.5-2.8	SE158465.044	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH12 0.15-0.45	SE158465.045	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH12 1.0-1.3	SE158465.046	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH13 0.2-0.5	SE158465.048	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH13 1.0-1.3	SE158465.049	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH13 2.0-2.3	SE158465.050	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH14 0.5-0.8	SE158465.052	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
Duplicate D1	SE158465.054	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
Duplicate D3	SE158465.055	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
Duplicate D6	SE158465.056	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016
BH14 2.05-2.15	SE158465.059	LB112544	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	01 Nov 2016

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-ENVJAN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Rinsate R1	SE158465.057	LB112591	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	06 Dec 2016	28 Oct 2016

VOC's in Soil

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.15-0.45	SE158465.001	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH2 0.15-0.45	SE158465.002	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH3 0.13-0.43	SE158465.003	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH4 0.15-0.25	SE158465.004	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH4 0.25-0.35	SE158465.005	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH4 1.0-1.3	SE158465.007	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH5 0.15-0.45	SE158465.010	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH6 0.15-0.25	SE158465.013	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH6 0.25-0.4	SE158465.014	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH6 1.0-1.3	SE158465.016	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH7 0.15-0.25	SE158465.018	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH7 0.25-0.35	SE158465.019	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH7 0.35-0.65	SE158465.020	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH8 0.15-0.25	SE158465.022	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH8 0.5-0.8	SE158465.024	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH9 0.15-0.25	SE158465.026	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH9 0.25-0.5	SE158465.027	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH9 1.0-1.3	SE158465.029	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH9 2.0-2.3	SE158465.031	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH9 2.5-2.7	SE158465.032	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH10 0.15-0.45	SE158465.033	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH10 0.5-0.8	SE158465.034	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH10 1.5-1.8	SE158465.036	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH10 2.7-3.0	SE158465.038	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH11 0.15-0.25	SE158465.039	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH11 1.2-1.5	SE158465.042	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016

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)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH11 2.5-2.8	SE158465.044	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH12 0.15-0.45	SE158465.045	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH13 0.2-0.5	SE158465.048	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH13 2.0-2.3	SE158465.050	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH14 0.5-0.8	SE158465.052	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
Duplicate D1	SE158465.054	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
Duplicate D6	SE158465.056	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
Trip Spike TS1	SE158465.058	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016

VOCs in Water

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Rinsate R1	SE158465.057	LB112521	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	06 Dec 2016	28 Oct 2016

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.15-0.45	SE158465.001	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH2 0.15-0.45	SE158465.002	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH3 0.13-0.43	SE158465.003	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH4 0.15-0.25	SE158465.004	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH4 0.25-0.35	SE158465.005	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH4 1.0-1.3	SE158465.007	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH5 0.15-0.45	SE158465.010	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH6 0.15-0.25	SE158465.013	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH6 0.25-0.4	SE158465.014	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH6 1.0-1.3	SE158465.016	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH7 0.15-0.25	SE158465.018	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH7 0.25-0.35	SE158465.019	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH7 0.35-0.65	SE158465.020	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH8 0.15-0.25	SE158465.022	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH8 0.5-0.8	SE158465.024	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH9 0.15-0.25	SE158465.026	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH9 0.25-0.5	SE158465.027	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH9 1.0-1.3	SE158465.029	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH9 2.0-2.3	SE158465.031	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH9 2.5-2.7	SE158465.032	LB112524	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH10 0.15-0.45	SE158465.033	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH10 0.5-0.8	SE158465.034	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH10 1.5-1.8	SE158465.036	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH10 2.7-3.0	SE158465.038	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH11 0.15-0.25	SE158465.039	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH11 1.2-1.5	SE158465.042	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH11 2.5-2.8	SE158465.044	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH12 0.15-0.45	SE158465.045	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH13 0.2-0.5	SE158465.048	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH13 2.0-2.3	SE158465.050	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
BH14 0.5-0.8	SE158465.052	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
Duplicate D1	SE158465.054	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
Duplicate D6	SE158465.056	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	31 Oct 2016
Trip Spike TS1	SE158465.058	LB112529	20 Oct 2016	21 Oct 2016	03 Nov 2016	27 Oct 2016	06 Dec 2016	02 Nov 2016

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Rinsate R1	SE158465.057	LB112521	20 Oct 2016	21 Oct 2016	27 Oct 2016	27 Oct 2016	06 Dec 2016	28 Oct 2016

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]AN400/AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH1 0.15-0.45	SE158465.001	%	60 - 130%	85
	BH2 0.15-0.45	SE158465.002	%	60 - 130%	79
	BH3 0.13-0.43	SE158465.003	%	60 - 130%	77
	BH4 0.15-0.25	SE158465.004	%	60 - 130%	80
	BH4 0.25-0.35	SE158465.005	%	60 - 130%	79
	BH4 1.0-1.3	SE158465.007	%	60 - 130%	80
	BH5 0.15-0.45	SE158465.010	%	60 - 130%	76
	BH6 0.15-0.25	SE158465.013	%	60 - 130%	79
	BH6 0.25-0.4	SE158465.014	%	60 - 130%	81
	BH6 1.0-1.3	SE158465.016	%	60 - 130%	97
	BH7 0.15-0.25	SE158465.018	%	60 - 130%	94
	BH7 0.25-0.35	SE158465.019	%	60 - 130%	90
	BH7 0.35-0.65	SE158465.020	%	60 - 130%	93
	BH8 0.15-0.25	SE158465.022	%	60 - 130%	91
	BH8 0.5-0.8	SE158465.024	%	60 - 130%	90
	BH9 0.15-0.25	SE158465.026	%	60 - 130%	92
	BH9 0.25-0.5	SE158465.027	%	60 - 130%	91
	BH9 1.0-1.3	SE158465.029	%	60 - 130%	92
	BH9 2.0-2.3	SE158465.031	%	60 - 130%	93
	BH9 2.5-2.7	SE158465.032	%	60 - 130%	92
	BH10 0.15-0.45	SE158465.033	%	60 - 130%	87
	BH10 0.5-0.8	SE158465.034	%	60 - 130%	91
	BH10 1.5-1.8	SE158465.036	%	60 - 130%	92
	BH10 2.7-3.0	SE158465.038	%	60 - 130%	83
	BH11 0.15-0.25	SE158465.039	%	60 - 130%	75
	BH11 1.2-1.5	SE158465.042	%	60 - 130%	75
	BH11 2.5-2.8	SE158465.044	%	60 - 130%	105
	BH12 0.15-0.45	SE158465.045	%	60 - 130%	73
	BH13 0.2-0.5	SE158465.048	%	60 - 130%	75
	BH13 2.0-2.3	SE158465.050	%	60 - 130%	75
	BH14 0.5-0.8	SE158465.052	%	60 - 130%	77
	Duplicate D1	SE158465.054	%	60 - 130%	73
	Duplicate D6	SE158465.056	%	60 - 130%	73

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH1 0.15-0.45	SE158465.001	%	70 - 130%	80
	BH2 0.15-0.45	SE158465.002	%	70 - 130%	84
	BH3 0.13-0.43	SE158465.003	%	70 - 130%	80
	BH4 0.15-0.25	SE158465.004	%	70 - 130%	80
	BH4 0.25-0.35	SE158465.005	%	70 - 130%	80
	BH4 0.35-0.65	SE158465.006	%	70 - 130%	82
	BH4 1.0-1.3	SE158465.007	%	70 - 130%	80
	BH4 1.5-1.8	SE158465.008	%	70 - 130%	82
	BH4 2.0-2.3	SE158465.009	%	70 - 130%	78
	BH5 0.15-0.45	SE158465.010	%	70 - 130%	88
	BH5 1.0-1.3	SE158465.011	%	70 - 130%	78
	BH5 1.5-1.8	SE158465.012	%	70 - 130%	82
	BH6 0.15-0.25	SE158465.013	%	70 - 130%	82
	BH6 0.25-0.4	SE158465.014	%	70 - 130%	80
	BH6 0.4-0.7	SE158465.015	%	70 - 130%	80
	BH6 1.0-1.3	SE158465.016	%	70 - 130%	84
	BH6 1.5-1.8	SE158465.017	%	70 - 130%	82
	BH7 0.15-0.25	SE158465.018	%	70 - 130%	86
	BH7 0.25-0.35	SE158465.019	%	70 - 130%	88
	BH7 0.35-0.65	SE158465.020	%	70 - 130%	86
	BH8 0.15-0.25	SE158465.022	%	70 - 130%	80
	BH8 0.25-0.5	SE158465.023	%	70 - 130%	84
	BH8 0.5-0.8	SE158465.024	%	70 - 130%	84
	BH9 0.15-0.25	SE158465.026	%	70 - 130%	82
	BH9 0.25-0.5	SE158465.027	%	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 %
2-fluorobiphenyl (Surrogate)	BH9 0.5-0.8	SE158465.028	%	70 - 130%	86
	BH9 1.0-1.3	SE158465.029	%	70 - 130%	86
	BH9 1.5-1.8	SE158465.030	%	70 - 130%	84
	BH9 2.0-2.3	SE158465.031	%	70 - 130%	82
	BH9 2.5-2.7	SE158465.032	%	70 - 130%	86
	BH10 0.15-0.45	SE158465.033	%	70 - 130%	92
	BH10 0.5-0.8	SE158465.034	%	70 - 130%	86
	BH10 1.0-1.3	SE158465.035	%	70 - 130%	82
	BH10 1.5-1.8	SE158465.036	%	70 - 130%	84
	BH10 2.0-2.3	SE158465.037	%	70 - 130%	72
	BH10 2.7-3.0	SE158465.038	%	70 - 130%	84
	BH11 0.15-0.25	SE158465.039	%	70 - 130%	86
	BH11 0.25-0.55	SE158465.040	%	70 - 130%	82
	BH11 0.8-1.1	SE158465.041	%	70 - 130%	88
	BH11 1.2-1.5	SE158465.042	%	70 - 130%	80
	BH11 1.7-2.2	SE158465.043	%	70 - 130%	80
	BH11 2.5-2.8	SE158465.044	%	70 - 130%	82
	BH12 0.15-0.45	SE158465.045	%	70 - 130%	80
	BH12 1.0-1.3	SE158465.046	%	70 - 130%	82
	BH13 0.2-0.5	SE158465.048	%	70 - 130%	82
	BH13 1.0-1.3	SE158465.049	%	70 - 130%	84
	BH13 2.0-2.3	SE158465.050	%	70 - 130%	76
	BH14 0.5-0.8	SE158465.052	%	70 - 130%	82
	Duplicate D1	SE158465.054	%	70 - 130%	82
	Duplicate D3	SE158465.055	%	70 - 130%	80
	Duplicate D6	SE158465.056	%	70 - 130%	84
	BH14 2.05-2.15	SE158465.059	%	70 - 130%	90
d14-p-terphenyl (Surrogate)	BH1 0.15-0.45	SE158465.001	%	70 - 130%	94
	BH2 0.15-0.45	SE158465.002	%	70 - 130%	102
	BH3 0.13-0.43	SE158465.003	%	70 - 130%	94
	BH4 0.15-0.25	SE158465.004	%	70 - 130%	100
	BH4 0.25-0.35	SE158465.005	%	70 - 130%	98
	BH4 0.35-0.65	SE158465.006	%	70 - 130%	100
	BH4 1.0-1.3	SE158465.007	%	70 - 130%	98
	BH4 1.5-1.8	SE158465.008	%	70 - 130%	98
	BH4 2.0-2.3	SE158465.009	%	70 - 130%	92
	BH5 0.15-0.45	SE158465.010	%	70 - 130%	106
	BH5 1.0-1.3	SE158465.011	%	70 - 130%	94
	BH5 1.5-1.8	SE158465.012	%	70 - 130%	98
	BH6 0.15-0.25	SE158465.013	%	70 - 130%	96
	BH6 0.25-0.4	SE158465.014	%	70 - 130%	104
	BH6 0.4-0.7	SE158465.015	%	70 - 130%	96
	BH6 1.0-1.3	SE158465.016	%	70 - 130%	98
	BH6 1.5-1.8	SE158465.017	%	70 - 130%	94
	BH7 0.15-0.25	SE158465.018	%	70 - 130%	96
	BH7 0.25-0.35	SE158465.019	%	70 - 130%	92
	BH7 0.35-0.65	SE158465.020	%	70 - 130%	98
	BH8 0.15-0.25	SE158465.022	%	70 - 130%	96
	BH8 0.25-0.5	SE158465.023	%	70 - 130%	92
	BH8 0.5-0.8	SE158465.024	%	70 - 130%	96
	BH9 0.15-0.25	SE158465.026	%	70 - 130%	94
	BH9 0.25-0.5	SE158465.027	%	70 - 130%	90
	BH9 0.5-0.8	SE158465.028	%	70 - 130%	90
	BH9 1.0-1.3	SE158465.029	%	70 - 130%	104
	BH9 1.5-1.8	SE158465.030	%	70 - 130%	98
	BH9 2.0-2.3	SE158465.031	%	70 - 130%	94
	BH9 2.5-2.7	SE158465.032	%	70 - 130%	90
	BH10 0.15-0.45	SE158465.033	%	70 - 130%	90
	BH10 0.5-0.8	SE158465.034	%	70 - 130%	98
	BH10 1.0-1.3	SE158465.035	%	70 - 130%	92
	BH10 1.5-1.8	SE158465.036	%	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 %
d14-p-terphenyl (Surrogate)	BH10 2.0-2.3	SE158465.037	%	70 - 130%	76
	BH10 2.7-3.0	SE158465.038	%	70 - 130%	84
	BH11 0.15-0.25	SE158465.039	%	70 - 130%	102
	BH11 0.25-0.55	SE158465.040	%	70 - 130%	106
	BH11 0.8-1.1	SE158465.041	%	70 - 130%	98
	BH11 1.2-1.5	SE158465.042	%	70 - 130%	104
	BH11 1.7-2.2	SE158465.043	%	70 - 130%	82
	BH11 2.5-2.8	SE158465.044	%	70 - 130%	86
	BH12 0.15-0.45	SE158465.045	%	70 - 130%	92
	BH12 1.0-1.3	SE158465.046	%	70 - 130%	98
	BH13 0.2-0.5	SE158465.048	%	70 - 130%	94
	BH13 1.0-1.3	SE158465.049	%	70 - 130%	102
	BH13 2.0-2.3	SE158465.050	%	70 - 130%	76
	BH14 0.5-0.8	SE158465.052	%	70 - 130%	86
	Duplicate D1	SE158465.054	%	70 - 130%	118
	Duplicate D3	SE158465.055	%	70 - 130%	86
	Duplicate D6	SE158465.056	%	70 - 130%	98
d5-nitrobenzene (Surrogate)	BH14 2.05-2.15	SE158465.059	%	70 - 130%	106
	BH1 0.15-0.45	SE158465.001	%	70 - 130%	86
	BH2 0.15-0.45	SE158465.002	%	70 - 130%	90
	BH3 0.13-0.43	SE158465.003	%	70 - 130%	82
	BH4 0.15-0.25	SE158465.004	%	70 - 130%	88
	BH4 0.25-0.35	SE158465.005	%	70 - 130%	88
	BH4 0.35-0.65	SE158465.006	%	70 - 130%	86
	BH4 1.0-1.3	SE158465.007	%	70 - 130%	82
	BH4 1.5-1.8	SE158465.008	%	70 - 130%	84
	BH4 2.0-2.3	SE158465.009	%	70 - 130%	78
	BH5 0.15-0.45	SE158465.010	%	70 - 130%	90
	BH5 1.0-1.3	SE158465.011	%	70 - 130%	80
	BH5 1.5-1.8	SE158465.012	%	70 - 130%	84
	BH6 0.15-0.25	SE158465.013	%	70 - 130%	80
	BH6 0.25-0.4	SE158465.014	%	70 - 130%	88
	BH6 0.4-0.7	SE158465.015	%	70 - 130%	78
	BH6 1.0-1.3	SE158465.016	%	70 - 130%	80
	BH6 1.5-1.8	SE158465.017	%	70 - 130%	76
	BH7 0.15-0.25	SE158465.018	%	70 - 130%	82
	BH7 0.25-0.35	SE158465.019	%	70 - 130%	80
	BH7 0.35-0.65	SE158465.020	%	70 - 130%	82
	BH8 0.15-0.25	SE158465.022	%	70 - 130%	80
	BH8 0.25-0.5	SE158465.023	%	70 - 130%	78
	BH8 0.5-0.8	SE158465.024	%	70 - 130%	82
	BH9 0.15-0.25	SE158465.026	%	70 - 130%	80
	BH9 0.25-0.5	SE158465.027	%	70 - 130%	80
	BH9 0.5-0.8	SE158465.028	%	70 - 130%	82
	BH9 1.0-1.3	SE158465.029	%	70 - 130%	84
	BH9 1.5-1.8	SE158465.030	%	70 - 130%	82
	BH9 2.0-2.3	SE158465.031	%	70 - 130%	82
	BH9 2.5-2.7	SE158465.032	%	70 - 130%	82
	BH10 0.15-0.45	SE158465.033	%	70 - 130%	86
	BH10 0.5-0.8	SE158465.034	%	70 - 130%	86
	BH10 1.0-1.3	SE158465.035	%	70 - 130%	80
	BH10 1.5-1.8	SE158465.036	%	70 - 130%	82
	BH10 2.0-2.3	SE158465.037	%	70 - 130%	78
	BH10 2.7-3.0	SE158465.038	%	70 - 130%	86
	BH11 0.15-0.25	SE158465.039	%	70 - 130%	94
	BH11 0.25-0.55	SE158465.040	%	70 - 130%	88
	BH11 0.8-1.1	SE158465.041	%	70 - 130%	92
	BH11 1.2-1.5	SE158465.042	%	70 - 130%	78
	BH11 1.7-2.2	SE158465.043	%	70 - 130%	84
	BH11 2.5-2.8	SE158465.044	%	70 - 130%	88
	BH12 0.15-0.45	SE158465.045	%	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.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d5-nitrobenzene (Surrogate)	BH12 1.0-1.3	SE158465.046	%	70 - 130%	88
	BH13 0.2-0.5	SE158465.048	%	70 - 130%	90
	BH13 1.0-1.3	SE158465.049	%	70 - 130%	84
	BH13 2.0-2.3	SE158465.050	%	70 - 130%	84
	BH14 0.5-0.8	SE158465.052	%	70 - 130%	88
	Duplicate D1	SE158465.054	%	70 - 130%	88
	Duplicate D3	SE158465.055	%	70 - 130%	86
	Duplicate D6	SE158465.056	%	70 - 130%	88
	BH14 2.05-2.15	SE158465.059	%	70 - 130%	92

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	Rinsate R1	SE158465.057	%	40 - 130%	52
d14-p-terphenyl (Surrogate)	Rinsate R1	SE158465.057	%	40 - 130%	110
d5-nitrobenzene (Surrogate)	Rinsate R1	SE158465.057	%	40 - 130%	44

