DETAILED SITE INVESTIGATION

Snowy Mountains Grammar School
6339 Kosciuszko Road
A Portion of Lot 4, DP 874113 and Lot 12, DP 242010
Jindabyne NSW 2627

January 2021

Client: Spectrum Property & Projects
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Jindabyne NSW 2627
(A Portion of Lot 4, DP 874113 and Lot 12, DP 242010)

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TABLE OF CONTENTS

EXECUTIVE SUMMARY 5

1.1 RECOMMENDATIONS 6

2 INTRODUCTION 7

2.1 BACKGROUND 7
2.2 REGULATORY COMPLIANCE AND GUIDELINES 7
2.3 OBJECTIVES 8
2.4 SCOPE OF WORK 8

3 SITE INFORMATION 10

3.1 SITE DETAILS 10
3.2 SITE DESCRIPTION 10
3.3 SURROUNDING LAND USES 10
3.4 PREVIOUS ENVIRONMENTAL ASSESSMENTS 11
3.5 PREVIOUS RELEVANT ASSESSMENTS 13

4 ENVIRONMENTAL SETTING 15

4.1 TOPOGRAPHY 15
4.2 GEOLOGY 15
4.3 HYDROGEOLOGY 15

5 DATA QUALITY OBJECTIVES 16

6 SAMPLE DESIGN 18

6.1 ANALYTICAL SCHEDULE 18
6.2 LABORATORY ANALYSIS 19

7 SITE ASSESSMENT CRITERIA 21

7.1 ASSESSMENT CRITERIA FOR SOIL 21
7.2 EVALUATION OF ASSESSMENT CRITERIA 24
7.3 STATISTICAL EVALUATION 24

8 SAMPLING METHODOLOGY 25

8.1 SOIL SAMPLING 25

9 FIELD WORK AND OBSERVATIONS 26

9.1 SOIL SAMPLING 26

10 ANALYTICAL RESULTS 28

10.1 SOIL ANALYTICAL RESULTS 28

11 QUALITY ASSURANCE AND QUALITY CONTROL RESULTS 29

11.1 FIELD QUALITY CONTROL 29
11.2 LABORATORY QUALITY CONTROL 29

12 DATA QUALITY INDICATORS 31

13 Conceptual site model 33

13.1 POTENTIAL ON-SITE SOURCES OF CONTAMINATION 33
13.2 POTENTIAL OFF-SITE SOURCES OF CONTAMINATION 33
13.3 CONCEPTUAL SITE MODEL 33

CONCLUSIONS AND RECOMMENDATIONS 35

13.4 CONCLUSIONS 35

13.5 RECOMMENDATIONS 35
14 REFERENCES 37
15 ABBREVIATIONS 38
16 STATEMENT OF LIMITATIONS 40

TABLES IN TEXT

Table A: Site Identification
Table B: Surrounding Land Use
Table C: Summary of DQO Process
Table D: Laboratory Analytical Schedule
Table E: HIL/HSL and EIL/ESL Site Assessment Criteria
Table F: Summary of Acceptable Laboratory QA/QC Limits
Table G: Summary of the DQO and DQI

ATTACHMENTS

Report Terms and Conditions

FIGURES

Figure 1: Site Location Plan
Figure 2: General Site Plan
Figure 3: Sample Location Plan
Figure 4: Conceptual Site Model – Ecological and Groundwater Buffer

TABLES

Table 1: Physicochemical Criteria Calculation Results
Table 2: Soil Analytical Results
Table 3: Soil QA/QC Results
Table 4: Soil QA/QC Results
Table 5: Field Asbestos in Soil Estimations

APPENDICES

Appendix A: Spectrum Pre-Application Development Plan
Appendix B: PID Calibration Records
Appendix C: Test Pit & Borehole Logs
Appendix D: Site Photographs
Appendix E: Sample Receipt Advice, COC Documentation and Certified Laboratory Reports
Appendix F: Upper Confidence Limit (UCL) Results TRH F3 (C_{16}-C_{34})

EXECUTIVE SUMMARY

Spectrum Property & Projects (Spectrum) engaged Robson Environmental Pty Ltd (Robson) to undertake a Detailed Site Investigation (DSI) of a designated area for redevelopment at the Snowy Mountains Grammar School (SMGS) located at 6339 Kosciuszko Road (a portion of Lot 4, DP 874113 and Lot 12, DP 242010), Jindabyne NSW 2627, herein referred to as 'the site' as presented in **Figure 1** and **Figure 2**.

It is understood that the designated area within the SMGS grounds is to be redeveloped to facilitate the construction of a new school building as shown in **Appendix A**. Also, Robson understands that an Art Room and an associated shed at the site are to be demolished to facilitate the redevelopment works.

Safe Work and Environments Pty Ltd (SWE) previously undertook a Preliminary Site Investigation (PSI) of the site which recommended to *'undertake a systematic soil sampling across the site to investigate possible historic contaminating activities including bulk fuel storage, metal fabrication, use of lead paint and use of the site as a historic workshop of the Snowy Mountains Hydro Electric Authority'* and also *'confirm the contamination status of the soil and use of clean back fill material within the underground storage tank (UST) excavation pit'*.

Thus, based on the PSI, Robson understands that the areas of environmental concern (AEC) of the site for the purpose of this DSI are the following:

- AEC 1 –Possible fill material and historical contaminating activities across the site associated with bulk fuel storage, metal fabrication, use of lead paint and use of the site as a historic workshop of the Snowy Mountains Hydro Electric Authority;
- AEC 2 – Soil and backfill material within the UST excavation pit and associated infrastructure (historical bowser);

This DSI has been undertaken to delineate the vertical and lateral extent of potential contamination associated with the possible fill material and historical contaminating activities across the site and the soil and backfill material within the UST excavation pit, which may have impacted the suitability of the site for its proposed land use.

Based on the DSI fieldwork observations and laboratory results, Robson makes the following conclusions:

- No uncontrolled or impacted fill material was observed in AEC 1;
- Fill material was observed in AEC 2 as part of the backfill material used in the UST excavation pit;
- Based on the borehole logs, the fill material within AEC 2 ranged in depth from 0.3 metres below ground level (mbgl) to 1.9 mbgl;
- Anthropogenic material such a mix of gravel with clay was observed within the fill material in AEC 2 that presumably facilitated compacting works during the backfilling of the UST excavation pit;
- Indications of low-level hydrocarbon contamination was detected in TP03 (0.0-0.2) and TP14 (0.0-0.2) but as the concentrations did not exceed the SAC and diminished at depth the hydrocarbon impacts are not considered to be of concern;
- Indications of low-level polycyclic aromatic hydrocarbon (PAH) contamination was detected in BH17 (0.0-0.2) but as the concentrations did not exceed the SAC, the sample was close to the bitumen surface of the carpark and the PAH concentration diminished at depth, the PAH impacts are not considered to be of concern;

- All samples collected recorded soil analytical results below the ASC NEPM (2013) HIL/HSL 'A' and EIL/ESL urban residential and public open space site assessment criteria (SAC).

Based on the field observations and the analytical results AEC 1 and AEC 2 identified at the SMGS are no longer considered to be areas of concern and the site is considered suitable for the current and proposed land use. However, the following management recommendations should be implemented prior to redevelopment works at the site.

1.1 Recommendations

Robson recommends the following:

- The drafting and implementation of a Construction Environment Management Plan (CEMP) which includes an Unexpected Finds Protocol (UFP) which has been prepared by a suitably qualified environmental consultant (SQEC), to manage any suspicious hazardous materials (e.g., ACM) in soil/fill material or potential olfactory or visual signs of potential contamination if they are encountered onsite during redevelopment works. Initial inductions into the UFP must be performed by a SQEC. Subsequent inductions can then be performed by senior site personnel previously inducted by the SQEC. Furthermore, as current on-site infrastructure is to be demolished (art room and associated shed) during the redevelopment works, the demolishment works shall adhere to the CEMP and UFP.
- As portions of the SMGS are proposed to be demolished, refurbished, or disturbed as part of the redevelopment works, the developer should follow the recommendations set up in the Pre-Demolition Hazardous Materials Survey and Management Plan issued by Robson in October 2020 (Document reference: T-10332_Snowy Mountains Grammar School Art Room & storage shed -20201008).
- If soil is required to be removed from site as part of the redevelopment works the soil must be assessed by a SQEC in accordance with the NSW EPA (2014) '*Waste Classification Guidelines, Part 1: Classification of Waste*'. All soil must remain on site until approval is given by a NSW licensed land fill facility for acceptance of the material.

THIS REPORT MUST NOT BE REPRODUCED EXCEPT IN FULL AND MUST BE READ IN CONJUNCTION WITH THE REPORT TERMS AND CONDITIONS, INCLUDED AFTER THE STATEMENT OF LIMITATIONS SECTION OF THIS REPORT.

2 INTRODUCTION

2.1 Background

Spectrum Property & Projects (Spectrum) engaged Robson Environmental Pty Ltd (Robson) to undertake a Detailed Site Investigation (DSI) of a designated area for redevelopment at the Snowy Mountains Grammar School (SMGS) located at 6339 Kosciuszko Road, Jindabyne NSW 2627 (A portion of Lot 4, DP 874113 and Lot 12, DP 242010), herein referred to as 'the site' as presented in **Figure 1** and **Figure 2**.

It is understood that the designated area within the SMGS grounds is to be redeveloped to facilitate the construction of a new school building as shown in **Appendix A**. Also, Robson understands that an Art Room and an associated shed at the site are to be demolished to facilitate the redevelopment works.

Safe Work and Environments Pty Ltd (SWE) previously undertook a Preliminary Site Investigation (PSI) of the site which recommended to *'undertake a systematic soil sampling across the site to investigate possible historic contaminating activities including bulk fuel storage, metal fabrication, use of lead paint and use of the site as a historic workshop of the Snowy Mountains Hydro Electric Authority'* and also *'confirm the contamination status of the soil and use of clean back fill material within the underground storage tank (UST) excavation pit'*.

Thus, based on the PSI, Robson understands that the areas of environmental concern (AEC) of the site for the purpose of this DSI are the following:

- AEC 1 – Possible fill material and historical contaminating activities across the site associated with bulk fuel storage, metal fabrication, use of lead paint and use of the site as a historic workshop of the Snowy Mountains Hydro Electric Authority;
- AEC 2 – Backfill material within the UST excavation pit;

This DSI has been undertaken to delineate the vertical and lateral extent of potential contamination associated with the possible fill material across the site and the backfill material within the UST excavation pit, which may have impacted the suitability of the site for its proposed land use.

2.2 Regulatory Compliance and Guidelines

This report has been prepared in general accordance with the NSW legislation and NSW Environment Protection Authority (EPA) endorsed guidelines including:

- *Environment Planning and Assessment Planning Act 1979;*
- *NSW Contaminated Land Management Act 1997;*
- *NSW Protection of the Environment Operations Act 1997;*
- *NSW Contaminated Land Management Regulation 2008;*
- *State Environmental Planning Policy 55 – Remediation of Land (SEPP 55);*
- *Work Health and Safety Act 2011;*
- *Work Health and Safety Regulations 2011;*
- Standards Australia AS 4482.1-2005 '*Guide to the sampling and investigation of potentially contaminated soil – Part 1: Non-volatile and semi-volatile compounds* (herein referred to as AS 4482.1-2005);

- National Environment Protection Council (NEPC, 1999) '*National Environment Protection (Assessment of Contaminated Sites) Measure 1999*' as amended in May 2013, herein refer to as the ASC NEPM (2013);
- NSW Environment Protection Authority (NSW EPA) (1995) '*Sampling Design Guidelines'*;
- Western Australian Department of Health (WA DOH) (2009) *'Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia'* (herein referred to as the WA Guidelines);
- NSW EPA (2020) '*Consultants reporting on contaminated land – Contaminated Land Guidelines'*.