PCBs in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH1 0.15-0.45	SE158465.001	%	60 - 130%	85
	BH2 0.15-0.45	SE158465.002	%	60 - 130%	79
	BH3 0.13-0.43	SE158465.003	%	60 - 130%	77
	BH4 0.15-0.25	SE158465.004	%	60 - 130%	80
	BH4 0.25-0.35	SE158465.005	%	60 - 130%	79
	BH4 1.0-1.3	SE158465.007	%	60 - 130%	80
	BH5 0.15-0.45	SE158465.010	%	60 - 130%	76
	BH6 0.15-0.25	SE158465.013	%	60 - 130%	79
	BH6 0.25-0.4	SE158465.014	%	60 - 130%	81
	BH6 1.0-1.3	SE158465.016	%	60 - 130%	97
	BH7 0.15-0.25	SE158465.018	%	60 - 130%	94
	BH7 0.25-0.35	SE158465.019	%	60 - 130%	90
	BH7 0.35-0.65	SE158465.020	%	60 - 130%	93
	BH8 0.15-0.25	SE158465.022	%	60 - 130%	91
	BH8 0.5-0.8	SE158465.024	%	60 - 130%	90
	BH9 0.15-0.25	SE158465.026	%	60 - 130%	92
	BH9 0.25-0.5	SE158465.027	%	60 - 130%	91
	BH9 1.0-1.3	SE158465.029	%	60 - 130%	92
	BH9 2.0-2.3	SE158465.031	%	60 - 130%	93
	BH9 2.5-2.7	SE158465.032	%	60 - 130%	92
	BH10 0.15-0.45	SE158465.033	%	60 - 130%	87
	BH10 0.5-0.8	SE158465.034	%	60 - 130%	91
	BH10 1.5-1.8	SE158465.036	%	60 - 130%	92
	BH10 2.7-3.0	SE158465.038	%	60 - 130%	83
	BH11 0.15-0.25	SE158465.039	%	60 - 130%	75
	BH11 1.2-1.5	SE158465.042	%	60 - 130%	75
	BH11 2.5-2.8	SE158465.044	%	60 - 130%	105
	BH12 0.15-0.45	SE158465.045	%	60 - 130%	73
	BH13 0.2-0.5	SE158465.048	%	60 - 130%	75
	BH13 2.0-2.3	SE158465.050	%	60 - 130%	75
	BH14 0.5-0.8	SE158465.052	%	60 - 130%	77
	Duplicate D1	SE158465.054	%	60 - 130%	73
	Duplicate D6	SE158465.056	%	60 - 130%	73

VOC's in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH1 0.15-0.45	SE158465.001	%	60 - 130%	102
	BH2 0.15-0.45	SE158465.002	%	60 - 130%	105
	BH3 0.13-0.43	SE158465.003	%	60 - 130%	99
	BH4 0.15-0.25	SE158465.004	%	60 - 130%	106
	BH4 0.25-0.35	SE158465.005	%	60 - 130%	119
	BH4 1.0-1.3	SE158465.007	%	60 - 130%	97
	BH5 0.15-0.45	SE158465.010	%	60 - 130%	104
	BH6 0.15-0.25	SE158465.013	%	60 - 130%	99

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 %
Bromofluorobenzene (Surrogate)	BH6 0.25-0.4	SE158465.014	%	60 - 130%	99
	BH6 1.0-1.3	SE158465.016	%	60 - 130%	96
	BH7 0.15-0.25	SE158465.018	%	60 - 130%	105
	BH7 0.25-0.35	SE158465.019	%	60 - 130%	87
	BH7 0.35-0.65	SE158465.020	%	60 - 130%	79
	BH8 0.15-0.25	SE158465.022	%	60 - 130%	98
	BH8 0.5-0.8	SE158465.024	%	60 - 130%	89
	BH9 0.15-0.25	SE158465.026	%	60 - 130%	86
	BH9 0.25-0.5	SE158465.027	%	60 - 130%	118
	BH9 1.0-1.3	SE158465.029	%	60 - 130%	75
	BH9 2.0-2.3	SE158465.031	%	60 - 130%	80
	BH9 2.5-2.7	SE158465.032	%	60 - 130%	90
	BH10 0.15-0.45	SE158465.033	%	60 - 130%	109
	BH10 0.5-0.8	SE158465.034	%	60 - 130%	79
	BH10 1.5-1.8	SE158465.036	%	60 - 130%	75
	BH10 2.7-3.0	SE158465.038	%	60 - 130%	82
	BH11 0.15-0.25	SE158465.039	%	60 - 130%	108
	BH11 1.2-1.5	SE158465.042	%	60 - 130%	75
	BH11 2.5-2.8	SE158465.044	%	60 - 130%	83
	BH12 0.15-0.45	SE158465.045	%	60 - 130%	102
	BH13 0.2-0.5	SE158465.048	%	60 - 130%	104
	BH13 2.0-2.3	SE158465.050	%	60 - 130%	85
	BH14 0.5-0.8	SE158465.052	%	60 - 130%	104
	Duplicate D1	SE158465.054	%	60 - 130%	99
	Duplicate D6	SE158465.056	%	60 - 130%	109
	Trip Spike TS1	SE158465.058	%	60 - 130%	78
d4-1,2-dichloroethane (Surrogate)	BH1 0.15-0.45	SE158465.001	%	60 - 130%	115
	BH2 0.15-0.45	SE158465.002	%	60 - 130%	120
	BH3 0.13-0.43	SE158465.003	%	60 - 130%	117
	BH4 0.15-0.25	SE158465.004	%	60 - 130%	125
	BH4 0.25-0.35	SE158465.005	%	60 - 130%	84
	BH4 1.0-1.3	SE158465.007	%	60 - 130%	110
	BH5 0.15-0.45	SE158465.010	%	60 - 130%	101
	BH6 0.15-0.25	SE158465.013	%	60 - 130%	104
	BH6 0.25-0.4	SE158465.014	%	60 - 130%	99
	BH6 1.0-1.3	SE158465.016	%	60 - 130%	122
	BH7 0.15-0.25	SE158465.018	%	60 - 130%	112
	BH7 0.25-0.35	SE158465.019	%	60 - 130%	107
	BH7 0.35-0.65	SE158465.020	%	60 - 130%	120
	BH8 0.15-0.25	SE158465.022	%	60 - 130%	117
	BH8 0.5-0.8	SE158465.024	%	60 - 130%	118
	BH9 0.15-0.25	SE158465.026	%	60 - 130%	117
	BH9 0.25-0.5	SE158465.027	%	60 - 130%	110
	BH9 1.0-1.3	SE158465.029	%	60 - 130%	91
	BH9 2.0-2.3	SE158465.031	%	60 - 130%	96
	BH9 2.5-2.7	SE158465.032	%	60 - 130%	95
	BH10 0.15-0.45	SE158465.033	%	60 - 130%	101
	BH10 0.5-0.8	SE158465.034	%	60 - 130%	103
	BH10 1.5-1.8	SE158465.036	%	60 - 130%	100
	BH10 2.7-3.0	SE158465.038	%	60 - 130%	124
	BH11 0.15-0.25	SE158465.039	%	60 - 130%	113
	BH11 1.2-1.5	SE158465.042	%	60 - 130%	110
	BH11 2.5-2.8	SE158465.044	%	60 - 130%	112
	BH12 0.15-0.45	SE158465.045	%	60 - 130%	102
	BH13 0.2-0.5	SE158465.048	%	60 - 130%	119
	BH13 2.0-2.3	SE158465.050	%	60 - 130%	115
	BH14 0.5-0.8	SE158465.052	%	60 - 130%	101
	Duplicate D1	SE158465.054	%	60 - 130%	90
	Duplicate D6	SE158465.056	%	60 - 130%	113
	Trip Spike TS1	SE158465.058	%	60 - 130%	97
d8-toluene (Surrogate)	BH1 0.15-0.45	SE158465.001	%	60 - 130%	85

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)	BH2 0.15-0.45	SE158465.002	%	60 - 130%	72
	BH3 0.13-0.43	SE158465.003	%	60 - 130%	77
	BH4 0.15-0.25	SE158465.004	%	60 - 130%	71
	BH4 0.25-0.35	SE158465.005	%	60 - 130%	76
	BH4 1.0-1.3	SE158465.007	%	60 - 130%	82
	BH5 0.15-0.45	SE158465.010	%	60 - 130%	76
	BH6 0.15-0.25	SE158465.013	%	60 - 130%	83
	BH6 0.25-0.4	SE158465.014	%	60 - 130%	75
	BH6 1.0-1.3	SE158465.016	%	60 - 130%	72
	BH7 0.15-0.25	SE158465.018	%	60 - 130%	70
	BH7 0.25-0.35	SE158465.019	%	60 - 130%	73
	BH7 0.35-0.65	SE158465.020	%	60 - 130%	71
	BH8 0.15-0.25	SE158465.022	%	60 - 130%	77
	BH8 0.5-0.8	SE158465.024	%	60 - 130%	74
	BH9 0.15-0.25	SE158465.026	%	60 - 130%	75
	BH9 0.25-0.5	SE158465.027	%	60 - 130%	85
	BH9 1.0-1.3	SE158465.029	%	60 - 130%	73
	BH9 2.0-2.3	SE158465.031	%	60 - 130%	72
	BH9 2.5-2.7	SE158465.032	%	60 - 130%	72
	BH10 0.15-0.45	SE158465.033	%	60 - 130%	85
	BH10 0.5-0.8	SE158465.034	%	60 - 130%	77
	BH10 1.5-1.8	SE158465.036	%	60 - 130%	76
	BH10 2.7-3.0	SE158465.038	%	60 - 130%	78
	BH11 0.15-0.25	SE158465.039	%	60 - 130%	82
	BH11 1.2-1.5	SE158465.042	%	60 - 130%	83
	BH11 2.5-2.8	SE158465.044	%	60 - 130%	73
	BH12 0.15-0.45	SE158465.045	%	60 - 130%	80
	BH13 0.2-0.5	SE158465.048	%	60 - 130%	75
	BH13 2.0-2.3	SE158465.050	%	60 - 130%	79
	BH14 0.5-0.8	SE158465.052	%	60 - 130%	78
	Duplicate D1	SE158465.054	%	60 - 130%	71
	Duplicate D6	SE158465.056	%	60 - 130%	95
	Trip Spike TS1	SE158465.058	%	60 - 130%	72
Dibromofluoromethane (Surrogate)	BH1 0.15-0.45	SE158465.001	%	60 - 130%	78
	BH2 0.15-0.45	SE158465.002	%	60 - 130%	101
	BH3 0.13-0.43	SE158465.003	%	60 - 130%	104
	BH4 0.15-0.25	SE158465.004	%	60 - 130%	103
	BH4 0.25-0.35	SE158465.005	%	60 - 130%	97
	BH4 1.0-1.3	SE158465.007	%	60 - 130%	105
	BH5 0.15-0.45	SE158465.010	%	60 - 130%	92
	BH6 0.15-0.25	SE158465.013	%	60 - 130%	81
	BH6 0.25-0.4	SE158465.014	%	60 - 130%	99
	BH6 1.0-1.3	SE158465.016	%	60 - 130%	108
	BH7 0.15-0.25	SE158465.018	%	60 - 130%	110
	BH7 0.25-0.35	SE158465.019	%	60 - 130%	91
	BH7 0.35-0.65	SE158465.020	%	60 - 130%	115
	BH8 0.15-0.25	SE158465.022	%	60 - 130%	94
	BH8 0.5-0.8	SE158465.024	%	60 - 130%	104
	BH9 0.15-0.25	SE158465.026	%	60 - 130%	102
	BH9 0.25-0.5	SE158465.027	%	60 - 130%	90
	BH9 1.0-1.3	SE158465.029	%	60 - 130%	89
	BH9 2.0-2.3	SE158465.031	%	60 - 130%	108
	BH9 2.5-2.7	SE158465.032	%	60 - 130%	95
	BH10 0.15-0.45	SE158465.033	%	60 - 130%	117
	BH10 0.5-0.8	SE158465.034	%	60 - 130%	109
	BH10 1.5-1.8	SE158465.036	%	60 - 130%	117
	BH10 2.7-3.0	SE158465.038	%	60 - 130%	90
	BH11 0.15-0.25	SE158465.039	%	60 - 130%	114
	BH11 1.2-1.5	SE158465.042	%	60 - 130%	116
	BH11 2.5-2.8	SE158465.044	%	60 - 130%	92
	BH12 0.15-0.45	SE158465.045	%	60 - 130%	77

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 %
Dibromofluoromethane (Surrogate)	BH13 0.2-0.5	SE158465.048	%	60 - 130%	91
	BH13 2.0-2.3	SE158465.050	%	60 - 130%	107
	BH14 0.5-0.8	SE158465.052	%	60 - 130%	107
	Duplicate D1	SE158465.054	%	60 - 130%	98
	Duplicate D6	SE158465.056	%	60 - 130%	81
	Trip Spike TS1	SE158465.058	%	60 - 130%	103

VOCs in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	Rinsate R1	SE158465.057	%	40 - 130%	86
d4-1,2-dichloroethane (Surrogate)	Rinsate R1	SE158465.057	%	40 - 130%	111
d8-toluene (Surrogate)	Rinsate R1	SE158465.057	%	40 - 130%	89
Dibromofluoromethane (Surrogate)	Rinsate R1	SE158465.057	%	40 - 130%	123

Volatile Petroleum Hydrocarbons in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH1 0.15-0.45	SE158465.001	%	60 - 130%	92
	BH2 0.15-0.45	SE158465.002	%	60 - 130%	93
	BH3 0.13-0.43	SE158465.003	%	60 - 130%	93
	BH4 0.15-0.25	SE158465.004	%	60 - 130%	104
	BH4 0.25-0.35	SE158465.005	%	60 - 130%	119
	BH4 1.0-1.3	SE158465.007	%	60 - 130%	77
	BH5 0.15-0.45	SE158465.010	%	60 - 130%	93
	BH6 0.15-0.25	SE158465.013	%	60 - 130%	84
	BH6 0.25-0.4	SE158465.014	%	60 - 130%	99
	BH6 1.0-1.3	SE158465.016	%	60 - 130%	96
	BH7 0.15-0.25	SE158465.018	%	60 - 130%	98
	BH7 0.25-0.35	SE158465.019	%	60 - 130%	87
	BH7 0.35-0.65	SE158465.020	%	60 - 130%	79
	BH8 0.15-0.25	SE158465.022	%	60 - 130%	97
	BH8 0.5-0.8	SE158465.024	%	60 - 130%	89
	BH9 0.15-0.25	SE158465.026	%	60 - 130%	86
	BH9 0.25-0.5	SE158465.027	%	60 - 130%	91
	BH9 1.0-1.3	SE158465.029	%	60 - 130%	75
	BH9 2.0-2.3	SE158465.031	%	60 - 130%	80
	BH9 2.5-2.7	SE158465.032	%	60 - 130%	90
	BH10 0.15-0.45	SE158465.033	%	60 - 130%	92
	BH10 0.5-0.8	SE158465.034	%	60 - 130%	79
	BH10 1.5-1.8	SE158465.036	%	60 - 130%	75
	BH10 2.7-3.0	SE158465.038	%	60 - 130%	104
	BH11 0.15-0.25	SE158465.039	%	60 - 130%	94
	BH11 1.2-1.5	SE158465.042	%	60 - 130%	75
	BH11 2.5-2.8	SE158465.044	%	60 - 130%	83
	BH12 0.15-0.45	SE158465.045	%	60 - 130%	86
	BH13 0.2-0.5	SE158465.048	%	60 - 130%	86
	BH13 2.0-2.3	SE158465.050	%	60 - 130%	85
	BH14 0.5-0.8	SE158465.052	%	60 - 130%	104
	Duplicate D1	SE158465.054	%	60 - 130%	99
	Duplicate D6	SE158465.056	%	60 - 130%	86
d4-1,2-dichloroethane (Surrogate)	BH1 0.15-0.45	SE158465.001	%	60 - 130%	102
	BH2 0.15-0.45	SE158465.002	%	60 - 130%	107
	BH3 0.13-0.43	SE158465.003	%	60 - 130%	112
	BH4 0.15-0.25	SE158465.004	%	60 - 130%	109
	BH4 0.25-0.35	SE158465.005	%	60 - 130%	84
	BH4 1.0-1.3	SE158465.007	%	60 - 130%	98
	BH5 0.15-0.45	SE158465.010	%	60 - 130%	112
	BH6 0.15-0.25	SE158465.013	%	60 - 130%	98
	BH6 0.25-0.4	SE158465.014	%	60 - 130%	99
	BH6 1.0-1.3	SE158465.016	%	60 - 130%	122
	BH7 0.15-0.25	SE158465.018	%	60 - 130%	113
	BH7 0.25-0.35	SE158465.019	%	60 - 130%	107
	BH7 0.35-0.65	SE158465.020	%	60 - 130%	120

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)	BH8 0.15-0.25	SE158465.022	%	60 - 130%	109
	BH8 0.5-0.8	SE158465.024	%	60 - 130%	118
	BH9 0.15-0.25	SE158465.026	%	60 - 130%	117
	BH9 0.25-0.5	SE158465.027	%	60 - 130%	110
	BH9 1.0-1.3	SE158465.029	%	60 - 130%	91
	BH9 2.0-2.3	SE158465.031	%	60 - 130%	96
	BH9 2.5-2.7	SE158465.032	%	60 - 130%	95
	BH10 0.15-0.45	SE158465.033	%	60 - 130%	118
	BH10 0.5-0.8	SE158465.034	%	60 - 130%	103
	BH10 1.5-1.8	SE158465.036	%	60 - 130%	100
	BH10 2.7-3.0	SE158465.038	%	60 - 130%	104
	BH11 0.15-0.25	SE158465.039	%	60 - 130%	111
	BH11 1.2-1.5	SE158465.042	%	60 - 130%	110
	BH11 2.5-2.8	SE158465.044	%	60 - 130%	112
	BH12 0.15-0.45	SE158465.045	%	60 - 130%	115
	BH13 0.2-0.5	SE158465.048	%	60 - 130%	120
	BH13 2.0-2.3	SE158465.050	%	60 - 130%	115
	BH14 0.5-0.8	SE158465.052	%	60 - 130%	101
	Duplicate D1	SE158465.054	%	60 - 130%	90
	Duplicate D6	SE158465.056	%	60 - 130%	120
d8-toluene (Surrogate)	BH1 0.15-0.45	SE158465.001	%	60 - 130%	78
	BH2 0.15-0.45	SE158465.002	%	60 - 130%	76
	BH3 0.13-0.43	SE158465.003	%	60 - 130%	76
	BH4 0.15-0.25	SE158465.004	%	60 - 130%	70
	BH4 0.25-0.35	SE158465.005	%	60 - 130%	76
	BH4 1.0-1.3	SE158465.007	%	60 - 130%	71
	BH5 0.15-0.45	SE158465.010	%	60 - 130%	79
	BH6 0.15-0.25	SE158465.013	%	60 - 130%	73
	BH6 0.25-0.4	SE158465.014	%	60 - 130%	75
	BH6 1.0-1.3	SE158465.016	%	60 - 130%	72
	BH7 0.15-0.25	SE158465.018	%	60 - 130%	74
	BH7 0.25-0.35	SE158465.019	%	60 - 130%	73
	BH7 0.35-0.65	SE158465.020	%	60 - 130%	71
	BH8 0.15-0.25	SE158465.022	%	60 - 130%	79
	BH8 0.5-0.8	SE158465.024	%	60 - 130%	74
	BH9 0.15-0.25	SE158465.026	%	60 - 130%	75
	BH9 0.25-0.5	SE158465.027	%	60 - 130%	74
	BH9 1.0-1.3	SE158465.029	%	60 - 130%	73
	BH9 2.0-2.3	SE158465.031	%	60 - 130%	72
	BH9 2.5-2.7	SE158465.032	%	60 - 130%	72
	BH10 0.15-0.45	SE158465.033	%	60 - 130%	75
	BH10 0.5-0.8	SE158465.034	%	60 - 130%	77
	BH10 1.5-1.8	SE158465.036	%	60 - 130%	76
	BH10 2.7-3.0	SE158465.038	%	60 - 130%	76
	BH11 0.15-0.25	SE158465.039	%	60 - 130%	91
	BH11 1.2-1.5	SE158465.042	%	60 - 130%	83
	BH11 2.5-2.8	SE158465.044	%	60 - 130%	73
	BH12 0.15-0.45	SE158465.045	%	60 - 130%	73
	BH13 0.2-0.5	SE158465.048	%	60 - 130%	78
	BH13 2.0-2.3	SE158465.050	%	60 - 130%	79
	BH14 0.5-0.8	SE158465.052	%	60 - 130%	78
	Duplicate D1	SE158465.054	%	60 - 130%	71
	Duplicate D6	SE158465.056	%	60 - 130%	86
Dibromofluoromethane (Surrogate)	BH1 0.15-0.45	SE158465.001	%	60 - 130%	80
	BH2 0.15-0.45	SE158465.002	%	60 - 130%	92
	BH3 0.13-0.43	SE158465.003	%	60 - 130%	89
	BH4 0.15-0.25	SE158465.004	%	60 - 130%	119
	BH4 0.25-0.35	SE158465.005	%	60 - 130%	97
	BH4 1.0-1.3	SE158465.007	%	60 - 130%	111
	BH5 0.15-0.45	SE158465.010	%	60 - 130%	117
	BH6 0.15-0.25	SE158465.013	%	60 - 130%	116

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 %
Dibromofluoromethane (Surrogate)	BH6 0.25-0.4	SE158465.014	%	60 - 130%	99
	BH6 1.0-1.3	SE158465.016	%	60 - 130%	108
	BH7 0.15-0.25	SE158465.018	%	60 - 130%	112
	BH7 0.25-0.35	SE158465.019	%	60 - 130%	91
	BH7 0.35-0.65	SE158465.020	%	60 - 130%	115
	BH8 0.15-0.25	SE158465.022	%	60 - 130%	103
	BH8 0.5-0.8	SE158465.024	%	60 - 130%	104
	BH9 0.15-0.25	SE158465.026	%	60 - 130%	102
	BH9 0.25-0.5	SE158465.027	%	60 - 130%	113
	BH9 1.0-1.3	SE158465.029	%	60 - 130%	89
	BH9 2.0-2.3	SE158465.031	%	60 - 130%	108
	BH9 2.5-2.7	SE158465.032	%	60 - 130%	95
	BH10 0.15-0.45	SE158465.033	%	60 - 130%	103
	BH10 0.5-0.8	SE158465.034	%	60 - 130%	109
	BH10 1.5-1.8	SE158465.036	%	60 - 130%	117
	BH10 2.7-3.0	SE158465.038	%	60 - 130%	94
	BH11 0.15-0.25	SE158465.039	%	60 - 130%	96
	BH11 1.2-1.5	SE158465.042	%	60 - 130%	116
	BH11 2.5-2.8	SE158465.044	%	60 - 130%	92
	BH12 0.15-0.45	SE158465.045	%	60 - 130%	118
	BH13 0.2-0.5	SE158465.048	%	60 - 130%	121
	BH13 2.0-2.3	SE158465.050	%	60 - 130%	107
	BH14 0.5-0.8	SE158465.052	%	60 - 130%	107
	Duplicate D1	SE158465.054	%	60 - 130%	98
	Duplicate D6	SE158465.056	%	60 - 130%	114

Volatile Petroleum Hydrocarbons in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	Rinsate R1	SE158465.057	%	40 - 130%	86
d4-1,2-dichloroethane (Surrogate)	Rinsate R1	SE158465.057	%	60 - 130%	111
d8-toluene (Surrogate)	Rinsate R1	SE158465.057	%	40 - 130%	89
Dibromofluoromethane (Surrogate)	Rinsate R1	SE158465.057	%	40 - 130%	123

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
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Mercury (dissolved) in Water

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

Sample Number	Parameter	Units	LOR	Result
LB112679.001	Mercury	mg/L	0.0001	<0.0001

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB112652.001	Mercury	mg/kg	0.05	<0.05
LB112653.001	Mercury	mg/kg	0.05	<0.05
LB112654.001	Mercury	mg/kg	0.05	<0.05
LB112655.001	Mercury	mg/kg	0.05	<0.05

Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320/AN321

Sample Number	Parameter	Units	LOR	Result
LB112682.001	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]AN400/AN420

Sample Number	Parameter	Units	LOR	Result
LB112541.001	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)	%	-	94
LB112542.001	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

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)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result
LB112542.001	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			
LB112544.001	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	105
	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)	%	-	91

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB112541.001	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)	%	-	84
	d14-p-terphenyl (Surrogate)	%	-	98

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
LB112542.001	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)	%	-	86
	2-fluorobiphenyl (Surrogate)	%	-	86
	d14-p-terphenyl (Surrogate)	%	-	102
LB112544.001	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)	%	-	84
	2-fluorobiphenyl (Surrogate)	%	-	76
	d14-p-terphenyl (Surrogate)	%	-	78

PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-ENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB112591.001	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)	%	-	96
	2-fluorobiphenyl (Surrogate)	%	-	84

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 Water (continued)

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

Sample Number	Parameter	Units	LOR	Result
LB112591.001	Surrogates	d14-p-terphenyl (Surrogate)	%	-
				114

PCBs in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result
LB112541.001	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)	%	-
LB112542.001	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)	%	-
LB112544.001	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)	%	-

Total Cyanide in soil by Discrete Analyser (Aquakem)

Method: ME-(AU)-[ENV]AN077/AN287

Sample Number	Parameter	Units	LOR	Result
LB112619.001	Total Cyanide	mg/kg	0.5	<0.5
LB112679.001	Total Cyanide	mg/kg	0.5	<0.5
LB112722.001	Total Cyanide	mg/kg	0.5	<0.5

Total Phenolics in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB112681.001	Total Phenols	mg/kg	5	<5
LB112723.001	Total Phenols	mg/kg	5	<5
LB112876.001	Total Phenols	mg/kg	5	<5
LB112924.001	Total Phenols	mg/kg	5	<5

Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES

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

Sample Number	Parameter	Units	LOR	Result
LB112698.001	Arsenic, As	mg/kg	3	<3
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.3	<0.3
	Copper, Cu	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Nickel, Ni	mg/kg	0.5	<0.5
	Zinc, Zn	mg/kg	0.5	<0.5
LB112699.001	Arsenic, As	mg/kg	3	<3
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.3	<0.3

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 Metals in Soil/Waste Solids/Materials by ICPOES (continued)

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

Sample Number	Parameter	Units	LOR	Result
LB112699.001	Copper, Cu	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Nickel, Ni	mg/kg	0.5	<0.5
	Zinc, Zn	mg/kg	0.5	<0.5
LB112700.001	Arsenic, As	mg/kg	3	<3
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.3	<0.3
	Copper, Cu	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Nickel, Ni	mg/kg	0.5	<0.5
LB112701.001	Zinc, Zn	mg/kg	0.5	<0.5
	Arsenic, As	mg/kg	3	<3
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.3	<0.3
	Copper, Cu	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Nickel, Ni	mg/kg	0.5	<0.5
	Zinc, Zn	mg/kg	0.5	<0.5

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB112541.001	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
LB112542.001	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
LB112544.001	TRH C10-C36 Total	mg/kg	110	<110
	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
LB112591.001	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
LB112524.001	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1
		1,2-dichloropropane	mg/kg	0.1	<0.1
		cis-1,3-dichloropropene	mg/kg	0.1	<0.1
		trans-1,3-dichloropropene	mg/kg	0.1	<0.1
		1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1
	Halogenated Aliphatics	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1
		Chloromethane	mg/kg	1	<1
		Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1
		Bromomethane	mg/kg	1	<1
		Chloroethane	mg/kg	1	<1
		Trichlorofluoromethane	mg/kg	1	<1
		Iodomethane	mg/kg	5	<5
		1,1-dichloroethene	mg/kg	0.1	<0.1
		Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5
		Allyl chloride	mg/kg	0.1	<0.1
		trans-1,2-dichloroethene	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.

VOC's in Soil (continued)

Method: ME-(AU)-ENVJAN433

Sample Number		Parameter	Units	LOR	Result
LB112524.001	Halogenated Aliphatics	1,1-dichloroethane	mg/kg	0.1	<0.1
		cis-1,2-dichloroethene	mg/kg	0.1	<0.1
		Bromochloromethane	mg/kg	0.1	<0.1
		1,2-dichloroethane	mg/kg	0.1	<0.1
		1,1,1-trichloroethane	mg/kg	0.1	<0.1
		1,1-dichloropropene	mg/kg	0.1	<0.1
		Carbon tetrachloride	mg/kg	0.1	<0.1
		Dibromomethane	mg/kg	0.1	<0.1
		Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1
		1,1,2-trichloroethane	mg/kg	0.1	<0.1
		1,3-dichloropropane	mg/kg	0.1	<0.1
		Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1
		1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1
		cis-1,4-dichloro-2-butene	mg/kg	1	<1
		1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1
		1,2,3-trichloropropane	mg/kg	0.1	<0.1
		trans-1,4-dichloro-2-butene	mg/kg	1	<1
		1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1
	Halogenated Aromatics	Hexachlorobutadiene	mg/kg	0.1	<0.1
		Chlorobenzene	mg/kg	0.1	<0.1
		Bromobenzene	mg/kg	0.1	<0.1
		2-chlorotoluene	mg/kg	0.1	<0.1
		4-chlorotoluene	mg/kg	0.1	<0.1
		1,3-dichlorobenzene	mg/kg	0.1	<0.1
		1,4-dichlorobenzene	mg/kg	0.1	<0.1
		1,2-dichlorobenzene	mg/kg	0.1	<0.1
	Monocyclic Aromatic Hydrocarbons	1,2,4-trichlorobenzene	mg/kg	0.1	<0.1
		1,2,3-trichlorobenzene	mg/kg	0.1	<0.1
		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
		Styrene (Vinyl benzene)	mg/kg	0.1	<0.1
		Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1
		n-propylbenzene	mg/kg	0.1	<0.1
		1,3,5-trimethylbenzene	mg/kg	0.1	<0.1
		tert-butylbenzene	mg/kg	0.1	<0.1
		1,2,4-trimethylbenzene	mg/kg	0.1	<0.1
		sec-butylbenzene	mg/kg	0.1	<0.1
		p-isopropyltoluene	mg/kg	0.1	<0.1
		n-butylbenzene	mg/kg	0.1	<0.1
	Nitrogenous Compounds	Acrylonitrile	mg/kg	0.1	<0.1
		2-nitropropane	mg/kg	10	<10
	Oxygenated Compounds	Acetone (2-propanone)	mg/kg	10	<10
		MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1
		Vinyl acetate	mg/kg	10	<10
		MEK (2-butanone)	mg/kg	10	<10
		MIBK (4-methyl-2-pentanone)	mg/kg	1	<1
		2-hexanone (MBK)	mg/kg	5	<5
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	98
		d4-1,2-dichloroethane (Surrogate)	%	-	105
		d8-toluene (Surrogate)	%	-	81
		Bromofluorobenzene (Surrogate)	%	-	76
	Totals	Total BTEX	mg/kg	0.6	<0.6
		Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8
		Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8
	Trihalomethanes	Chloroform	mg/kg	0.1	<0.1
		Bromodichloromethane	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.

VOC's in Soil (continued)

Method: ME-(AU)-ENVJAN433

Sample Number		Parameter	Units	LOR	Result
LB112524.001	Trihalomethanes	Chlorodibromomethane	mg/kg	0.1	<0.1
		Bromoform	mg/kg	0.1	<0.1
LB112529.001	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1
		1,2-dichloropropane	mg/kg	0.1	<0.1
		cis-1,3-dichloropropene	mg/kg	0.1	<0.1
		trans-1,3-dichloropropene	mg/kg	0.1	<0.1
		1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1
	Halogenated Aliphatics	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1
		Chloromethane	mg/kg	1	<1
		Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1
		Bromomethane	mg/kg	1	<1
		Chloroethane	mg/kg	1	<1
		Trichlorofluoromethane	mg/kg	1	<1
		Iodomethane	mg/kg	5	<5
		1,1-dichloroethene	mg/kg	0.1	<0.1
		Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5
		Allyl chloride	mg/kg	0.1	<0.1
		trans-1,2-dichloroethene	mg/kg	0.1	<0.1
		1,1-dichloroethane	mg/kg	0.1	<0.1
		cis-1,2-dichloroethene	mg/kg	0.1	<0.1
		Bromochloromethane	mg/kg	0.1	<0.1
		1,2-dichloroethane	mg/kg	0.1	<0.1
		1,1,1-trichloroethane	mg/kg	0.1	<0.1
		1,1-dichloropropene	mg/kg	0.1	<0.1
		Carbon tetrachloride	mg/kg	0.1	<0.1
		Dibromomethane	mg/kg	0.1	<0.1
		Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1
		1,1,2-trichloroethane	mg/kg	0.1	<0.1
		1,3-dichloropropane	mg/kg	0.1	<0.1
		Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1
		1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1
		cis-1,4-dichloro-2-butene	mg/kg	1	<1
		1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1
		1,2,3-trichloropropane	mg/kg	0.1	<0.1
		trans-1,4-dichloro-2-butene	mg/kg	1	<1
		1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1
		Hexachlorobutadiene	mg/kg	0.1	<0.1
	Halogenated Aromatics	Chlorobenzene	mg/kg	0.1	<0.1
		Bromobenzene	mg/kg	0.1	<0.1
		2-chlorotoluene	mg/kg	0.1	<0.1
		4-chlorotoluene	mg/kg	0.1	<0.1
		1,3-dichlorobenzene	mg/kg	0.1	<0.1
		1,4-dichlorobenzene	mg/kg	0.1	<0.1
		1,2-dichlorobenzene	mg/kg	0.1	<0.1
		1,2,4-trichlorobenzene	mg/kg	0.1	<0.1
		1,2,3-trichlorobenzene	mg/kg	0.1	<0.1
	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
		Styrene (Vinyl benzene)	mg/kg	0.1	<0.1
		Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1
		n-propylbenzene	mg/kg	0.1	<0.1
		1,3,5-trimethylbenzene	mg/kg	0.1	<0.1
		tert-butylbenzene	mg/kg	0.1	<0.1
		1,2,4-trimethylbenzene	mg/kg	0.1	<0.1
		sec-butylbenzene	mg/kg	0.1	<0.1
		p-isopropyltoluene	mg/kg	0.1	<0.1
		n-butylbenzene	mg/kg	0.1	<0.1
	Nitrogenous Compounds	Acrylonitrile	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.

VOC's in Soil (continued)

Method: ME-(AU)-ENVJAN433

Sample Number		Parameter	Units	LOR	Result
LB112529.001	Nitrogenous Compounds	2-nitropropane	mg/kg	10	<10
	Oxygenated Compounds	Acetone (2-propanone)	mg/kg	10	<10
		MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1
		Vinyl acetate	mg/kg	10	<10
		MEK (2-butanone)	mg/kg	10	<10
		MIBK (4-methyl-2-pentanone)	mg/kg	1	<1
		2-hexanone (MBK)	mg/kg	5	<5
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	108
		d4-1,2-dichloroethane (Surrogate)	%	-	106
		d8-toluene (Surrogate)	%	-	72
		Bromofluorobenzene (Surrogate)	%	-	88
	Totals	Total BTEX	mg/kg	0.6	<0.6
		Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8
		Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8
	Trihalomethanes	Chloroform	mg/kg	0.1	<0.1
		Bromodichloromethane	mg/kg	0.1	<0.1
		Chlorodibromomethane	mg/kg	0.1	<0.1
		Bromoform	mg/kg	0.1	<0.1

VOCs in Water

Method: ME-(AU)-ENVJAN433

Sample Number		Parameter	Units	LOR	Result
LB112521.001	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
	Polycyclic VOCs	Naphthalene	µg/L	0.5	<0.5
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	90
		d4-1,2-dichloroethane (Surrogate)	%	-	86
		d8-toluene (Surrogate)	%	-	92
		Bromofluorobenzene (Surrogate)	%	-	91

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Sample Number		Parameter	Units	LOR	Result
LB112524.001	Surrogates	TRH C6-C9	mg/kg	20	<20
		Dibromofluoromethane (Surrogate)	%	-	90
		d4-1,2-dichloroethane (Surrogate)	%	-	92
		d8-toluene (Surrogate)	%	-	81
LB112529.001	Surrogates	TRH C6-C9	mg/kg	20	<20
		Dibromofluoromethane (Surrogate)	%	-	108
		d4-1,2-dichloroethane (Surrogate)	%	-	106
		d8-toluene (Surrogate)	%	-	72

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-ENVJAN433

Sample Number		Parameter	Units	LOR	Result
LB112521.001	Surrogates	TRH C6-C9	µg/L	40	<40
		Dibromofluoromethane (Surrogate)	%	-	91
		d4-1,2-dichloroethane (Surrogate)	%	-	83
		d8-toluene (Surrogate)	%	-	85
		Bromofluorobenzene (Surrogate)	%	-	93

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 %
SE158492.001	LB112579.014	Mercury	µg/L	0.0001	<0.0001	<0.0001	164	0

Mercury in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE158465.007	LB112652.014	Mercury	mg/kg	0.05	0.27	0.32	47	16
SE158465.016	LB112652.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE158465.026	LB112653.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE158465.035	LB112653.024	Mercury	mg/kg	0.05	<0.05	<0.05	195	0
SE158465.045	LB112654.014	Mercury	mg/kg	0.05	<0.05	0.07	114	36
SE158465.054	LB112654.024	Mercury	mg/kg	0.05	0.09	0.09	86	7
SE158500.008	LB112655.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE158500.019	LB112655.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320/AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE158559.004	LB112682.021	Arsenic, As	mg/L	0.02	-0.000740091	0.00288065	200	0
		Cadmium, Cd	mg/L	0.001	0.000268333	-4.5783E-005	200	0
		Chromium, Cr	mg/L	0.005	-0.000867603	-0.000809807	200	0
		Copper, Cu	mg/L	0.005	-0.000213754	-0.000304319	200	0
		Lead, Pb	mg/L	0.02	-0.004287	-0.0033347	200	0
		Nickel, Ni	mg/L	0.005	0.00147341	0.00221093	200	0
		Zinc, Zn	mg/L	0.01	0.00100268	0.000541709	200	0

Moisture Content

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE158465.010	LB112570.011	% Moisture	%w/w	0.5	15	14	37	8
SE158465.020	LB112570.022	% Moisture	%w/w	0.5	15	15	37	4
SE158465.030	LB112570.033	% Moisture	%w/w	0.5	17	16	36	5
SE158465.040	LB112570.044	% Moisture	%w/w	0.5	6.3	4.4	49	37
SE158465.050	LB112570.055	% Moisture	%w/w	0.5	9.0	9.2	41	2
SE158465.059	LB112570.063	% Moisture	%w/w	0.5	20	19	35	3

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE158465.013	LB112541.027	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	0	200	0
		Alpha BHC	mg/kg	0.1	<0.1	0	200	0
		Lindane	mg/kg	0.1	<0.1	0	200	0
		Heptachlor	mg/kg	0.1	<0.1	0	200	0
		Aldrin	mg/kg	0.1	<0.1	0	200	0
		Beta BHC	mg/kg	0.1	<0.1	0	200	0
		Delta BHC	mg/kg	0.1	<0.1	0	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	0	200	0
		o,p'-DDE	mg/kg	0.1	<0.1	0	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	0	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	0	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	0	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	0	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	0	200	0
		Dieldrin	mg/kg	0.05	<0.05	0	200	0
		Endrin	mg/kg	0.2	<0.2	0	200	0
		o,p'-DDD	mg/kg	0.1	<0.1	0	200	0
		o,p'-DDT	mg/kg	0.1	<0.1	0	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	0	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	0	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	0	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	0	200	0
		Endrin Aldehyde	mg/kg	0.1	<0.1	0	200	0
		Methoxychlor	mg/kg	0.1	<0.1	0	200	0
		Endrin Ketone	mg/kg	0.1	<0.1	0	200	0
		Isodrin	mg/kg	0.1	<0.1	0	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]AN400/AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE158465.013	LB112541.027	Mirex	mg/kg	0.1	<0.1	0	200	0
		Surrogates						
		Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.12	0.121	30	2
SE158465.026	LB112542.014	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	0.14	30	0
SE158465.036	LB112542.025	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	0.16	30	14
SE158465.056	LB112544.026	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	0	200	0
		Alpha BHC	mg/kg	0.1	<0.1	0	200	0
		Lindane	mg/kg	0.1	<0.1	0	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]AN400/AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE158465.056	LB112544.026	Heptachlor	mg/kg	0.1	<0.1	0	200	0
		Aldrin	mg/kg	0.1	<0.1	0	200	0
		Beta BHC	mg/kg	0.1	<0.1	0	200	0
		Delta BHC	mg/kg	0.1	<0.1	0	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	0	200	0
		o,p'-DDE	mg/kg	0.1	<0.1	0	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	0	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	0	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	0	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	0	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	0	200	0
		Dieldrin	mg/kg	0.05	<0.05	0	200	0
		Endrin	mg/kg	0.2	<0.2	0	200	0
		o,p'-DDD	mg/kg	0.1	<0.1	0	200	0
		o,p'-DDT	mg/kg	0.1	<0.1	0	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	0	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	0	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	0	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	0	200	0
		Endrin Aldehyde	mg/kg	0.1	<0.1	0	200	0
		Methoxychlor	mg/kg	0.1	<0.1	0	200	0
		Endrin Ketone	mg/kg	0.1	<0.1	0	200	0
		Isodrin	mg/kg	0.1	<0.1	0	200	0
		Mirex	mg/kg	0.1	<0.1	0	200	0
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.11	0.11	30	0