2.3 Objectives

The objectives of the DSI were to:

- Undertake grid-based and targeted sampling across the site to determine the potential for soil contamination within the site's AECs;
- Assess whether contaminants (if any) are present at levels which may impact the suitability of the site for the proposed redevelopment;
- Discuss the current site condition;
- Assess and provide recommendations (if required) regarding the need for further environmental investigations;
- Prepare a soil assessment report including the site history review in general accordance with the NSW EPA (2020) '*Consultants reporting on contaminated land – Contaminated Land Guidelines'*.

2.4 Scope of Work

The scope of work undertaken for the soil assessment included the following:

- Review previous environmental assessments specific to the site as provided by Spectrum or held by Robson;

<u>Preparation for Fieldwork</u>

Prior to fieldwork, the following would be undertaken:

- Preparation of a Safe Work Method Statement (SWMS) and Site Safety Management Plan (SSMP) prior to the commencement of on-site works;
- Engage a Telstra-accredited service locator to assess and clear each test pit and borehole location for underground services or infrastructure;
- Engage and mobilise a suitably licenced and experienced excavator operator to the site to auger the test pits.

<u>Soil Assessment</u>

The scope of work for the collection and analysis of soil (grid-based and targeted samples) is as follows:

- Mobilisation of a suitably qualified environmental consultant (SQEC) and appropriately licenced excavator operator to the site to mechanically excavate the test pit or borehole locations and collect soil samples;

- To assess AEC 1, 17 grid-based test pit locations (allowing one (1) sample location for AEC 2 also) were excavated across the accessible areas of the site to determine the chemical composition of the soil and delineate any potential contamination at the site;
- To assess AEC 1, collection of soil samples at the near surface (0.0 – 0.2 mbgl), intermediate depth (0.4 - 0.6 mbgl) and at 1.0 m or refusal. The test pits or boreholes were excavated to a maximum depth of 1 m below ground level (mbgl) or 0.3 m into natural soil whichever comes first;
    - If a layer of material was encountered which contained obvious visual or olfactory signs of contamination, then an additional sample would be collected at this depth;
- To assess AEC 2, four (4) targeted borehole locations (one (1) sample location from AEC 1 also) was located within the UST area. Three (3) out of four (4) sample locations were distributed around the former UST location and one (1) sample location in the middle of the backfilled test pit of the former UST area;
    - If a layer of material was encountered which contained obvious visual or olfactory signs of contamination, then an additional sample would be collected at this depth;
- At the near surface layer or when fill material with anthropogenic material was observed during field work, a further 10 litre (L) sample was collected at each sample location and sieved (7-millimetre (mm) x 7 mm sieve) to screen for asbestos containing material (ACM) in accordance with the WA Guidelines;
- Field duplicate and triplicate soil samples were collected for quality assurance and quality control (QA/QC) purposes in accordance with Australian Standard 4482.1-2005 '*Guide to the investigation and sampling of sites with potentially contaminated soil: Part 1: Non-volatile and semi-volatile compounds*' (AS4482.1). In addition, one (1) trip blank and one (1) trip spike sample was collected for each day of sampling;
- Each soil sample was field screened for volatile ionisable hydrocarbon compounds with a photo-ionisation detector (PID);
- The test pits and boreholes were backfilled with the test pit or borehole cuttings – no soil was removed from site;
- All surface samples from the test pits and nine (9) samples at depth were selected for analysis;
- Eight (8) samples at depth and one (1) surface sample from the boreholes were selected for analysis to assess the former UST location;
- Analysis of collected samples at a National Association of Testing Authorities (NATA) accredited laboratory for contaminants of potential concern.

Prepare a DSI report in general accordance with the NSW EPA (2020) '*Consultants reporting on contaminated land – Contaminated Land Guidelines*'.

3 SITE INFORMATION

3.1 Site Details

Details of the site location, zoning, current and proposed land uses are summarised in **Table A** below.