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE158389.009	LB112541.028	Naphthalene	mg/kg	0.1	0.7	0.74	44	6
		2-methylnaphthalene	mg/kg	0.1	0.7	0.69	45	3
		1-methylnaphthalene	mg/kg	0.1	0.4	0.44	53	0
		Acenaphthylene	mg/kg	0.1	0.2	0.16	91	6
		Acenaphthene	mg/kg	0.1	0.2	0.17	91	6
		Fluorene	mg/kg	0.1	0.2	0.17	89	0
		Phenanthrene	mg/kg	0.1	1.5	1.61	36	9
		Anthracene	mg/kg	0.1	0.4	0.45	54	12
		Fluoranthene	mg/kg	0.1	1.3	1.43	37	7
		Pyrene	mg/kg	0.1	1.5	1.63	36	8
		Benzo(a)anthracene	mg/kg	0.1	0.7	0.77	44	10
		Chrysene	mg/kg	0.1	0.9	0.93	41	6
		Benzo(b&j)fluoranthene	mg/kg	0.1	1.1	1.17	39	5
		Benzo(k)fluoranthene	mg/kg	0.1	0.3	0.27	66	4
		Benzo(a)pyrene	mg/kg	0.1	0.9	0.9	41	3
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.7	0.73	44	4
		Dibenzo(ah)anthracene	mg/kg	0.1	0.2	0.19	84	5
		Benzo(ghi)perylene	mg/kg	0.1	0.7	0.77	43	5
		Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	1.3	1.392	25	4
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	1.3	1.392	32	4
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	1.3	1.392	25	4
		Total PAH (18)	mg/kg	0.8	12	13.13	36	6
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.45	30	2
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.41	30	2
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	4
SE158465.013	LB112541.027	Naphthalene	mg/kg	0.1	<0.1	0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	0.1	184	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	0.08	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	0	200	0
		Acenaphthene	mg/kg	0.1	<0.1	0.01	200	0
		Fluorene	mg/kg	0.1	<0.1	0.01	200	0
		Phenanthrene	mg/kg	0.1	0.2	0.22	79	15
		Anthracene	mg/kg	0.1	<0.1	0.01	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)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE158465.013	LB112541.027	Fluoranthene	mg/kg	0.1	<0.1	0.04	200	0
		Pyrene	mg/kg	0.1	<0.1	0.04	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	0.02	200	0
		Chrysene	mg/kg	0.1	<0.1	0.08	163	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	0.06	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	0.05	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	0.01	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	0	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	0.01	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	0.04	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	0	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	0.242	134	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	0.121	175	0
		Total PAH (18)	mg/kg	0.8	<0.8	0.42	200	0
		Surrogates						
SE158465.026	LB112542.014	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.41	30	2
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.41	30	0
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.48	30	0
		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
SE158465.036	LB112542.025	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	TEQ (mg/kg)	0.2	<0.2	<0.2	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	134	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (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	3
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	2
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	4
		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	TEQ (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.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE158465.036	LB112542.025	Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	134	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	175	0
		Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	30	2
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	2
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	2
SE158465.048	LB112544.025	Naphthalene	mg/kg	0.1	<0.1	0	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	0	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	0	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	0	200	0
		Acenaphthene	mg/kg	0.1	<0.1	0	200	0
		Fluorene	mg/kg	0.1	<0.1	0	200	0
		Phenanthrene	mg/kg	0.1	<0.1	0.01	200	0
		Anthracene	mg/kg	0.1	<0.1	0.01	200	0
		Fluoranthene	mg/kg	0.1	<0.1	0.03	200	0
		Pyrene	mg/kg	0.1	<0.1	0.03	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	0.02	200	0
		Chrysene	mg/kg	0.1	<0.1	0.02	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	0.03	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	0.03	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	0.02	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	0.01	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	0	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	0.01	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	0	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	0.242	134	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	0.121	175	0
		Total PAH (18)	mg/kg	0.8	<0.8	0	200	0
		d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.43	30	5
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	2
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.48	30	2
SE158465.056	LB112544.026	Naphthalene	mg/kg	0.1	<0.1	0	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	0	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	0	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	0	200	0
		Acenaphthene	mg/kg	0.1	<0.1	0	200	0
		Fluorene	mg/kg	0.1	<0.1	0	200	0
		Phenanthrene	mg/kg	0.1	<0.1	0.03	200	0
		Anthracene	mg/kg	0.1	<0.1	0	200	0
		Fluoranthene	mg/kg	0.1	<0.1	0.03	200	0
		Pyrene	mg/kg	0.1	<0.1	0.03	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	0.04	200	0
		Chrysene	mg/kg	0.1	<0.1	0	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	0.04	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	0.04	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	0.02	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	0.01	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	0	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	0.02	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	0	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	0.242	134	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	0.121	175	0
		Total PAH (18)	mg/kg	0.8	<0.8	0	200	0
		d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.44	30	0
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	5
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.45	30	9

PCBs in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Original	Duplicate	Parameter	Units	LOR
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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)-[ENV]AN400/AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE158465.013	LB112541.026	Arochlor 1016	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1221	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1232	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1242	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1248	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1254	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1260	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1262	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1268	mg/kg	0.2	<0.2	0	200	0
		Total PCBs (Arochlors)	mg/kg	1	<1	0	200	0
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)		mg/kg	-	0	0.121	30	2
SE158465.026	LB112542.014	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	0
SE158465.036	LB112542.025	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	14
SE158465.056	LB112544.025	Arochlor 1016	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1221	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1232	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1242	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1248	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1254	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1260	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1262	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1268	mg/kg	0.2	<0.2	0	200	0
		Total PCBs (Arochlors)	mg/kg	1	<1	0	200	0
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)		mg/kg	-	0	0.11	30	0

pH in soil (1:5)

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE158465.019	LB112549.014	pH	pH Units	-	8.9	9.0	31	1
SE158465.022	LB112558.014	pH	pH Units	-	8.3	7.4	31	11
SE158465.052	LB112558.023	pH	pH Units	-	8.5	8.5	31	0

Total Cyanide in soil by Discrete Analyser (Aquakem)

Method: ME-(AU)-[ENV]AN077/AN287

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE158370.005	LB112722.004	Total Cyanide	mg/kg	0.5	<0.5	<0.5	200	0
SE158465.001	LB112619.004	Total Cyanide	mg/kg	0.5	<0.5	<0.5	200	0
SE158465.029	LB112679.004	Total Cyanide	mg/kg	0.5	<0.5	<0.5	200	0

Total Phenolics in Soil

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

Original	Duplicate	Parameter	Units	LOR
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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 Phenolics in Soil (continued)

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE156671A.058	LB112924.004	Total Phenols	mg/kg	5	1.0	0.8	26	30 @
SE158370.005	LB112723.004	Total Phenols	mg/kg	5	<5	<5	200	0
SE158398.001	LB112876.004	Total Phenols	mg/kg	5	44	43	15	2

Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE158445.001	LB112698.014	Arsenic, As	mg/kg	3	34	32	33	6
		Cadmium, Cd	mg/kg	0.3	0.6	0.7	77	13
		Chromium, Cr	mg/kg	0.3	13	9.0	35	38 @
		Copper, Cu	mg/kg	0.5	66	66	31	1
		Lead, Pb	mg/kg	1	160	180	31	9
		Nickel, Ni	mg/kg	0.5	16	11	34	35 @
SE158465.007	LB112698.024	Zinc, Zn	mg/kg	0.5	310	260	31	18
		Arsenic, As	mg/kg	3	12	15	38	23
		Cadmium, Cd	mg/kg	0.3	0.4	0.5	94	17
		Chromium, Cr	mg/kg	0.3	13	17	33	28
		Copper, Cu	mg/kg	0.5	43	46	31	5
		Lead, Pb	mg/kg	1	310	320	30	1
SE158465.017	LB112699.014	Nickel, Ni	mg/kg	0.5	9.4	9.0	35	5
		Zinc, Zn	mg/kg	0.5	270	310	31	13
		Arsenic, As	mg/kg	3	15	14	37	5
		Cadmium, Cd	mg/kg	0.3	0.3	<0.3	131	11
		Chromium, Cr	mg/kg	0.3	11	7.5	35	40 @
		Copper, Cu	mg/kg	0.5	20	16	33	22
SE158465.026	LB112699.024	Lead, Pb	mg/kg	1	52	31	32	51 @
		Nickel, Ni	mg/kg	0.5	5.7	3.8	41	41
		Zinc, Zn	mg/kg	0.5	54	40	34	30
		Arsenic, As	mg/kg	3	<3	<3	67	5
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.3	2.5	1.1	58	77 @
SE158465.036	LB112700.014	Copper, Cu	mg/kg	0.5	5.1	1.1	46	131 @
		Lead, Pb	mg/kg	1	2	2	82	1
		Nickel, Ni	mg/kg	0.5	1.4	0.7	78	63
		Zinc, Zn	mg/kg	0.5	4.6	3.2	81	35
		Arsenic, As	mg/kg	3	6	7	45	3
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
SE158465.045	LB112700.024	Chromium, Cr	mg/kg	0.3	7.0	6.4	37	8
		Copper, Cu	mg/kg	0.5	19	19	33	2
		Lead, Pb	mg/kg	1	14	14	37	4
		Nickel, Ni	mg/kg	0.5	6.9	8.1	37	16
		Zinc, Zn	mg/kg	0.5	43	40	35	8
		Arsenic, As	mg/kg	3	5	4	53	12
SE158465.055	LB112701.014	Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.3	3.2	3.4	45	5
		Copper, Cu	mg/kg	0.5	17	19	33	11
		Lead, Pb	mg/kg	1	14	11	38	26
		Nickel, Ni	mg/kg	0.5	11	12	34	10
		Zinc, Zn	mg/kg	0.5	61	61	33	1
SE158500.008	LB112701.024	Arsenic, As	mg/kg	3	5	3	55	44
		Cadmium, Cd	mg/kg	0.3	0.3	<0.3	135	9
		Chromium, Cr	mg/kg	0.3	6.5	5.8	38	12
		Copper, Cu	mg/kg	0.5	200	140	30	37 @
		Lead, Pb	mg/kg	1	86	81	31	7
		Nickel, Ni	mg/kg	0.5	9.4	8.5	36	10
SE158500.008	LB112701.024	Zinc, Zn	mg/kg	0.5	85	70	33	19
		Arsenic, As	mg/kg	3	<3	<3	63	0
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	133	0
		Chromium, Cr	mg/kg	0.3	15	8.7	34	56 @
		Copper, Cu	mg/kg	0.5	24	27	32	13
		Lead, Pb	mg/kg	1	18	15	36	15
SE158500.008	LB112701.024	Nickel, Ni	mg/kg	0.5	9.5	7.5	36	23

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 Metals in Soil/Waste Solids/Materials by ICPOES (continued)

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE158500.008	LB112701.024	Zinc, Zn	mg/kg	0.5	130	140	31	8

TRH (Total Recoverable Hydrocarbons) in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE158389.009	LB112541.027	TRH C10-C14	mg/kg	20	<20	0	200	0
		TRH C15-C28	mg/kg	45	200	171	55	13
		TRH C29-C36	mg/kg	45	150	149	60	1
		TRH C37-C40	mg/kg	100	<100	0	200	0
		TRH C10-C36 Total	mg/kg	110	340	320	63	7
		TRH C10-C40 Total	mg/kg	210	340	320	93	7
		TRH F Bands	mg/kg	25	<25	0	200	0
		TRH >C10-C16 (F2)	mg/kg	25	<25	0	200	0
		TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	<25	0	200	0
		TRH >C16-C34 (F3)	mg/kg	90	290	263	63	9
SE158465.013	LB112541.028	TRH >C34-C40 (F4)	mg/kg	120	<120	0	200	0
		TRH C10-C14	mg/kg	20	<20	0	200	0
		TRH C15-C28	mg/kg	45	<45	0	200	0
		TRH C29-C36	mg/kg	45	<45	0	200	0
		TRH C37-C40	mg/kg	100	<100	0	200	0
		TRH C10-C36 Total	mg/kg	110	<110	0	200	0
		TRH C10-C40 Total	mg/kg	210	<210	0	200	0
		TRH F Bands	mg/kg	25	<25	0	200	0
		TRH >C10-C16 (F2)	mg/kg	25	<25	0	200	0
		TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	<25	0	200	0
SE158465.026	LB112542.014	TRH >C16-C34 (F3)	mg/kg	90	<90	0	200	0
		TRH >C34-C40 (F4)	mg/kg	120	<120	0	200	0
		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	mg/kg	210	<210	<210	200	0
		TRH F Bands	mg/kg	25	<25	<25	200	0
		TRH >C10-C16 (F2)	mg/kg	25	<25	<25	200	0
SE158465.036	LB112542.025	TRH >C10-C16 (F2) - Naphthalene	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
		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	mg/kg	210	<210	<210	200	0
		TRH F Bands	mg/kg	25	<25	<25	200	0
SE158465.048	LB112544.025	TRH >C10-C16 (F2) - Naphthalene	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
		TRH C10-C14	mg/kg	20	<20	0	200	0
		TRH C15-C28	mg/kg	45	<45	0	200	0
		TRH C29-C36	mg/kg	45	<45	0	200	0
		TRH C37-C40	mg/kg	100	<100	0	200	0
		TRH C10-C36 Total	mg/kg	110	<110	0	200	0
		TRH C10-C40 Total	mg/kg	210	<210	0	200	0
		TRH F Bands	mg/kg	25	<25	0	200	0

VOC's in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE158465.016	LB112524.014	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

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 %		
SE158465.016	LB112524.014	Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0		
			Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	5.4	4.8	50	12	
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	6.1	5.7	50	7		
			d8-toluene (Surrogate)	mg/kg	-	3.6	3.9	50	9		
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.8	5.1	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		
SE158465.032	LB112524.025	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0		
			Aromatic	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	Dibromofluoromethane (Surrogate)	mg/kg	-	4.8	4.4	50	8	
		d4-1,2-dichloroethane (Surrogate)		mg/kg	-	4.7	4.6	50	3		
		d8-toluene (Surrogate)		mg/kg	-	3.6	3.6	50	1		
		Bromofluorobenzene (Surrogate)		mg/kg	-	4.5	4.3	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		
		SE158465.050	LB112529.014	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			Dibromofluoromethane (Surrogate)	mg/kg	-	5.4	4.9	50	9	
d4-1,2-dichloroethane (Surrogate)				mg/kg	-	5.7	4.7	50	20		
d8-toluene (Surrogate)				mg/kg	-	4.0	3.6	50	8		
Bromofluorobenzene (Surrogate)				mg/kg	-	4.2	4.1	50	3		
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		
SE158518.001	LB112529.022			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	Dibromofluoromethane (Surrogate)	mg/kg	-	5.1	5.2	50	2	
		d4-1,2-dichloroethane (Surrogate)		mg/kg	-	5.6	5.3	50	6		
		d8-toluene (Surrogate)		mg/kg	-	4.0	3.8	50	6		
		Bromofluorobenzene (Surrogate)		mg/kg	-	4.4	4.3	50	3		
		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 %	
SE158465.016	LB112524.014	TRH C6-C10	mg/kg	25	<25	<25	200	0	
		TRH C6-C9	mg/kg	20	<20	<20	200	0	
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	5.4	4.8	30	12
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	6.1	5.7	30	7	
		d8-toluene (Surrogate)	mg/kg	-	3.6	3.9	30	9	
		Bromofluorobenzene (Surrogate)	mg/kg	-	4.8	5.1	30	6	
		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	
SE158465.032	LB112524.025	TRH C6-C10	mg/kg	25	<25	<25	200	0	
		TRH C6-C9	mg/kg	20	<20	<20	200	0	
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.8	4.4	30	8
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.7	4.6	30	3	
		d8-toluene (Surrogate)	mg/kg	-	3.6	3.6	30	1	
		Bromofluorobenzene (Surrogate)	mg/kg	-	4.5	4.3	30	4	
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
				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.

Volatile Petroleum Hydrocarbons in Soil (continued)

Method: ME-(AU)-ENVJAN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE158465.032	LB112524.025	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE158465.050	LB112529.014		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	5.4	4.9	30	9
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	5.7	4.7	30	20
			d8-toluene (Surrogate)	mg/kg	-	4.0	3.6	30	8
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.2	4.1	30	3
		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
SE158518.001	LB112529.022		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	5.1	5.2	30	2
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	5.6	5.3	30	6
			d8-toluene (Surrogate)	mg/kg	-	4.0	3.8	30	6
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.4	4.3	30	3
		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

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 %
LB112666.002	Exchangeable Sodium, Na	mg/kg	2	NA	390	80 - 120	98
	Exchangeable Potassium, K	mg/kg	2	NA	343	80 - 120	99
	Exchangeable Calcium, Ca	mg/kg	2	NA	2570	80 - 120	92
	Exchangeable Magnesium, Mg	mg/kg	2	NA	635	80 - 120	93

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB112652.002	Mercury	mg/kg	0.05	0.19	0.2	70 - 130	95
LB112653.002	Mercury	mg/kg	0.05	0.18	0.2	70 - 130	90
LB112654.002	Mercury	mg/kg	0.05	0.18	0.2	70 - 130	90
LB112655.002	Mercury	mg/kg	0.05	0.18	0.2	70 - 130	92

Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320/AN321

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB112682.002	Arsenic, As	mg/L	0.02	1.9	2	80 - 120	96
	Cadmium, Cd	mg/L	0.001	2.0	2	80 - 120	100
	Chromium, Cr	mg/L	0.005	1.9	2	80 - 120	94
	Copper, Cu	mg/L	0.005	1.9	2	80 - 120	96
	Lead, Pb	mg/L	0.02	1.9	2	80 - 120	97
	Nickel, Ni	mg/L	0.005	1.9	2	80 - 120	96
	Zinc, Zn	mg/L	0.01	1.9	2	80 - 120	97

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB112541.002	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	108
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	98
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	100
	Dieldrin	mg/kg	0.05	0.18	0.2	60 - 140	88
	Endrin	mg/kg	0.2	0.2	0.2	60 - 140	106
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	120
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	40 - 130
LB112542.002	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	94
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	88
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	90
	Dieldrin	mg/kg	0.05	0.17	0.2	60 - 140	85
	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	117
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.15	40 - 130
LB112544.002	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	99
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	95
	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	85
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	104
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	ma/ka	-	0.19	0.15	40 - 130

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB112541.002	Naphthalene	mg/kg	0.1	3.8	4	60 - 140	96	
	Acenaphthylene	mg/kg	0.1	4.1	4	60 - 140	101	
	Acenaphthene	mg/kg	0.1	3.8	4	60 - 140	95	
	Phenanthrene	mg/kg	0.1	3.8	4	60 - 140	96	
	Anthracene	mg/kg	0.1	3.9	4	60 - 140	98	
	Fluoranthene	mg/kg	0.1	3.9	4	60 - 140	97	
	Pyrene	mg/kg	0.1	3.8	4	60 - 140	96	
	Benzo(a)pyrene	mg/kg	0.1	5.1	4	60 - 140	127	
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	88
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	82
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	94
LB112542.002	Naphthalene	mg/kg	0.1	3.8	4	60 - 140	96	
	Acenaphthylene	mg/kg	0.1	4.9	4	60 - 140	123	
	Acenaphthene	mg/kg	0.1	3.7	4	60 - 140	92	
	Phenanthrene	mg/kg	0.1	3.6	4	60 - 140	91	

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 %
LB112542.002	Anthracene	mg/kg	0.1	3.5	4	60 - 140	88
	Fluoranthene	mg/kg	0.1	3.9	4	60 - 140	98
	Pyrene	mg/kg	0.1	3.6	4	60 - 140	90
	Benzo(a)pyrene	mg/kg	0.1	3.8	4	60 - 140	95
	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	80
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	82
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	82
LB112544.002	Naphthalene	mg/kg	0.1	3.5	4	60 - 140	86
	Acenaphthylene	mg/kg	0.1	3.6	4	60 - 140	91
	Acenaphthene	mg/kg	0.1	3.5	4	60 - 140	88
	Phenanthrene	mg/kg	0.1	4.1	4	60 - 140	104
	Anthracene	mg/kg	0.1	3.7	4	60 - 140	93
	Fluoranthene	mg/kg	0.1	3.6	4	60 - 140	89
	Pyrene	mg/kg	0.1	3.3	4	60 - 140	84
	Benzo(a)pyrene	mg/kg	0.1	3.6	4	60 - 140	90
	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	88
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	76
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	106

PAH (Polynuclear Aromatic Hydrocarbons) in Water
Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB112591.002	Naphthalene	µg/L	0.1	28	40	60 - 140	70
	Acenaphthylene	µg/L	0.1	32	40	60 - 140	79
	Acenaphthene	µg/L	0.1	29	40	60 - 140	74
	Phenanthrene	µg/L	0.1	33	40	60 - 140	82
	Anthracene	µg/L	0.1	40	40	60 - 140	100
	Fluoranthene	µg/L	0.1	35	40	60 - 140	88
	Pyrene	µg/L	0.1	45	40	60 - 140	112
	Benzo(a)pyrene	µg/L	0.1	36	40	60 - 140	89
	d5-nitrobenzene (Surrogate)	µg/L	-	0.5	0.5	40 - 130	106
	2-fluorobiphenyl (Surrogate)	µg/L	-	0.3	0.5	40 - 130	64
	d14-p-terphenyl (Surrogate)	µg/L	-	0.4	0.5	40 - 130	88

PCBs in Soil
Method: ME-(AU)-[ENV]AN400/AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB112541.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	97
LB112542.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	107
LB112544.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	108

pH in soil (1:5)
Method: ME-(AU)-[ENV]AN101

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB112549.003	pH	pH Units	-	7.4	7.415	98 - 102	100
LB112558.003	pH	pH Units	-	7.4	7.415	98 - 102	100

Total Cyanide in soil by Discrete Analyser (Aquakem)
Method: ME-(AU)-[ENV]AN077/AN287

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB112619.002	Total Cyanide	mg/kg	0.5	<0.5	0.25	70 - 130	95
LB112679.002	Total Cyanide	mg/kg	0.5	<0.5	0.25	70 - 130	85
LB112722.002	Total Cyanide	mg/kg	0.5	<0.5	0.25	70 - 130	96

Total Phenolics in Soil
Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB112681.002	Total Phenols	mg/kg	5	<5	2.5	70 - 130	91
LB112723.002	Total Phenols	mg/kg	5	<5	2.5	70 - 130	98
LB112876.002	Total Phenols	mg/kg	5	<5	2.5	70 - 130	89
LB112924.002	Total Phenols	mg/kg	5	<5	2.5	70 - 130	88

Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES
Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB112698.002	Arsenic, As	mg/kg	3	46	50	80 - 120	93
	Cadmium, Cd	mg/kg	0.3	48	50	80 - 120	96
	Chromium, Cr	mg/kg	0.3	46	50	80 - 120	92
	Copper, Cu	mg/kg	0.5	46	50	80 - 120	92

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 Metals in Soil/Waste Solids/Materials by ICPOES (continued)

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB112698.002	Lead, Pb	mg/kg	1	46	50	80 - 120	93
	Nickel, Ni	mg/kg	0.5	48	50	80 - 120	96
	Zinc, Zn	mg/kg	0.5	47	50	80 - 120	94
LB112699.002	Arsenic, As	mg/kg	3	44	50	80 - 120	89
	Cadmium, Cd	mg/kg	0.3	46	50	80 - 120	92
	Chromium, Cr	mg/kg	0.3	45	50	80 - 120	90
	Copper, Cu	mg/kg	0.5	44	50	80 - 120	89
	Lead, Pb	mg/kg	1	45	50	80 - 120	89
	Nickel, Ni	mg/kg	0.5	46	50	80 - 120	92
	Zinc, Zn	mg/kg	0.5	45	50	80 - 120	90
LB112700.002	Arsenic, As	mg/kg	3	47	50	80 - 120	95
	Cadmium, Cd	mg/kg	0.3	49	50	80 - 120	98
	Chromium, Cr	mg/kg	0.3	47	50	80 - 120	95
	Copper, Cu	mg/kg	0.5	48	50	80 - 120	95
	Lead, Pb	mg/kg	1	48	50	80 - 120	95
	Nickel, Ni	mg/kg	0.5	49	50	80 - 120	98
LB112701.002	Arsenic, As	mg/kg	3	45	50	80 - 120	90
	Cadmium, Cd	mg/kg	0.3	46	50	80 - 120	93
	Chromium, Cr	mg/kg	0.3	45	50	80 - 120	91
	Copper, Cu	mg/kg	0.5	45	50	80 - 120	91
	Lead, Pb	mg/kg	1	45	50	80 - 120	91
	Nickel, Ni	mg/kg	0.5	46	50	80 - 120	93
LB112701.002	Zinc, Zn	mg/kg	0.5	45	50	80 - 120	91

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB112541.002	TRH C10-C14	mg/kg	20	41	40	60 - 140	103
	TRH C15-C28	mg/kg	45	<45	40	60 - 140	100
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	95
	TRH F Bands	mg/kg	25	41	40	60 - 140	103
	TRH >C10-C16 (F2)	mg/kg	90	<90	40	60 - 140	98
	TRH >C16-C34 (F3)	mg/kg	120	<120	20	60 - 140	95
LB112542.002	TRH C10-C14	mg/kg	20	38	40	60 - 140	95
	TRH C15-C28	mg/kg	45	<45	40	60 - 140	95
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	90
	TRH F Bands	mg/kg	25	38	40	60 - 140	95
	TRH >C10-C16 (F2)	mg/kg	90	<90	40	60 - 140	95
	TRH >C16-C34 (F3)	mg/kg	120	<120	20	60 - 140	90
LB112544.002	TRH C10-C14	mg/kg	20	40	40	60 - 140	100
	TRH C15-C28	mg/kg	45	<45	40	60 - 140	100
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	98
	TRH F Bands	mg/kg	25	40	40	60 - 140	100
	TRH >C10-C16 (F2)	mg/kg	90	<90	40	60 - 140	100
	TRH >C16-C34 (F3)	mg/kg	120	<120	20	60 - 140	100

TRH (Total Recoverable Hydrocarbons) in Water

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB112591.002	TRH C10-C14	µg/L	50	840	1200	60 - 140	70
	TRH C15-C28	µg/L	200	990	1200	60 - 140	83
	TRH C29-C36	µg/L	200	1300	1200	60 - 140	109
	TRH F Bands	µg/L	60	900	1200	60 - 140	75
	TRH >C10-C16 (F2)	µg/L	500	1200	1200	60 - 140	96
	TRH >C16-C34 (F3)	µg/L	500	730	600	60 - 140	122

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB112524.002	Halogenated	1,1-dichloroethene	mg/kg	0.1	2.4	2.56	60 - 140	93
	Aliphatics	1,2-dichloroethane	mg/kg	0.1	2.4	2.56	60 - 140	94
		Trichloroethene (Trichloroethylene -TCE)		mg/kg	0.1	2.0	2.56	60 - 140
	Halogenated	Chlorobenzene	mg/kg	0.1	2.6	2.56	60 - 140	102
	Monocyclic	Benzene	mg/kg	0.1	2.1	2.9	60 - 140	72

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.

VOC's in Soil (continued)

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB112524.002	Monocyclic	Toluene	mg/kg	0.1	2.0	2.9	60 - 140
	Aromatic	Ethylbenzene	mg/kg	0.1	2.3	2.9	60 - 140
		m/p-xylene	mg/kg	0.2	4.7	5.8	60 - 140
		o-xylene	mg/kg	0.1	2.4	2.9	60 - 140
	Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	5.2	5	60 - 140
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.5	5	60 - 140
		d8-toluene (Surrogate)	mg/kg	-	5.9	5	60 - 140
		Bromofluorobenzene (Surrogate)	mg/kg	-	4.5	5	60 - 140
	Trihalomethan	Chloroform	mg/kg	0.1	2.4	2.56	60 - 140
LB112529.002	Halogenated	1,1-dichloroethene	mg/kg	0.1	2.1	2.56	60 - 140
	Aliphatics	1,2-dichloroethane	mg/kg	0.1	2.4	2.56	60 - 140
		Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	2.1	2.56	60 - 140
	Halogenated	Chlorobenzene	mg/kg	0.1	2.7	2.56	60 - 140
	Monocyclic	Benzene	mg/kg	0.1	2.2	2.9	60 - 140
	Aromatic	Toluene	mg/kg	0.1	2.5	2.9	60 - 140
		Ethylbenzene	mg/kg	0.1	2.1	2.9	60 - 140
		m/p-xylene	mg/kg	0.2	4.4	5.8	60 - 140
		o-xylene	mg/kg	0.1	2.2	2.9	60 - 140
	Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	5.5	5	60 - 140
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	5.6	5	60 - 140
		d8-toluene (Surrogate)	mg/kg	-	4.6	5	60 - 140
		Bromofluorobenzene (Surrogate)	mg/kg	-	6.2	5	60 - 140
	Trihalomethan	Chloroform	mg/kg	0.1	2.3	2.56	60 - 140

VOCs in Water

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB112521.002	Monocyclic	Benzene	µg/L	0.5	50	45.45	60 - 140
	Aromatic	Toluene	µg/L	0.5	50	45.45	60 - 140
		Ethylbenzene	µg/L	0.5	50	45.45	60 - 140
		m/p-xylene	µg/L	1	99	90.9	60 - 140
		o-xylene	µg/L	0.5	50	45.45	60 - 140
	Surrogates	Dibromofluoromethane (Surrogate)	µg/L	-	4.9	5	60 - 140
		d4-1,2-dichloroethane (Surrogate)	µg/L	-	5.3	5	60 - 140
		d8-toluene (Surrogate)	µg/L	-	4.7	5	60 - 140
		Bromofluorobenzene (Surrogate)	µg/L	-	4.7	5	60 - 140

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB112524.002		TRH C6-C10	mg/kg	25	<25	24.65	60 - 140
		TRH C6-C9	mg/kg	20	<20	23.2	60 - 140
	Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.7	5	60 - 140
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	5.1	5	60 - 140
		d8-toluene (Surrogate)	mg/kg	-	3.6	5	60 - 140
		Bromofluorobenzene (Surrogate)	mg/kg	-	4.4	5	60 - 140
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	7.25	60 - 140
LB112529.002		TRH C6-C10	mg/kg	25	<25	24.65	60 - 140
		TRH C6-C9	mg/kg	20	<20	23.2	60 - 140
	Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	5.5	5	60 - 140
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	5.4	5	60 - 140
		d8-toluene (Surrogate)	mg/kg	-	3.7	5	60 - 140
		Bromofluorobenzene (Surrogate)	mg/kg	-	4.0	5	60 - 140
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	7.25	60 - 140

Volatile Petroleum Hydrocarbons in Water

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB112521.002		TRH C6-C10	µg/L	50	930	946.63	60 - 140
		TRH C6-C9	µg/L	40	750	818.71	60 - 140
	Surrogates	Dibromofluoromethane (Surrogate)	µg/L	-	4.6	5	60 - 140
		d4-1,2-dichloroethane (Surrogate)	µg/L	-	4.5	5	60 - 140
		d8-toluene (Surrogate)	µg/L	-	4.7	5	60 - 140
		Bromofluorobenzene (Surrogate)	µg/L	-	5.0	5	60 - 140
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	630	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%
SE158351.013	LB112579.004	Mercury	mg/L	0.0001	0.0076	<0.0001	0.008	96

Mercury in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE158445.001	LB112652.004	Mercury	mg/kg	0.05	0.64	0.57	0.2	38 Ⓢ
SE158465.017	LB112653.004	Mercury	mg/kg	0.05	0.18	<0.05	0.2	86
SE158465.036	LB112654.004	Mercury	mg/kg	0.05	0.18	<0.05	0.2	79
SE158465.055	LB112655.004	Mercury	mg/kg	0.05	0.24	0.08	0.2	80

Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320/AN321

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE158370.076	LB112682.004	Arsenic, As	mg/L	0.02	1.9	<0.020	2	97
		Cadmium, Cd	mg/L	0.001	2.0	<0.001	2	98
		Chromium, Cr	mg/L	0.005	1.9	<0.005	2	93
		Copper, Cu	mg/L	0.005	1.9	<0.005	2	96
		Lead, Pb	mg/L	0.02	1.9	<0.02	2	97
		Nickel, Ni	mg/L	0.005	1.9	<0.005	2	95
		Zinc, Zn	mg/L	0.01	1.9	<0.01	2	95

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN400/AN420

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE158465.039	LB112544.024	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	103
		Aldrin	mg/kg	0.1	<0.1	0.2	97
		Beta BHC	mg/kg	0.1	<0.1	-	-
		Delta BHC	mg/kg	0.1	<0.1	0.2	92
		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	94
		Endrin	mg/kg	0.2	<0.2	0.2	90
		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	120
		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	-	0.11	-	97

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE158389.001	LB112541.026	Naphthalene	mg/kg	0.1	<0.1	4	93
		2-methylnaphthalene	mg/kg	0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	-	-
		Acenaphthylene	mg/kg	0.1	<0.1	4	97
		Acenaphthene	mg/kg	0.1	<0.1	4	92
		Fluorene	mg/kg	0.1	<0.1	-	-
		Phenanthrene	mg/kg	0.1	<0.1	4	95
		Anthracene	mg/kg	0.1	<0.1	4	96

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	Original	Spike	Recovery%
SE158389.001	LB112541.026	Fluoranthene	mg/kg	0.1	<0.1	4	91
		Pyrene	mg/kg	0.1	<0.1	4	96
		Benzo(a)anthracene	mg/kg	0.1	<0.1	-	-
		Chrysene	mg/kg	0.1	<0.1	-	-
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	-	-
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	-	-
		Benzo(a)pyrene	mg/kg	0.1	<0.1	4	110
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	-	-
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	-	-
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	<0.2	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	-	-
		Total PAH (18)	mg/kg	0.8	<0.8	-	-
		Surrogates					
		d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	-	86
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	-	80
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	-	96
SE158465.039	LB112544.024	Naphthalene	mg/kg	0.1	<0.1	4	101
		2-methylnaphthalene	mg/kg	0.1	0.2	-	-
		1-methylnaphthalene	mg/kg	0.1	0.2	-	-
		Acenaphthylene	mg/kg	0.1	<0.1	4	106
		Acenaphthene	mg/kg	0.1	<0.1	4	100
		Fluorene	mg/kg	0.1	<0.1	-	-
		Phenanthrene	mg/kg	0.1	1.0	4	118
		Anthracene	mg/kg	0.1	<0.1	4	116
		Fluoranthene	mg/kg	0.1	<0.1	4	107
		Pyrene	mg/kg	0.1	<0.1	4	85
		Benzo(a)anthracene	mg/kg	0.1	0.1	-	-
		Chrysene	mg/kg	0.1	<0.1	-	-
		Benzo(b&j)fluoranthene	mg/kg	0.1	0.1	-	-
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	-	-
		Benzo(a)pyrene	mg/kg	0.1	<0.1	4	124
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	-	-
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	-	-
		Benzo(ghi)perylene	mg/kg	0.1	0.1	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	<0.2	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	-	-
		Total PAH (18)	mg/kg	0.8	1.5	-	-
		Surrogates					
		d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	-	88
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	-	84
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	-	106

PCBs in Soil

Method: ME-(AU)-[ENV]AN400/AN420

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE158465.016	LB112542.026	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	112
		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	-	94
SE158465.039	LB112544.024	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	-	-

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.

PCBs in Soil (continued)

Method: ME-(AU)-[ENV]AN400/AN420

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE158465.039	LB112544.024	Arochlor 1254	mg/kg	0.2	<0.2	-	-
		Arochlor 1260	mg/kg	0.2	<0.2	0.4	114
		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	-	73

Total Cyanide in soil by Discrete Analyser (Aquakem)

Method: ME-(AU)-[ENV]AN077/AN287

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE158465.027	LB112619.021	Total Cyanide	mg/kg	0.5	<0.5	<0.5	0.25	85
SE158465.050	LB112679.015	Total Cyanide	mg/kg	0.5	<0.5	<0.5	0.25	80
SE158465.056	LB112722.015	Total Cyanide	mg/kg	0.5	<0.5	<0.5	0.25	97

Total Phenolics in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE158465.032	LB112723.015	Total Phenols	mg/kg	5	<5	<5	2.5	91
SE158465.056	LB112924.012	Total Phenols	mg/kg	5	<5	<5	2.5	95
SE158660.019	LB112876.015	Total Phenols	mg/kg	5	<5	0.4	2.5	86

Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN400/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE158431.002	LB112698.004	Arsenic, As	mg/kg	3	37	<3	50	71
		Cadmium, Cd	mg/kg	0.3	40	<0.3	50	80
		Chromium, Cr	mg/kg	0.3	41	6.6	50	69 @
		Copper, Cu	mg/kg	0.5	51	20	50	62 @
		Lead, Pb	mg/kg	1	45	5	50	81
		Nickel, Ni	mg/kg	0.5	40	<0.5	50	80
		Zinc, Zn	mg/kg	0.5	40	<0.5	50	78
SE158465.008	LB112699.004	Arsenic, As	mg/kg	3	62	15	50	92
		Cadmium, Cd	mg/kg	0.3	47	<0.3	50	93
		Chromium, Cr	mg/kg	0.3	53	7.8	50	90
		Copper, Cu	mg/kg	0.5	59	13	50	92
		Lead, Pb	mg/kg	1	89	39	50	99
		Nickel, Ni	mg/kg	0.5	52	7.5	50	90
		Zinc, Zn	mg/kg	0.5	85	41	50	88
SE158465.027	LB112700.004	Arsenic, As	mg/kg	3	47	8	50	77
		Cadmium, Cd	mg/kg	0.3	42	<0.3	50	84
		Chromium, Cr	mg/kg	0.3	45	5.1	50	80
		Copper, Cu	mg/kg	0.5	58	19	50	77
		Lead, Pb	mg/kg	1	59	21	50	76
		Nickel, Ni	mg/kg	0.5	49	9.6	50	79
		Zinc, Zn	mg/kg	0.5	78	42	50	72
SE158465.046	LB112701.004	Arsenic, As	mg/kg	3	42	4	50	78
		Cadmium, Cd	mg/kg	0.3	39	0.4	50	77
		Chromium, Cr	mg/kg	0.3	89	48	50	83
		Copper, Cu	mg/kg	0.5	76	27	50	97
		Lead, Pb	mg/kg	1	49	14	50	70
		Nickel, Ni	mg/kg	0.5	110	59	50	100
		Zinc, Zn	mg/kg	0.5	100	51	50	99

TRH (Total Recoverable Hydrocarbons) in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE158389.001	LB112541.026	TRH C10-C14	mg/kg	20	<20	40	98
		TRH C15-C28	mg/kg	45	140	40	45 @
		TRH C29-C36	mg/kg	45	<45	40	78
		TRH C37-C40	mg/kg	100	<100	-	-
		TRH C10-C36 Total	mg/kg	110	180	-	-
		TRH C10-C40 Total	mg/kg	210	<210	-	-
		TRH F Bands	mg/kg	25	<25	40	100
		TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	<25	-	-
		TRH >C16-C34 (F3)	mg/kg	90	170	40	35 @
		TRH >C34-C40 (F4)	mg/kg	120	<120	-	-

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.