Table A. Site Identification

Site Location	6339 Kosciuszko Road, Jindabyne, NSW, 2627
Lot and Deposited Plan	A portion of Lot 4 DP 874113 and Lot 12 DP 242010
Name of Site Lessee	Snowy Mountains Grammar School
Area of site	5,700 square metres (m^2) approximately
Site Zoning	According to the NSW Planning and Environment Department (https://www.planningportal.nsw.gov.au), the site is currently zoned for '*R1 – General Residential*' land use
Current Land Use	SMGS facilities which is an approved development for land use zone '*R1 – General Residential*'
Proposed Land Use	Redevelopment for the construction of a new building for the SMGS which is an approved development for land use zone '*R1 – General Residential*'

3.2 Site Description

The site is currently utilised as part of the SMGS grounds that consists mainly of grassed areas with some vegetation, trees, and natural occurring rocks outcrop in the centre of the site. The east portion of the site is occupied by the SMGS's art room (*Art Cube* building), an associated shed of the art room and a storage shed. Formed driveways are located within and adjacent to the east part of the site. The north boundary of the site is fenced off with a metallic wire fence, which delineates the SMGS grounds. The surface of the northwest portion of the site is covered by a compacted gravel layer and this area is presumably used as an additional car park area.

Furthermore, a dirt road or track (unpaved road) runs along the north portion of the site and follows the west boundary of the site in an uphill gradient and south direction, and this track connects the west wing of the Boarding House building of the SMGS with the northernmost paved driveway of the SMGS. The site also includes an approximate area of 70 m^2 at the southwest corner of the Snowy Shed building where a former UST was located. The main site features are shown on **Figure 2**.

3.3 Surrounding Land Uses

The land immediately surrounding the site on the southwest, east and south is zoned as *'R1 – General Residential'* and '*R2 – Low Density Residential*'. The land located to the north of the site is zoned as *'SP1 – Special Activities'* and the land to the west of the site is zoned as '*RU1 – Primary Production*'. Land uses outside the site boundary are outlined overleaf in **Table B**.

Table B. Surrounding Land Uses

Direction from Site	Description
North	**Special Activities** Immediately to the north of the site is Kosciuszko Road, followed by a public park area and foreshore of Lake Jindabyne zoned as 'SP*1 – Special Activities'*.
East	**General Residential:** Immediately to the east of the site is part of the SMGS grounds surrounded by Barry Way which is zoned as *'R1 – General Residential'*. Further east to the site is a green public space zoned as '*RE1 – Public Recreation'*.
South / Southeast	**General and Low Density Residential:** Immediately to the south of the site is a few of holiday accommodation and residential housing zoned as '*R1 - General Residential'*. To the southeast of the site is a vacant land zoned as '*R2 – Low Density Residential*'.
West	**Primary Production:** Immediately to the west of the site is a vacant land zoned as '*RU1 – Primary Production*'.

Potential sensitive receptors within a 500 metre (m) radius of the site include:

- Workers and visitors to the site, which include teachers and students of the SMGS;
- Lake Jindabyne and its foreshore park to the north of the site;
- Residential properties to the south of the site.

The nearest surface water bodies are the Lake Jindabyne approximately 225 metres (m) to the north and 1.7 kilometres (km) to the east, and the Widows Creek approximately 1.2 km to the west.

3.4 Previous Environmental Assessments

The following environmental assessments were made available to Robson during the DSI assessment.

Safe Work & Environments (November 2020) '*Stage 1 Environmental Site Assessment Part of Lot 4 DP874113 & Lot 12 DP242010 – Kosciuszko Road, Jindabyne NSW 2627'*, dated November 2020, report reference C109271A.v1;

The Stage 1 Environmental Site Assessment (S1 ESA or herein referred to as the PSI) was undertaken to review past and present land uses for activities that may introduce contamination, and to assess the suitability of the site for the proposed redevelopment. The scope of the assessment included a desktop review of available previous environmental assessments, NSW Government records, review of the regional physiographic setting, and a site walkover to observe current site conditions and infrastructure.

The PSI concluded the following:

- The PSI report documents the findings from the compilation of the Site history and Site walkover of part of Lot 4 DP874113 and Lot 12 DP242010, Kosciuszko Road Street, Jindabyne, NSW;
- A thorough review of the greater site history including past and present contaminating activities which may have occurred on site have been identified, and used to develop a

preliminary *Conceptual Site Model* (CSM) for the site and list the contaminants of potential concern (COC);

- Due to the proposed development and land-use, the most appropriate Site Assessment Criteria (SAC) is the most conservative assessment criteria of HIL A, 'Residential *A'* as outlined in the *National Environment Protection (Assessment of site Contamination) Measure 2013* (NEPM).
- The Site history documented in the PSI indicates:
  - The Site has had a pastoral and commercial/industrial land-use between approximately 1979 to the late 1990s (approximately);
  - The Site was previously used by the Snowy Mountains Hydro Electric Authority (SMHEA) as a depot and mechanical workshop;
  - A number of the historic buildings have been renovated and retrofitted for school use;
  - The Site contained an UST which had been removed by SMHEA in 2001. The pit was backfilled with clean material however no validation report was available. The UST was located off the south-west corner of the *Snowy maintenance shed.* A small depression and change in groundcover are the only indicators of its presence in that location. During the site inspection no remnant fuel storage infrastructure was able to be located, indicating removal;
- The area of investigation based on the proposed development and school upgrades is adjacent to the *Snowy Shed, Townsend Building* and encompasses the *Art Cube* building and smaller storage shed;
- Visual inspection of the investigation area did not reveal any ACM on the ground surface;
- Should any change in Site conditions or incident occur which causes a potential environmental impact, a suitable environmental professional should be engaged to further assess the Site and consider requirements for any additional assessment;

Based on the review of aerial photographs, publicly available information, and site observations, the PSI recommended to *'undertake a systematic soil sampling across the site to investigate possible historic contaminating activities including bulk fuel storage, metal fabrication, use of lead paint and use of the site as a historic workshop of the Snowy Mountains Hydro Electric Authority'* and also *'confirm the contamination status of the soil and use of clean back fill material within the UST excavation pit'*. Thus, based on the PSI, Robson understands that the AEC are the following:

- AEC 1 – Potential fill material and historical contaminating activities across the site associated with bulk fuel storage, metal fabrication, use of lead paint and use of the site as a historic workshop of the Snowy Mountains Hydro Electric Authority;
- AEC 2 – Soil and backfill material within the UST excavation pit and associated infrastructure (historic bowser);

<u>AEC 1 – Potential fill material and historical contaminating activities across the site associated with bulk fuel storage, metal fabrication, use of lead paint and use of the site as a historic workshop of the Snowy Mountains Hydro Electric Authority</u>

AEC 1 is described as potential fill material related to historical commercial/industrial activities and land-use across the entire site. Fill material may have been used to level the buildings (art room, associated shed) and/or adjacent school facility areas. A subsurface fill layer may have been disturbed in the past as the site was used as a workshop of the Snowy Mountains Hydro Electric Authority. Likewise, the potential fill material used across the site

may have originated from the site as ex-situ material, or it may have been imported from offsite.

Based on the preliminary CSM of the PSI, the contaminants of potential concern (COPC) associated with AEC 1 as fill material, surface runoff and historical land use application from an unknown source include total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylenes (BTEX), organochlorine pesticides (OCPs), Organophosphorus pesticides (OPPs), polycyclic aromatic hydrocarbons (PAHs), eight (8) heavy metals (including arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc) and asbestos.

Due to the potential for uncontrolled fill material on the site, the PSI recommended a soil assessment be undertaken of the fill material prior to redevelopment works.

<u>AEC 2 – Soil and backfill material within the UST excavation pit and associated infrastructure (historic bowser)</u>

The site contained an UST and bowser which had been removed by SMHEA in 2001. As no validation report regarding the decommissioning works of the UST and its associated infrastructure was made available during the PSI, the characteristics of the backfill material and surrounding soil of the UST excavation pit is unknown.