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

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

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE158465.016	LB112542.026	TRH C10-C14	mg/kg	20	<20	40	100
		TRH C15-C28	mg/kg	45	<45	40	95
		TRH C29-C36	mg/kg	45	<45	40	95
		TRH C37-C40	mg/kg	100	<100	-	-
		TRH C10-C36 Total	mg/kg	110	<110	-	-
		TRH C10-C40 Total	mg/kg	210	<210	-	-
		TRH F Bands					
		TRH >C10-C16 (F2)	mg/kg	25	<25	40	100
		TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	<25	-	-
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	98
SE158465.039	LB112544.024	TRH >C34-C40 (F4)	mg/kg	120	<120	-	-
		TRH C10-C14	mg/kg	20	<20	40	100
		TRH C15-C28	mg/kg	45	<45	40	55 @
		TRH C29-C36	mg/kg	45	<45	40	90
		TRH C37-C40	mg/kg	100	<100	-	-
		TRH C10-C36 Total	mg/kg	110	<110	-	-
		TRH C10-C40 Total	mg/kg	210	<210	-	-
		TRH F Bands					
		TRH >C10-C16 (F2)	mg/kg	25	<25	40	108
		TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	<25	-	-
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	53 @
		TRH >C34-C40 (F4)	mg/kg	120	<120	-	-

VOC's in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%	
SE158465.001	LB112524.004	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	-	-	
			1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	-	-	
			cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	-	-	
			trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	-	-	
			1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	-	-	
		Aliphatics	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	-	-	
			Chloromethane	mg/kg	1	<1	<1	-	-	
			Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	-	-	
			Bromomethane	mg/kg	1	<1	<1	-	-	
			Chloroethane	mg/kg	1	<1	<1	-	-	
			Trichlorofluoromethane	mg/kg	1	<1	<1	-	-	
			Iodomethane	mg/kg	5	<5	<5	-	-	
			1,1-dichloroethene	mg/kg	0.1	2.8	<0.1	2.56	109	
			Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	-	-	
			Allyl chloride	mg/kg	0.1	<0.1	<0.1	-	-	
			trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	-	-	
			1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1	-	-	
			cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	-	-	
			Bromochloromethane	mg/kg	0.1	<0.1	<0.1	-	-	
			1,2-dichloroethane	mg/kg	0.1	2.4	<0.1	2.56	93	
			1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	-	-	
			1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	-	-	
			Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	-	-	
			Dibromomethane	mg/kg	0.1	<0.1	<0.1	-	-	
			Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	2.0	<0.1	2.56	79	
			1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	-	-	
			1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	-	-	
			Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	-	-	
			1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	-	-	
			cis-1,4-dichloro-2-butene	mg/kg	1	<1	<1	-	-	
			1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	-	-	
			1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	-	-	
			trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	-	-	
			1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	-	-	
			Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	-	-	
			Halogenated Aromatics	Chlorobenzene	mg/kg	0.1	2.6	<0.1	2.56	101
				Bromobenzene	mg/kg	0.1	<0.1	<0.1	-	-
				2-chlorotoluene	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.

VOC's in Soil (continued)

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE158465.001	LB112524.004	Halogenated	4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	-
		Aromatics	1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-
			1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-
			1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-
			1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	-
			1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	-
		Monocyclic	Benzene	mg/kg	0.1	1.8	<0.1	2.9
		Aromatic	Toluene	mg/kg	0.1	1.9	<0.1	2.9
			Ethylbenzene	mg/kg	0.1	2.2	<0.1	2.9
			m/p-xylene	mg/kg	0.2	4.6	<0.2	5.8
			o-xylene	mg/kg	0.1	2.5	<0.1	2.9
			Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	-
			Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	-
			n-propylbenzene	mg/kg	0.1	<0.1	<0.1	-
			1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	-
			tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	-
			1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	-
			sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	-
			p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	-
			n-butylbenzene	mg/kg	0.1	<0.1	<0.1	-
		Nitrogenous	Acrylonitrile	mg/kg	0.1	<0.1	<0.1	-
		Compounds	2-nitropropane	mg/kg	10	<10	<10	-
		Oxygenated	Acetone (2-propanone)	mg/kg	10	<10	<10	-
		Compounds	MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	-
			Vinyl acetate	mg/kg	10	<10	<10	-
			MEK (2-butanone)	mg/kg	10	<10	<10	-
			MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	-
			2-hexanone (MBK)	mg/kg	5	<5	<5	-
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	-
		Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5	<0.5	-
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	5.1	3.9	-
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.2	5.7	-
			d8-toluene (Surrogate)	mg/kg	-	5.1	4.3	-
			Bromofluorobenzene (Surrogate)	mg/kg	-	3.9	5.1	-
		Totals	Total Xylenes*	mg/kg	0.3	7.1	<0.3	-
			Total BTEX	mg/kg	0.6	13	<0.6	-
			Total VOC*	mg/kg	24	25	<24	-
			Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	<3.0	-
			Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	12	<1.8	-
			Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	12	<1.8	-
		Trihalomethanes	Chloroform	mg/kg	0.1	2.3	<0.1	2.56
			Bromodichloromethane	mg/kg	0.1	<0.1	<0.1	-
			Chlorodibromomethane	mg/kg	0.1	<0.1	<0.1	-
			Bromoform	mg/kg	0.1	<0.1	<0.1	-
SE158465.033	LB112529.004	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	-
			1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	-
			cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	-
			trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	-
			1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	-
		Halogenated	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	-
		Aliphatics	Chloromethane	mg/kg	1	<1	<1	-
			Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	-
			Bromomethane	mg/kg	1	<1	<1	-
			Chloroethane	mg/kg	1	<1	<1	-
			Trichlorofluoromethane	mg/kg	1	<1	<1	-
			Iodomethane	mg/kg	5	<5	<5	-
			1,1-dichloroethene	mg/kg	0.1	NVL	NVL	NVL
			Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	-
			Allyl chloride	mg/kg	0.1	<0.1	<0.1	-
			trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	-
			1,1-dichloroethane	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.

VOC's in Soil (continued)

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE158465.033	LB112529.004	Halogenated	cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	-
		Aliphatics	Bromochloromethane	mg/kg	0.1	<0.1	<0.1	-
			1,2-dichloroethane	mg/kg	0.1	2.4	<0.1	2.56
			1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	-
			1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	-
			Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	-
			Dibromomethane	mg/kg	0.1	<0.1	<0.1	-
			Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	2.1	<0.1	2.56
			1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	-
			1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	-
			Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	-
			1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	-
			cis-1,4-dichloro-2-butene	mg/kg	1	<1	<1	-
			1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	-
			1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	-
			trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	-
			1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	-
			Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	-
		Halogenated	Chlorobenzene	mg/kg	0.1	2.7	<0.1	2.56
		Aromatics	Bromobenzene	mg/kg	0.1	<0.1	<0.1	-
			2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	-
			4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	-
			1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-
			1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-
			1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-
			1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	-
			1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	-
		Monocyclic	Benzene	mg/kg	0.1	1.9	<0.1	2.9
		Aromatic	Toluene	mg/kg	0.1	1.8	<0.1	2.9
			Ethylbenzene	mg/kg	0.1	2.0	<0.1	2.9
			m/p-xylene	mg/kg	0.2	4.2	<0.2	5.8
			o-xylene	mg/kg	0.1	2.2	<0.1	2.9
			Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	-
			Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	-
			n-propylbenzene	mg/kg	0.1	<0.1	<0.1	-
			1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	-
			tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	-
			1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	-
			sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	-
			p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	-
			n-butylbenzene	mg/kg	0.1	<0.1	<0.1	-
		Nitrogenous	Acrylonitrile	mg/kg	0.1	<0.1	<0.1	-
		Compounds	2-nitropropane	mg/kg	10	<10	<10	-
		Oxygenated	Acetone (2-propanone)	mg/kg	10	<10	<10	-
		Compounds	MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	-
			Vinyl acetate	mg/kg	10	<10	<10	-
			MEK (2-butanone)	mg/kg	10	<10	<10	-
			MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	-
			2-hexanone (MBK)	mg/kg	5	<5	<5	-
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	-
		Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5	<0.5	-
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	5.2	5.8	-
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	5.2	5.1	-
			d8-toluene (Surrogate)	mg/kg	-	4.2	4.3	-
			Bromofluorobenzene (Surrogate)	mg/kg	-	5.5	5.4	-
		Totals	Total Xylenes*	mg/kg	0.3	6.4	<0.3	-
			Total BTEX	mg/kg	0.6	12	<0.6	-
			Total VOC*	mg/kg	24	<24	<24	-
			Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	<3.0	-
			Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	11	<1.8	-
			Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	11	<1.8	-

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%	
SE158465.033	LB112529.004	Trihalomethanes	Chloroform	mg/kg	0.1	2.3	<0.1	2.56	88
			Bromodichloromethane	mg/kg	0.1	<0.1	<0.1	-	-
			Chlorodibromomethane	mg/kg	0.1	<0.1	<0.1	-	-
			Bromoform	mg/kg	0.1	<0.1	<0.1	-	-

Volatile Petroleum Hydrocarbons in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%		
SE158465.001	LB112524.004	TRH C6-C10	mg/kg	25	<25	<25	24.65	84		
		TRH C6-C9	mg/kg	20	<20	<20	23.2	67		
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.5	4.0	-	90	
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	3.5	5.1	-	70	
			d8-toluene (Surrogate)	mg/kg	-	3.8	3.9	-	76	
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.3	4.6	-	85	
		VPH F	Benzene (F0)	mg/kg	0.1	1.8	<0.1	-	-	
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	7.25	108	
		SE158465.033	LB112529.004	TRH C6-C10	mg/kg	25	<25	<25	24.65	80
				TRH C6-C9	mg/kg	20	<20	<20	23.2	65
Surrogates	Dibromofluoromethane (Surrogate)			mg/kg	-	6.1	5.2	-	123	
	d4-1,2-dichloroethane (Surrogate)			mg/kg	-	5.8	5.9	-	115	
	d8-toluene (Surrogate)			mg/kg	-	3.8	3.8	-	75	
	Bromofluorobenzene (Surrogate)			mg/kg	-	4.3	4.6	-	85	
VPH F	Benzene (F0)			mg/kg	0.1	1.9	<0.1	-	-	
Bands	TRH C6-C10 minus BTEX (F1)			mg/kg	25	<25	<25	7.25	106	

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 : <http://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 .
- 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.

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24/10/16 @ 3:55

SGS EHS Alexandria Laboratory



SE158465 COC

Received: 21-Oct-2016

GEOTECHNIQUE PTY LTD

Laboratory Test Request / Chain of Custody Record

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Page 1 of 6

TO: SGS ENVIRONMENTAL SERVICES UNIT 16 33 MADDOX STREET ALEXANDRIA NSW 2015 PH: 02 8594 0400 FAX: 02 8594 0499 ATTN: MS EMILY YIN	Sampling By: LY Job No: 13603/3 Project: Project Manager: JX Location: Liverpool
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Sampling details					Sample type		Results required by: Standard Turnaround Time									
Location	Depth (m)	Date	Time	Soil	Water	Metals As, Cd, Cr, Cu, Pb, Hg, Ni and Zn	TPH* & BTEX	PAH	OCP & PCB	Phenols & Cyanides	pH, CEC	ASBESTOS 0.001% w/w	BTEX	VOC	KEEP SAMPLE	
1 BH1	0.15-0.45	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓	✓	✓		✓	YES	
BH1	0.55-0.65	20/10/2016	-	SG											YES	
2 BH2	0.15-0.45	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓		✓		✓	YES	
BH2	0.55-0.65	20/10/2016	-	SG											YES	
3 BH3	0.13-0.43	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓		✓		✓	YES	
BH3	0.65-0.75	20/10/2016	-	SG											YES	
4 BH4	0.15-0.25	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓	✓	✓		✓	YES	
5 BH4	0.25-0.35	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓	✓	✓			YES	
6 BH4	0.35-0.65	20/10/2016	-	SG/SP		✓		✓				✓			YES	
7 BH4	1.0-1.3	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓	✓	✓		✓	YES	
8 BH4	1.5-1.8	20/10/2016	-	SG/SP		✓		✓				✓			YES	
9 BH4	2.0-2.3	20/10/2016	-	SG/SP		✓		✓				✓			YES	

Relinquished by			Received by		
Name	Signature	Date	Name	Signature	Date
JOHN XU	JX	24/10/2016	Suba	[Signature]	21/10/16 @ 1:35

Legend:

WG	Water sample, glass bottle	SG	Soil sample (glass jar)	SP	Soil sample (plastic bag)	* Purge & Trap
WP	Water sample, plastic bottle			✓	Test required	

Lemko Place
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--	---

Sampling details				Sample type		Results required by: Standard Turnaround Time									
Location	Depth (m)	Date	Time	Soil	Water	Metals As, Cd, Cr, Cu, Pb, Hg, Ni and Zn	TPH* & BTEX	PAH	OCP & PCB	Phenols & Cyanides	pH, CEC	ASBESTOS 0.001% w/w	BTEX	VOC	KEEP SAMPLE
BH4	2.55-2.65	20/10/2016	-	SG											YES
10 BH5	0.15-0.45	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓	✓	✓		✓	YES
11 BH5	1.0-1.3	20/10/2016	-	SG/SP		✓		✓				✓			YES
12 BH5	1.5-1.8	20/10/2016	-	SG/SP		✓		✓				✓			YES
BH5	2.05-2.15	20/10/2016	-	SG											YES
13 BH6	0.15-0.25	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓		✓		✓	YES
14 BH6	0.25-0.4	20/10/2016	-	SG/SP		✓	✓	✓	✓			✓			YES
15 BH6	0.4-0.7	20/10/2016	-	SG/SP		✓		✓				✓			YES
16 BH6	1.0-1.3	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓		✓			YES
17 BH6	1.5-1.8	20/10/2016	-	SG/SP		✓		✓				✓			YES
BH6	1.85-1.95	20/10/2016	-	SG											YES
18 BH7	0.15-0.25	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓	✓	✓		✓	YES

Relinquished by			Received by		
Name	Signature	Date	Name	Signature	Date
JOHN XU	JX	24/10/2016	Suba	P. Feby	21/10/16 @ 1:35

Legend:

WG	Water sample, glass bottle	SG	Soil sample (glass jar)	SP	Soil sample (plastic bag)	* Purge & Trap
WP	Water sample, plastic bottle			✓	Test required	

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--	---

Sampling details					Sample type		Results required by: Standard Turnaround Time									
Location	Depth (m)	Date	Time	Soil	Water	Metals As, Cd, Cr, Cu, Pb, Hg, Ni and Zn	TPH* & BTEX	PAH	OCP & PCB	Phenols & Cyanides	pH, CEC	ASBESTOS 0.001% w/w	BTEX	VOC	KEEP SAMPLE	
19 BH7	0.25-0.35	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓	✓	✓			YES	
20 BH7	0.35-0.65	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓	✓	✓			YES	
21 BH7	1.4-1.7	20/10/2016	-	SG/SP		✓					✓	✓			YES	
BH7	1.85-1.95	20/10/2016	-	SG											YES	
22 BH8	0.15-0.25	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓	✓	✓		✓	YES	
23 BH8	0.25-0.5	20/10/2016	-	SG/SP		✓		✓				✓			YES	
24 BH8	0.5-0.8	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓		✓			YES	
25 BH8	0.9-1.2	20/10/2016	-	SG/SP		✓						✓			YES	
BH8	1.25-1.35	20/10/2016	-	SG											YES	
26 BH9	0.15-0.25	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓		✓			YES	
27 BH9	0.25-0.5	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓	✓	✓		✓	YES	
28 BH9	0.5-0.8	20/10/2016	-	SG/SP		✓		✓				✓			YES	

Relinquished by			Received by		
Name	Signature	Date	Name	Signature	Date
JOHN XU	JX	24/10/2016	Suba	P. Suba	21/10/16 @1:35

Legend:

WG	Water sample, glass bottle	SG	Soil sample (glass jar)	SP	Soil sample (plastic bag)	* Purge & Trap
WP	Water sample, plastic bottle			✓	Test required	

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TO: SGS ENVIRONMENTAL SERVICES UNIT 16 33 MADDOX STREET ALEXANDRIA NSW 2015 PH: 02 8594 0400 FAX: 02 8594 0499 ATTN: MS EMILY YIN	Sampling By: LY Job No: 13603/3 Project: Project Manager: JX Location: Liverpool
--	---

Sampling details				Sample type		Results required by: Standard Turnaround Time									
Location	Depth (m)	Date	Time	Soil	Water	Metals As, Cd, Cr, Cu, Pb, Hg, Ni and Zn	TPH* & BTEX	PAH	OCP & PCB	Phenols & Cyanides	pH, CEC	ASBESTOS 0.001% w/w	BTEX	VOC	KEEP SAMPLE
29 BH9	1.0-1.3	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓	✓	✓			YES
30 BH9	1.5-1.8	20/10/2016	-	SG/SP		✓	✓	✓				✓			YES
31 BH9	2.0-2.3	20/10/2016	-	SG/SP		✓	✓	✓	✓			✓			YES
32 BH9	2.5-2.7	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓		✓			YES
BH9	2.75-2.85	20/10/2016	-	SG											YES
33 BH10	0.15-0.45	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓		✓		✓	YES
34 BH10	0.5-0.8	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓		✓			YES
35 BH10	1.0-1.3	20/10/2016	-	SG/SP		✓		✓				✓			YES
36 BH10	1.5-1.8	20/10/2016	-	SG/SP		✓	✓	✓	✓			✓			YES
37 BH10	2.0-2.3	20/10/2016	-	SG/SP		✓		✓			✓	✓			YES
38 BH10	2.7-3.0	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓	✓	✓		✓	YES
BH10	3.05-3.15	20/10/2016	-	SG											YES

Relinquished by				Received by			
Name		Signature		Name		Signature	
JOHN XU		JX		Suba		21/10/16 @ 1.35	
		Date				Date	
		24/10/2016					

Legend:

WG	Water sample, glass bottle	SG	Soil sample (glass jar)	SP	Soil sample (plastic bag)	* Purge & Trap
WP	Water sample, plastic bottle			✓	Test required	

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--	---

Sampling details				Sample type		Results required by: Standard Turnaround Time									
Location	Depth (m)	Date	Time	Soil	Water	Metals As, Cd, Cr, Cu, Pb, Hg, Ni and Zn	TPH* & BTEX	PAH	OCP & PCB	Phenols & Cyanides	pH, CEC	ASBESTOS 0.001% w/w	BTEX	VOC	KEEP SAMPLE
39 BH11	0.15-0.25	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓	✓	✓		✓	YES
40 BH11	0.25-0.55	20/10/2016	-	SG/SP		✓		✓				✓			YES
41 BH11	0.8-1.1	20/10/2016	-	SG/SP		✓		✓				✓			YES
42 BH11	1.2-1.5	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓		✓			YES
43 BH11	1.7-2.2	20/10/2016	-	SG/SP		✓		✓				✓			YES
44 BH11	2.5-2.8	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓		✓			YES
BH11	3.15-3.25	20/10/2016	-	SG											YES
45 BH12	0.15-0.45	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓	✓	✓		✓	YES
46 BH12	1.0-1.3	20/10/2016	-	SG/SP		✓		✓				✓			YES
BH12	1.45-1.55	20/10/2016	-	SG											YES
47 BH13	0-0.15	20/10/2016	-	SG/SP		✓						✓			YES
48 BH13	0.2-0.5	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓		✓		✓	YES