The UST and its associated infrastructure were presumably located off the southwest corner of the Snowy maintenance shed. A small depression and change in groundcover are the only indicators of its presence in that location. During the site inspection no remnant fuel storage infrastructure was able to be located, indicating removal.

Based on the PSI, the potential contaminants associated with the UST and its associated infrastructure (historic bowser) are TRH, BTEX and lead (Pb). The PSI recommended further assessment of the site is required to determine if the site is suitable from a contamination perspective for the proposed development works.

3.5 Previous Relevant Assessments

The following hazardous material assessment was made available to Robson during the DSI assessment.

Robson (2020) '*Pre-Demolition Hazardous Materials Survey & Management Plan, Snowy Mountains Grammar School, Art Room, associated storage shed, and surrounding areas, Lot 12 DP242010 – 6339 Kosciuszko Road, Jindabyne NSW 2627*', dated October 2020, report reference T-10332;

The Pre-Demolition Hazardous Materials Survey and Management Plan (HMSMP) was commissioned by Spectrum in order to assure the occupants of the site the highest standards of occupational health and safety in relation to hazardous materials. The HMSMP recommended that safe removal of hazardous materials described in this document must be undertaken by appropriately licensed and skilled personnel prior to the demolition of the premises.

The HMSMP key recommendations are the following:

- The sheet ceiling and the upper sheet infill panels to the east side of the interior of the Art Room were found to contain asbestos. It is required that the sheeting be removed by a NSW licensed asbestos removalist prior to any demolition or refurbishment works conducted on the building.

- Two communications pits to the external surrounds were found to be lined with asbestos containing moulded sheet. Another two communications pits could not be properly accessed and one could not be located and was presumed to be buried. Given this, it should therefore be presumed that all communications pits within the scope of works contain asbestos until the remaining pits can be accessed and sampled and laboratory analysis determines the composition of these pits. If these pits are to be removed it is required that a NSW licensed asbestos removalist removes the pits prior to any excavation works which may disturb the material. Telstra, as owners of the pits should be contacted to arrange removal.
- The electrical switchboards within the Art Room and storage shed and light switch fixtures to the Art Room, storage shed and storage shed Cleaners Room are presumed to contain asbestos. Due to electrical hazards these items were not sampled and therefore should be presumed to contain asbestos until sampling and laboratory analysis determines the composition. A licensed electrician is required to isolate and open electrical switchboards and light switch fixtures prior to inspection and sampling.
- Concealed items containing asbestos such as packers, sheeting to the footings and pipes may be underground and were not accessible within this survey. 'If during demolition suspected asbestos materials are located a NSW licensed asbestos assessor or a NSW licensed asbestos removalist will be required to determine the composition of the material.
- Lead paint was located to the interior support beams of the Art Room, the storage shed doors and the storage shed door frame.
- Appropriate dust control methods, as per AS/NZS4361.2 should be employed during all stages of demolition works. Any building materials painted with lead paint may be disposed of as demolition waste.
- Synthetic Mineral Fibre (SMF) was identified as insulation to the exterior hot water unit. If these materials are to be disturbed during refurbishment appropriate personal protective equipment (PPE) should be worn. SMF materials being removed should be done so using effective dust control procedures.
- As the light fittings were live during the survey the capacitors could not be accessed. They must be presumed to contain PCB until safe access and assessment or analysis is possible.
- No oxygen depleting substances (ODS) and above storage tanks (ASTs) or USTs identified.

4 ENVIRONMENTAL SETTING

4.1 Topography

Reference to the topographic map found in the Spatial Map Viewer portal of the NSW Government (Reference: https://portal.spatial.nsw.gov.au/portal/apps/sites/#/home) indicates that the site has an elevation of approximately 925 m to 937 m above Australian Height Datum (AHD). The original local landscape shape seems to have been changed due to the historic land-use of the area including recent landscaping for the school grounds. Most of the portion of the site in the southwest seems to be undisturbed and steep with rocky outcrops and remnant native foliage. The scale gradient of the site and surrounding area slopes in a North-easterly direction, towards Lake Jindabyne, which is the nearest surface water body located approximately 225 m to the north of the site.