Relinquished by			Received by		
Name	Signature	Date	Name	Signature	Date
JOHN XU	JX	24/10/2016	Suba	[Signature]	21/10/16 @ 1:35

Legend:

WG	Water sample, glass bottle	SG	Soil sample (glass jar)	SP	Soil sample (plastic bag)	* Purge & Trap
WP	Water sample, plastic bottle			✓	Test required	

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--	---

Sampling details					Sample type		Results required by: Standard Turnaround Time									
Location	Depth (m)	Date	Time	Soil	Water	Metals As, Cd, Cr, Cu, Pb, Hg, Ni and Zn	TPH* & BTEX	PAH	OCP & PCB	Phenols & Cyanides	pH, CEC	ASBESTOS 0.001% w/w	BTEX	VOC	KEEP SAMPLE	
49 BH13	1.0-1.3	20/10/2016	-	SG/SP		✓		✓			✓	✓			YES	
50 BH13	2.0-2.3	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓		✓			YES	
BH13	2.55-2.65	20/10/2016	-	SG											YES	
51 BH14	0-0.15	20/10/2016	-	SG/SP		✓						✓			YES	
52 BH14	0.5-0.8	20/10/2016	-	SG/SP		✓	✓	✓	✓	✓	✓	✓			YES	
53 BH14	1.0-1.3	20/10/2016	-	SG/SP		✓						✓			YES	
54 BH14	2.05-2.15	20/10/2016	-	SG				✓							YES	
Duplicate D1	-	20/10/2016	-	SG		✓	✓	✓	✓	✓					YES	
Duplicate D2	-	20/10/2016	-	SG											YES	
55 Duplicate D3	-	20/10/2016	-	SG		✓		✓							YES	
Duplicate D4	-	20/10/2016	-	SG											YES	
Duplicate D5	-	20/10/2016	-	SG											YES	
56 Duplicate D6	-	20/10/2016	-	SG		✓	✓	✓	✓	✓				✓	YES	
57 Rinsate R1		20/10/2016			WG/vial	✓	✓	✓							YES	
58 Trip Spike TS1													✓		YES	

Relinquished by			Received by		
Name	Signature	Date	Name	Signature	Date
JOHN XU	JX	24/10/2016	Suba	[Signature]	21/10/16 01:35

Legend:

WG	Water sample, glass bottle	SG	Soil sample (glass jar)	SP	Soil sample (plastic bag)	* Purge & Trap
WP	Water sample, plastic bottle			✓	Test required	



SAMPLE RECEIPT ADVICE

SE158465

CLIENT DETAILS

Contact John Xu
Client Geotechnique
Address P.O. Box 880
PENRITH NSW 2751

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

Project **13603-3 Liverpool**
Order Number (Not specified)
Samples 59

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 Fri 21/10/2016
Report Due Mon 31/10/2016
SGS Reference **SE158465**

SUBMISSION DETAILS

This is to confirm that 59 samples were received on Friday 21/10/2016. Results are expected to be ready by Monday 31/10/2016. Please quote SGS reference SE158465 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	57 Soil, 1 Water	Type of documentation received	COC
Date documentation received	24/10/16@3:55pm	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	7.8°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

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

17 soil samples have been placed on hold.

To the extent not inconsistent with the other provisions of this document and unless specifically agreed otherwise in writing by SGS, all SGS services are rendered in accordance with the applicable SGS General Conditions of Service accessible at <http://www.sgs.com/en/terms-and-conditions>, as at the date of this document. Attention is drawn to the limitations of liability and to the clauses of indemnification.

CLIENT DETAILS

Client **Geotechnique**

Project **13603-3 Liverpool**

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Cyanide in soil by Discrete Analyser	Total Phenolics in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	BH1 0.15-0.45	28	26	11	3	1	10	82	8
002	BH2 0.15-0.45	28	26	11	3	1	10	82	8
003	BH3 0.13-0.43	28	26	11	3	1	10	82	8
004	BH4 0.15-0.25	28	26	11	3	1	10	82	8
005	BH4 0.25-0.35	28	26	11	3	1	10	12	8
006	BH4 0.35-0.65	-	26	-	-	-	-	-	-
007	BH4 1.0-1.3	28	26	11	3	1	10	82	8
008	BH4 1.5-1.8	-	26	-	-	-	-	-	-
009	BH4 2.0-2.3	-	26	-	-	-	-	-	-
010	BH5 0.15-0.45	28	26	11	3	1	10	82	8
011	BH5 1.0-1.3	-	26	-	-	-	-	-	-
012	BH5 1.5-1.8	-	26	-	-	-	-	-	-
013	BH6 0.15-0.25	28	26	11	3	1	10	82	8
014	BH6 0.25-0.4	28	26	11	-	-	10	12	8
015	BH6 0.4-0.7	-	26	-	-	-	-	-	-
016	BH6 1.0-1.3	28	26	11	3	1	10	12	8
017	BH6 1.5-1.8	-	26	-	-	-	-	-	-
018	BH7 0.15-0.25	28	26	11	3	1	10	82	8
019	BH7 0.25-0.35	28	26	11	3	1	10	12	8
020	BH7 0.35-0.65	28	26	11	3	1	10	12	8
022	BH8 0.15-0.25	28	26	11	3	1	10	82	8
023	BH8 0.25-0.5	-	26	-	-	-	-	-	-
024	BH8 0.5-0.8	28	26	11	3	1	10	12	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 **13603-3 Liverpool**

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Cyanide in soil by Discrete Analyser	Total Phenolics in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
026	BH9 0.15-0.25	28	26	11	3	1	10	12	8
027	BH9 0.25-0.5	28	26	11	3	1	10	82	8
028	BH9 0.5-0.8	-	26	-	-	-	-	-	-
029	BH9 1.0-1.3	28	26	11	3	1	10	12	8
030	BH9 1.5-1.8	-	26	-	-	-	-	-	-
031	BH9 2.0-2.3	28	26	11	-	-	10	12	8
032	BH9 2.5-2.7	28	26	11	3	1	10	12	8
033	BH10 0.15-0.45	28	26	11	3	1	10	82	8
034	BH10 0.5-0.8	28	26	11	3	1	10	12	8
035	BH10 1.0-1.3	-	26	-	-	-	-	-	-
036	BH10 1.5-1.8	28	26	11	-	-	10	12	8
037	BH10 2.0-2.3	-	26	-	-	-	-	-	-
038	BH10 2.7-3.0	28	26	11	3	1	10	82	8
039	BH11 0.15-0.25	28	26	11	3	1	10	82	8
040	BH11 0.25-0.55	-	26	-	-	-	-	-	-
041	BH11 0.8-1.1	-	26	-	-	-	-	-	-
042	BH11 1.2-1.5	28	26	11	3	1	10	12	8
043	BH11 1.7-2.2	-	26	-	-	-	-	-	-
044	BH11 2.5-2.8	28	26	11	3	1	10	12	8
045	BH12 0.15-0.45	28	26	11	3	1	10	82	8
046	BH12 1.0-1.3	-	26	-	-	-	-	-	-
048	BH13 0.2-0.5	28	26	11	3	1	10	82	8

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
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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 **13603-3 Liverpool**

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Cyanide in soil by Discrete Analyser	Total Phenolics in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
049	BH13 1.0-1.3	-	26	-	-	-	-	-	-
050	BH13 2.0-2.3	28	26	11	3	1	10	12	8
052	BH14 0.5-0.8	28	26	11	3	1	10	12	8
054	Duplicate D1	28	26	11	3	1	10	12	8
055	Duplicate D3	-	26	-	-	-	-	-	-
056	Duplicate D6	28	26	11	3	1	10	82	8
058	Trip Spike TS1	-	-	-	-	-	-	12	-
059	BH14 2.05-2.15	-	26	-	-	-	-	-	-

CONTINUED OVERLEAF

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Testing as per this table shall commence immediately unless the client intervenes with a correction .

CLIENT DETAILS

Client **Geotechnique**

Project **13603-3 Liverpool**

SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Gravimetric Determination of Asbestos in Soil	Mercury in Soil	Moisture Content	pH in soil (1:5)	Total Recoverable Metals in Soil/Waste
001	BH1 0.15-0.45	13	9	1	1	1	7
002	BH2 0.15-0.45	-	9	1	1	-	7
003	BH3 0.13-0.43	-	9	1	1	-	7
004	BH4 0.15-0.25	13	9	1	1	1	7
005	BH4 0.25-0.35	13	9	1	1	1	7
006	BH4 0.35-0.65	-	9	1	1	-	7
007	BH4 1.0-1.3	13	9	1	1	1	7
008	BH4 1.5-1.8	-	9	1	1	-	7
009	BH4 2.0-2.3	-	9	1	1	-	7
010	BH5 0.15-0.45	13	9	1	1	1	7
011	BH5 1.0-1.3	-	9	1	1	-	7
012	BH5 1.5-1.8	-	9	1	1	-	7
013	BH6 0.15-0.25	-	9	1	1	-	7
014	BH6 0.25-0.4	-	9	1	1	-	7
015	BH6 0.4-0.7	-	9	1	1	-	7
016	BH6 1.0-1.3	-	9	1	1	-	7
017	BH6 1.5-1.8	-	9	1	1	-	7
018	BH7 0.15-0.25	13	9	1	1	1	7
019	BH7 0.25-0.35	13	9	1	1	1	7
020	BH7 0.35-0.65	-	9	1	1	-	7
021	BH7 1.4-1.7	13	9	1	1	1	7
022	BH8 0.15-0.25	13	9	1	1	1	7
023	BH8 0.25-0.5	-	9	1	1	-	7
024	BH8 0.5-0.8	-	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 **13603-3 Liverpool**

SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Gravimetric Determination of Asbestos in Soil	Mercury in Soil	Moisture Content	pH in soil (1:5)	Total Recoverable Metals in Soil/Waste
025	BH8 0.9-1.2	-	9	1	1	-	7
026	BH9 0.15-0.25	-	9	1	1	-	7
027	BH9 0.25-0.5	13	9	1	1	1	7
028	BH9 0.5-0.8	-	9	1	1	-	7
029	BH9 1.0-1.3	13	9	1	1	1	7
030	BH9 1.5-1.8	-	9	1	1	-	7
031	BH9 2.0-2.3	-	9	1	1	-	7
032	BH9 2.5-2.7	-	9	1	1	-	7
033	BH10 0.15-0.45	-	9	1	1	-	7
034	BH10 0.5-0.8	-	9	1	1	-	7
035	BH10 1.0-1.3	-	9	1	1	-	7
036	BH10 1.5-1.8	-	9	1	1	-	7
037	BH10 2.0-2.3	13	9	1	1	1	7
038	BH10 2.7-3.0	13	9	1	1	1	7
039	BH11 0.15-0.25	13	9	1	1	1	7
040	BH11 0.25-0.55	-	9	1	1	-	7
041	BH11 0.8-1.1	-	9	1	1	-	7
042	BH11 1.2-1.5	-	9	1	1	-	7
043	BH11 1.7-2.2	-	9	1	1	-	7
044	BH11 2.5-2.8	-	9	1	1	-	7
045	BH12 0.15-0.45	13	9	1	1	1	7
046	BH12 1.0-1.3	-	9	1	1	-	7
047	BH13 0-0.15	-	9	1	1	-	7
048	BH13 0.2-0.5	-	9	1	1	-	7

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

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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 **13603-3 Liverpool**

SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Gravimetric Determination of Asbestos in Soil	Mercury in Soil	Moisture Content	pH in soil (1:5)	Total Recoverable Metals in Soil/Waste	VOCs in Water	Volatile Petroleum Hydrocarbons in Water
049	BH13 1.0-1.3	13	9	1	1	1	7	-	-
050	BH13 2.0-2.3	-	9	1	1	-	7	-	-
051	BH14 0-0.15	-	9	1	1	-	7	-	-
052	BH14 0.5-0.8	13	9	1	1	1	7	-	-
053	BH14 1.0-1.3	-	9	1	1	-	7	-	-
054	Duplicate D1	-	-	1	1	-	7	-	-
055	Duplicate D3	-	-	1	1	-	7	-	-
056	Duplicate D6	-	-	1	1	-	7	-	-
057	Rinsate R1	-	-	-	-	-	-	12	8
059	BH14 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 .



SAMPLE RECEIPT ADVICE

SE158465

CLIENT DETAILS

Client **Geotechnique**

Project **13603-3 Liverpool**

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
057	Rinsate R1	1	7	22	9

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

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Project **13603-3 Liverpool - Additional**
 Order Number (Not specified)
 Samples 59

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SGS Reference **SE158465A R0**
 Date Received 8/11/2016
 Date Reported 10/11/2016

COMMENTS

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

SIGNATORIES



Andy Sutton
 Senior Organic Chemist



Bennet Lo
 Senior Organic Chemist/Metals Chemist



Huong Crawford
 Production Manager



Ly Kim Ha
 Organic Section Head

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 9/11/2016

			BH14 1.0-1.3
			SOIL
			-
			20/10/2016
			SE158465A.053
PARAMETER	UOM	LOR	
Naphthalene	mg/kg	0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1
Fluorene	mg/kg	0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1
Anthracene	mg/kg	0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1
Pyrene	mg/kg	0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1
Chrysene	mg/kg	0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2



ANALYTICAL RESULTS

SE158465A R0

pH in soil (1:5) [AN101] Tested: 9/11/2016

			BH14 0-0.15
			SOIL
			-
			20/10/2016
			SE158465A.051
PARAMETER	UOM	LOR	
pH	pH Units	-	7.6

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122] Tested: 10/11/2016

			BH14 0-0.15
			SOIL
			-
			20/10/2016
			SE158465A.051
PARAMETER	UOM	LOR	
Exchangeable Sodium, Na	mg/kg	2	22
Exchangeable Sodium, Na	meq/100g	0.01	0.09
Exchangeable Sodium Percentage*	%	0.1	0.8
Exchangeable Potassium, K	mg/kg	2	270
Exchangeable Potassium, K	meq/100g	0.01	0.70
Exchangeable Potassium Percentage*	%	0.1	6.0
Exchangeable Calcium, Ca	mg/kg	2	1600
Exchangeable Calcium, Ca	meq/100g	0.01	8.0
Exchangeable Calcium Percentage*	%	0.1	69.0
Exchangeable Magnesium, Mg	mg/kg	2	340
Exchangeable Magnesium, Mg	meq/100g	0.02	2.8
Exchangeable Magnesium Percentage*	%	0.1	24.2
Cation Exchange Capacity	meq/100g	0.02	12

METHOD

METHODOLOGY SUMMARY

AN101

pH in Soil Sludge Sediment and Water: pH is measured electrometrically using a combination electrode and is calibrated against 3 buffers purchased commercially. For soils, sediments and sludges, an extract with water (or 0.01M CaCl₂) is made at a ratio of 1:5 and the pH determined and reported on the extract. Reference APHA 4500-H⁺.

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 Higginson, 1992, sections 15D3 and 15N1.-

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

Carcinogenic PAHs may be expressed as Benzo(a)pyrene equivalents by applying the BaP toxicity equivalence factor (NEPM 1999, June 2013, B7). These can be reported as the individual PAHs and as a sum of carcinogenic PAHs. The sum is reported three ways, the first assuming all <LOR results are zero, the second assuming all < LOR results are half the LOR and the third assuming all <LOR results are the LOR.

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.		

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

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

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

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

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

Note that in terms of units of radioactivity:

- 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 criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : <http://www.sgs.com.au/~media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf>

This document is issued, on the Client's behalf, by the Company under its General Conditions of Service available on request and accessible at <http://www.sgs.com/en/terms-and-conditions>. The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

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STATEMENT OF QA/QC PERFORMANCE

SE158465A R0

CLIENT DETAILS

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Project **13603-3 Liverpool - Additional**
Order Number (Not specified)
Samples 59

LABORATORY DETAILS

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SGS Reference **SE158465A R0**
Date Received 08 Nov 2016
Date Reported 10 Nov 2016

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 and was supplied by the Client.
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	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	1 item
	pH in soil (1:5)	1 item

SAMPLE SUMMARY

Sample counts by matrix	2 Soil	Type of documentation received	COC
Date documentation received	8/11/16@2:15pm	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	7.8°C
Sample container provider	SGS	Turnaround time requested	Two Days
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

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
BH14 0-0.15	SE158465A.051	LB113559	20 Oct 2016	08 Nov 2016	17 Nov 2016	10 Nov 2016	17 Nov 2016	10 Nov 2016

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
BH14 1.0-1.3	SE158465A.053	LB113461	20 Oct 2016	08 Nov 2016	03 Nov 2016	09 Nov 2016†	19 Dec 2016	10 Nov 2016

pH in soil (1:5)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH14 0-0.15	SE158465A.051	LB113484	20 Oct 2016	08 Nov 2016	27 Oct 2016	09 Nov 2016†	10 Nov 2016	09 Nov 2016

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH14 1.0-1.3	SE158465A.053	%	70 - 130%	76
d14-p-terphenyl (Surrogate)	BH14 1.0-1.3	SE158465A.053	%	70 - 130%	100
d5-nitrobenzene (Surrogate)	BH14 1.0-1.3	SE158465A.053	%	70 - 130%	72

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
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PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB113461.001	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
Surrogates	d5-nitrobenzene (Surrogate)	%	-	86
	2-fluorobiphenyl (Surrogate)	%	-	86
	d14-p-terphenyl (Surrogate)	%	-	106

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

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE158938.009	LB113461.014	Naphthalene	mg/kg	0.1	0	0	200	0
		2-methylnaphthalene	mg/kg	0.1	0	0	200	0
		1-methylnaphthalene	mg/kg	0.1	0	0	200	0
		Acenaphthylene	mg/kg	0.1	0	0	200	0
		Acenaphthene	mg/kg	0.1	0	0	200	0
		Fluorene	mg/kg	0.1	0	0	200	0
		Phenanthrene	mg/kg	0.1	0	0	200	0
		Anthracene	mg/kg	0.1	0	0	200	0
		Fluoranthene	mg/kg	0.1	0	0	200	0
		Pyrene	mg/kg	0.1	0	0	200	0
		Benzo(a)anthracene	mg/kg	0.1	0	0	200	0
		Chrysene	mg/kg	0.1	0	0	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	0	0	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	0	0	200	0
		Benzo(a)pyrene	mg/kg	0.1	0	0	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0	0	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	0	0	200	0
		Benzo(ghi)perylene	mg/kg	0.1	0	0	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	0	0	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	0.242	0.242	134	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	0.121	0.121	175	0
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.36	0.35	30	3
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.36	0.36	30	0
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.37	0.41	30	10

pH in soil (1:5)

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE158923.002	LB113484.014	pH	pH Units	-	8.712	8.574	31	2
SE158936.001	LB113484.024	pH	pH Units	-	7.7	7.8	31	1

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 %
LB113559.002	Exchangeable Sodium, Na	mg/kg	2	NA	390	80 - 120	99
	Exchangeable Potassium, K	mg/kg	2	NA	343	80 - 120	98
	Exchangeable Calcium, Ca	mg/kg	2	NA	2570	80 - 120	93
	Exchangeable Magnesium, Mg	mg/kg	2	NA	635	80 - 120	96

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB113461.002	Naphthalene	mg/kg	0.1	3.7	4	60 - 140	92
	Acenaphthylene	mg/kg	0.1	3.4	4	60 - 140	86
	Acenaphthene	mg/kg	0.1	3.8	4	60 - 140	94
	Phenanthrene	mg/kg	0.1	4.2	4	60 - 140	105
	Anthracene	mg/kg	0.1	4.8	4	60 - 140	119
	Fluoranthene	mg/kg	0.1	4.6	4	60 - 140	115
	Pyrene	mg/kg	0.1	3.1	4	60 - 140	79
	Benzo(a)pyrene	mg/kg	0.1	4.4	4	60 - 140	110
	Surrogates						
	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	74
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	76
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.6	0.5	40 - 130	116

pH in soil (1:5)

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB113484.003	pH	pH Units	-	7.4	7.415	98 - 102	100

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

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

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE158938.002	LB113461.018	Naphthalene	mg/kg	0.1	0	4	95
		2-methylnaphthalene	mg/kg	0.1	0	-	-
		1-methylnaphthalene	mg/kg	0.1	0	-	-
		Acenaphthylene	mg/kg	0.1	0	4	86
		Acenaphthene	mg/kg	0.1	0	4	91
		Fluorene	mg/kg	0.1	0	-	-
		Phenanthrene	mg/kg	0.1	0	4	116
		Anthracene	mg/kg	0.1	0	4	129
		Fluoranthene	mg/kg	0.1	0	4	120
		Pyrene	mg/kg	0.1	0	4	98
		Benzo(a)anthracene	mg/kg	0.1	0	-	-
		Chrysene	mg/kg	0.1	0	-	-
		Benzo(b&j)fluoranthene	mg/kg	0.1	0	-	-
		Benzo(k)fluoranthene	mg/kg	0.1	0	-	-
		Benzo(a)pyrene	mg/kg	0.1	0	4	108
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0	-	-
		Dibenzo(ah)anthracene	mg/kg	0.1	0	-	-
		Benzo(ghi)perylene	mg/kg	0.1	0	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	0	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	0.242	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	0.121	-	-
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.37	-	74
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.36	-	76
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.35	-	104

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 : <http://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 .
- 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, on the Client's behalf, by the Company under its General Conditions of Service, available on request and accessible at <http://www.sgs.com/en/terms-and-conditions>. The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

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Received: 08 – Nov – 2016

GFOTECHNIQUE PTY LTD

Laboratory Test Request / Chain of Custody Record

Tel: (02) 4722 2700
Fax: (02) 4722 6161
email: info@geotech.com.au

Page 1 of 1

Job No: 13603/3

Project:

Location: Liverpool

ATTN: MS EMILY YIN

[illegible]



SAMPLE RECEIPT ADVICE

SE158465A

CLIENT DETAILS

Contact John Xu
Client Geotechnique
Address P.O. Box 880
PENRITH NSW 2751

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

Project **13603-3 Liverpool - Additional**
Order Number (Not specified)
Samples 59

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 Tue 8/11/2016
Report Due Thu 10/11/2016
SGS Reference **SE158465A**

SUBMISSION DETAILS

This is to confirm that 59 samples were received on Tuesday 8/11/2016. Results are expected to be ready by Thursday 10/11/2016. Please quote SGS reference SE158465A when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	2 Soil	Type of documentation received	COC
Date documentation received	8/11/16@2:15pm	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	7.8°C
Sample container provider	SGS	Turnaround time requested	Two Days
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

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

To the extent not inconsistent with the other provisions of this document and unless specifically agreed otherwise in writing by SGS, all SGS services are rendered in accordance with the applicable SGS General Conditions of Service accessible at <http://www.sgs.com/en/terms-and-conditions>, as at the date of this document. Attention is drawn to the limitations of liability and to the clauses of indemnification.



SAMPLE RECEIPT ADVICE

SE158465A

CLIENT DETAILS

Client **Geotechnique**

Project **13603-3 Liverpool - Additional**

SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	pH in soil (1:5)
051	BH14 0-0.15	13	-	1
053	BH14 1.0-1.3	-	24	-

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 .



12 Ashley Street, Chatswood, NSW 2067
tel: +61 2 9910 6200

email: sydney@envirolab.com.au
envirolab.com.au

Envirolab Services Pty Ltd - Sydney | ABN 37 112 535 645

CERTIFICATE OF ANALYSIS

156006

Client:

Geotechnique Pty Ltd
PO Box 880
Penrith
NSW 2751

Attention: John Xu

Sample log in details:

Your Reference:	13603/3, Liverpool
No. of samples:	6 soils
Date samples received / completed instructions received	25/10/16 / 25/10/16

Analysis Details:

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

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

Report Details:

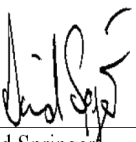
Date results requested by: / Issue Date:	1/11/16 / 31/10/16
Date of Preliminary Report:	Not Issued

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Accredited for compliance with ISO/IEC 17025 - Testing

Tests not covered by NATA are denoted with *.

Results Approved By:



David Springer
General Manager

Envirolab Reference: 156006
Revision No: R 00



VOCs in soil		
Our Reference:	UNITS	156006-4
Your Reference	-----	S4
	-	
Date Sampled	-----	20/10/2016
Type of sample		soil
Date extracted	-	26/10/2016
Date analysed	-	26/10/2016
Dichlorodifluoromethane	mg/kg	<1
Chloromethane	mg/kg	<1
Vinyl Chloride	mg/kg	<1
Bromomethane	mg/kg	<1
Chloroethane	mg/kg	<1
Trichlorofluoromethane	mg/kg	<1
1,1-Dichloroethene	mg/kg	<1
trans-1,2-dichloroethene	mg/kg	<1
1,1-dichloroethane	mg/kg	<1
cis-1,2-dichloroethene	mg/kg	<1
bromochloromethane	mg/kg	<1
chloroform	mg/kg	<1
2,2-dichloropropane	mg/kg	<1
1,2-dichloroethane	mg/kg	<1
1,1,1-trichloroethane	mg/kg	<1
1,1-dichloropropene	mg/kg	<1
Cyclohexane	mg/kg	<1
carbon tetrachloride	mg/kg	<1
Benzene	mg/kg	<0.2
dibromomethane	mg/kg	<1
1,2-dichloropropane	mg/kg	<1
trichloroethene	mg/kg	<1
bromodichloromethane	mg/kg	<1
trans-1,3-dichloropropene	mg/kg	<1
cis-1,3-dichloropropene	mg/kg	<1
1,1,2-trichloroethane	mg/kg	<1
Toluene	mg/kg	<0.5
1,3-dichloropropane	mg/kg	<1
dibromochloromethane	mg/kg	<1
1,2-dibromoethane	mg/kg	<1
tetrachloroethene	mg/kg	<1
1,1,1,2-tetrachloroethane	mg/kg	<1
chlorobenzene	mg/kg	<1
Ethylbenzene	mg/kg	<1
bromoform	mg/kg	<1
m+p-xylene	mg/kg	<2
styrene	mg/kg	<1
1,1,2,2-tetrachloroethane	mg/kg	<1
o-Xylene	mg/kg	<1

VOCs in soil Our Reference: Your Reference	UNITS ----- -	156006-4 S4
Date Sampled Type of sample	-----	20/10/2016 soil
1,2,3-trichloropropane	mg/kg	<1
isopropylbenzene	mg/kg	<1
bromobenzene	mg/kg	<1
n-propyl benzene	mg/kg	<1
2-chlorotoluene	mg/kg	<1
4-chlorotoluene	mg/kg	<1
1,3,5-trimethyl benzene	mg/kg	<1
tert-butyl benzene	mg/kg	<1
1,2,4-trimethyl benzene	mg/kg	<1
1,3-dichlorobenzene	mg/kg	<1
sec-butyl benzene	mg/kg	<1
1,4-dichlorobenzene	mg/kg	<1
4-isopropyl toluene	mg/kg	<1
1,2-dichlorobenzene	mg/kg	<1
n-butyl benzene	mg/kg	<1
1,2-dibromo-3-chloropropane	mg/kg	<1
1,2,4-trichlorobenzene	mg/kg	<1
hexachlorobutadiene	mg/kg	<1
1,2,3-trichlorobenzene	mg/kg	<1
Surrogate Dibromofluorometha	%	102
Surrogate aaa-Trifluorotoluene	%	78
Surrogate Toluene-d8	%	100
Surrogate 4-Bromofluorobenzene	%	112

vTRH(C6-C10)/BTEXN in Soil			
Our Reference:	UNITS	156006-1	156006-4
Your Reference	-----	S1	S4
	-		
Date Sampled	-----	20/10/2016	20/10/2016
Type of sample		soil	soil
Date extracted	-	26/10/2016	26/10/2016
Date analysed	-	26/10/2016	26/10/2016
TRHC ₆ - C ₉	mg/kg	<25	<25
TRHC ₆ - C ₁₀	mg/kg	<25	<25
vTPHC ₆ - C ₁₀ 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
Surrogate aaa-Trifluorotoluene	%	82	78

svTRH (C10-C40) in Soil			
Our Reference:	UNITS	156006-1	156006-4
Your Reference	-----	S1	S4
	-		
Date Sampled	-----	20/10/2016	20/10/2016
Type of sample		soil	soil
Date extracted	-	26/10/2016	26/10/2016
Date analysed	-	26/10/2016	27/10/2016
TRHC ₁₀ - C ₁₄	mg/kg	<50	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100	<100
TRH>C ₁₀ -C ₁₆	mg/kg	<50	<50
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100	<100
Surrogate o-Terphenyl	%	70	74

PAHs in Soil Our Reference: Your Reference	UNITS ----- -	156006-1 S1	156006-4 S4	156006-6 S6
Date Sampled Type of sample	----- -	20/10/2016 soil	20/10/2016 soil	20/10/2016 soil
Date extracted	-	26/10/2016	26/10/2016	26/10/2016
Date analysed	-	27/10/2016	27/10/2016	27/10/2016
Naphthalene	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	0.2	0.4
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.2	0.1
Pyrene	mg/kg	<0.1	0.2	0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	0.2	0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.07	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5
Total Positive PAHs	mg/kg	NIL (+)VE	0.81	0.70
Surrogate p-Terphenyl-d14	%	75	73	74

Organochlorine Pesticides in soil			
Our Reference:	UNITS	156006-1	156006-4
Your Reference	-----	S1	S4
	-		
Date Sampled	-----	20/10/2016	20/10/2016
Type of sample		soil	soil
Date extracted	-	26/10/2016	26/10/2016
Date analysed	-	26/10/2016	26/10/2016
HCB	mg/kg	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Surrogate TCMX	%	77	96

PCBs in Soil			
Our Reference:	UNITS	156006-1	156006-4
Your Reference	-----	S1	S4
	-		
Date Sampled	-----	20/10/2016	20/10/2016
Type of sample		soil	soil
Date extracted	-	26/10/2016	26/10/2016
Date analysed	-	26/10/2016	26/10/2016
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
Surrogate TCLMX	%	77	96

Acid Extractable metals in soil				
Our Reference:	UNITS	156006-1	156006-4	156006-6
Your Reference	-----	S1	S4	S6
	-			
Date Sampled	-----	20/10/2016	20/10/2016	20/10/2016
Type of sample		soil	soil	soil
Date prepared	-	26/10/2016	26/10/2016	26/10/2016
Date analysed	-	26/10/2016	26/10/2016	26/10/2016
Arsenic	mg/kg	15	18	15
Cadmium	mg/kg	<0.4	<0.4	<0.4
Chromium	mg/kg	7	16	9
Copper	mg/kg	14	14	23
Lead	mg/kg	17	17	30
Mercury	mg/kg	<0.1	<0.1	<0.1
Nickel	mg/kg	4	7	11
Zinc	mg/kg	28	24	58

Misc Soil - Inorg	UNITS	156006-1	156006-4
Our Reference:	-----	S1	S4
Your Reference	-		
Date Sampled	-----	20/10/2016	20/10/2016
Type of sample		soil	soil
Date prepared	-	26/10/2016	26/10/2016
Date analysed	-	26/10/2016	26/10/2016
Total Cyanide	mg/kg	<0.5	<0.5
Total Phenolics (as Phenol)	mg/kg	<5	<5

Moisture Our Reference: Your Reference	UNITS ----- -	156006-1 S1	156006-4 S4	156006-6 S6
Date Sampled Type of sample	----- -	20/10/2016 soil	20/10/2016 soil	20/10/2016 soil
Date prepared	-	26/10/2016	26/10/2016	26/10/2016
Date analysed	-	27/10/2016	27/10/2016	27/10/2016
Moisture	%	13	18	8.7

Method ID	Methodology Summary
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-016	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)-BTX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-003	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.
Org-012	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. For soil results:- 1. 'TEQ PQL' values are assuming all contributing PAHs reported as <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. 2. 'TEQ zero' values are assuming all contributing PAHs reported as <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. 3. 'TEQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. 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.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Inorg-014	Cyanide - free, total, weak acid dissociable by segmented flow analyser (in line dialysis with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Inorg-008	Moisture content determined by heating at 105+/-5 deg C for a minimum of 12 hours.

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
VOCs in soil						Base II Duplicate II %RPD		
Date extracted	-			26/10/2016	[NT]	[NT]	LCS-5	26/10/2016
Date analysed	-			26/10/2016	[NT]	[NT]	LCS-5	26/10/2016
Dichlorodifluoromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Chloromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Vinyl Chloride	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Bromomethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Chloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Trichlorofluoromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,1-Dichloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
trans-1,2-dichloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,1-dichloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-5	97%
cis-1,2-dichloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
bromochloromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
chloroform	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-5	98%
2,2-dichloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2-dichloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-5	89%
1,1,1-trichloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,1-dichloropropene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Cyclohexane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
carbon tetrachloride	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Benzene	mg/kg	0.2	Org-014	<0.2	[NT]	[NT]	[NR]	[NR]
dibromomethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2-dichloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
trichloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-5	86%
bromodichloromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-5	85%
trans-1,3-dichloropropene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
cis-1,3-dichloropropene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,1,2-trichloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Toluene	mg/kg	0.5	Org-014	<0.5	[NT]	[NT]	[NR]	[NR]
1,3-dichloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
dibromochloromethane	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-5	87%
1,2-dibromoethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
tetrachloroethene	mg/kg	1	Org-014	<1	[NT]	[NT]	LCS-5	94%
1,1,1,2-tetrachloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
chlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Ethylbenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
bromoform	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
m+p-xylene	mg/kg	2	Org-014	<2	[NT]	[NT]	[NR]	[NR]
styrene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
o-Xylene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2,3-trichloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
VOCs in soil						Base II Duplicate II %RPD		
isopropylbenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
bromobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
n-propyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
2-chlorotoluene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
4-chlorotoluene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,3,5-trimethyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
tert-butyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2,4-trimethyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,3-dichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
sec-butyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,4-dichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
4-isopropyl toluene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2-dichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
n-butyl benzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2,4-trichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
hexachlorobutadiene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
1,2,3-trichlorobenzene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Surrogate Dibromofluorometha	%		Org-014	102	[NT]	[NT]	LCS-5	98%
Surrogate aaa-Trifluorotoluene	%		Org-014	88	[NT]	[NT]	LCS-5	90%
Surrogate Toluene-d8	%		Org-014	100	[NT]	[NT]	LCS-5	101%
Surrogate 4-Bromofluorobenzene	%		Org-014	112	[NT]	[NT]	LCS-5	110%

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QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTRH(C6-C10)/BTEXN in Soil						Base II Duplicate II %RPD		
Date extracted	-			26/10/2016	[NT]	[NT]	LCS-5	26/10/2016
Date analysed	-			26/10/2016	[NT]	[NT]	LCS-5	26/10/2016
TRHC ₆ - C ₉	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-5	113%
TRHC ₆ - C ₁₀	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-5	113%
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	LCS-5	96%
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	LCS-5	101%
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-5	121%
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	LCS-5	123%
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-5	130%
naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	88	[NT]	[NT]	LCS-5	90%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
svTRH (C10-C40) in Soil						Base II Duplicate II %RPD		
Date extracted	-			26/10/2016	[NT]	[NT]	LCS-5	26/10/2016
Date analysed	-			26/10/2016	[NT]	[NT]	LCS-5	26/10/2016
TRHC ₁₀ - C ₁₄	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-5	109%
TRHC ₁₅ - C ₂₈	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-5	106%
TRHC ₂₈ - C ₃₆	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-5	96%
TRH>C ₁₀ -C ₁₆	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-5	109%
TRH>C ₁₆ -C ₃₄	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-5	106%
TRH>C ₃₄ -C ₄₀	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-5	96%
Surrogate o-Terphenyl	%		Org-003	75	[NT]	[NT]	LCS-5	84%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Date extracted	-			26/10/2016	[NT]	[NT]	LCS-5	26/10/2016
Date analysed	-			27/10/2016	[NT]	[NT]	LCS-5	27/10/2016
Naphthalene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-5	91%
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-5	89%
Phenanthrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-5	96%
Anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-5	89%
Pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-5	91%
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	[NT]	[NT]	[NR]	[NR]

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QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	[NT]	[NT]	LCS-5	95%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012	100	[NT]	[NT]	LCS-5	100%
QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organochlorine Pesticides in soil						Base II Duplicate II %RPD		
Date extracted	-			26/10/2016	[NT]	[NT]	LCS-5	26/10/2016
Date analysed	-			26/10/2016	[NT]	[NT]	LCS-5	26/10/2016
HCB	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-5	73%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-5	82%
Heptachlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-5	85%
delta-BHC	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-5	80%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-5	81%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-5	79%
Dieldrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-5	86%
Endrin	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-5	86%
pp-DDD	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-5	83%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	LCS-5	88%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCMX	%		Org-005	77	[NT]	[NT]	LCS-5	94%

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QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PCBs in Soil						Base II Duplicate II %RPD		
Date extracted	-			26/10/2016	[NT]	[NT]	LCS-5	26/10/2016
Date analysed	-			26/10/2016	[NT]	[NT]	LCS-5	26/10/2016
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	LCS-5	101%
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%		Org-006	77	[NT]	[NT]	LCS-5	76%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Date prepared	-			26/10/2016	[NT]	[NT]	LCS-5	26/10/2016
Date analysed	-			26/10/2016	[NT]	[NT]	LCS-5	26/10/2016
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	LCS-5	104%
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	LCS-5	111%
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	LCS-5	107%
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	LCS-5	104%
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	LCS-5	94%
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	LCS-5	92%
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	LCS-5	103%
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	LCS-5	106%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Misc Soil - Inorg						Base II Duplicate II %RPD		
Date prepared	-			26/10/2016	[NT]	[NT]	LCS-1	26/10/2016
Date analysed	-			26/10/2016	[NT]	[NT]	LCS-1	26/10/2016
Total Cyanide	mg/kg	0.5	Inorg-014	<0.5	[NT]	[NT]	LCS-1	108%
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	[NT]	[NT]	LCS-1	101%

Report Comments:

Asbestos ID was analysed by Approved Identifier:	Not applicable for this job
Asbestos ID was authorised by Approved Signatory:	Not applicable for this job

INS: Insufficient sample for this test	PQL: Practical Quantitation Limit	NT: Not tested
NR: Test not required	RPD: Relative Percent Difference	NA: Test not required
<: Less than	>: Greater than	LCS: Laboratory Control Sample

Quality Control Definitions

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

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

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

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

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

Laboratory Acceptance Criteria

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: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

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.

SAMPLE RECEIPT ADVICE

Client Details	
Client	Geotechnique Pty Ltd
Attention	John Xu

Sample Login Details	
Your Reference	13603/3, Liverpool
Envirolab Reference	156006
Date Sample Received	25/10/2016
Date Instructions Received	25/10/2016
Date Results Expected to be Reported	01/11/2016

Sample Condition	
Samples received in appropriate condition for analysis	YES
No. of Samples Provided	6 soils
Turnaround Time Requested	Standard
Temperature on receipt (°C)	12.0
Cooling Method	Ice
Sampling Date Provided	YES

Comments
Samples will be held for 1 month for water samples and 2 months for soil samples from date of receipt of samples

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email: ahie@envirolabservices.com.au	Email: jhurst@envirolabservices.com.au

Sample and Testing Details on following page



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 ABN 37 112 535 645
 12 Ashley St Chatswood NSW 2067
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Sample Id	VOCs in soil	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	Total Cyanide	Total Phenolics (as Phenol)	On Hold
S1		✓	✓	✓	✓	✓	✓	✓	✓	
S2										✓
S3										✓
S4	✓	✓	✓	✓	✓	✓	✓	✓	✓	
S5										✓
S6				✓			✓			

APPENDIX D

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 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 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 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 might not detect all contamination within a site. Contaminants could be present in areas that were not surveyed or sampled, or migrate to areas that 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.