4.2 Geology

Reference to the geology map 1:100 000 *Berridale 8625* First Edition (White A. J.R, Williams I.S and Chappell B.W, 1976) with data sourced from the NSW Department of Planning, Industry and Environment indicates that the geological unit on the site is Kosciusko Batholith, which is of the late Silurian to early Devonian era, and typically consists of hornblende-biotite tonalite to strongly foliated biotite granodiorite.

Based on the PSI, the area in the south-west of the site consists of granodiorite outcrop and boulders with remnant native vegetation throughout.

4.3 Hydrogeology

Based on information from the PSI, the groundwater and aquifer information have been sourced from previously documented groundwater management plans. Reference to Department of Primary Industries- Water Sharing Plan for the South Coast Groundwater Sources (2016) indicates that the Site is located within the Lachlan Fold Belt Coast Groundwater Source. The management area is made up of three groundwater sources which include the South East Coastal Sands and Sydney Basin- South Coast. The Lachlan Fold Belt Coast Groundwater source is the southern extent of a folded and fractured rock aquifer, which extends over most of eastern Australia. The Lachlan Fold Belt consists of Cambrian to Lower Carboniferous rock successions.

The PSI also indicates that considering the topography of the site, the local groundwater flow is likely to have a north-easterly flow direction towards the closest water body, Lake Jindabyne catchment area, located approximately 230 m to the north-east of the site. Mobile sub-surface contaminants located at the site would be expected to progress down to the groundwater gradient and migrate laterally down from the source to the drainage bed which is estimated to travel in a north-easterly direction towards the Lake Jindabyne catchment area.

Likewise, based on the groundwater search of the PSI via the WaterNSW groundwater map, one (1) groundwater abstraction bore was identified within 1 km radius area from the site. The identified bore was labelled GW102952; available data is supplied below:

- Bore #1 (GW102952) is located approximately 990 m to the east and generally across slope of the site. The bore is listed as being 78 m below ground surface with water bearing zones from a depth of 54m below ground surface.

5 DATA QUALITY OBJECTIVES

The Data Quality Objectives (DQO) process is a seven (7) step process used to aid the planning of environmental assessments by providing a structured methodology for assessing the most appropriate environmental data collection processes, including the identification of sample locations, number of samples required, sampling methods, and defining acceptable assessment criteria.

The DQO process used to aid this assessment has been prepared in general accordance with Appendix C of the Australian Standard AS4482.1-2005 '*Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil – Part 1: Non-Volatile and Semi-Volatile Compounds*' and the ASC NEPM (2013).

The DSI was undertaken to assess whether past or present land uses of the site have impacted the soil such that it may compromise the suitability of the site for the current and proposed land use. The DQO process has been tabulated below in **Table C**.

Table C: Summary of the DQO Process

1. State the Problem	The site is currently utilised as part of the SMGS grounds that consists mainly of grassed areas with some vegetation, trees, and natural occurring rocks outcrop in the centre of the site. The site is to be redeveloped to facilitate the construction of a new school building as shown in **Appendix A**. Also, Robson understands that an Art Room and an associated shed at the site are to be demolished to facilitate the redevelopment works. Previous environmental assessment works on the site have identified potential uncontrolled fill material and historical contaminating activities within the site, as well as an approximate area of 70 m^2 at the southwest corner of the Snowy Shed building where a former UST was located. Based on the PSI, Robson understands that the AEC are the following: • AEC 1 – Potential fill material and historical contaminating activities across the site associated with bulk fuel storage, metal fabrication, use of lead paint and use of the site as a historic workshop of the Snowy Mountains Hydro Electric Authority; • AEC 2 – Soil and backfill material within the UST excavation pit and associated infrastructure (historic bowser).
2. Identify the Decision	A decision for the suitability of the site's current/proposed land use considers the relevant site assessment criteria (SAC) for all mediums being assessed. The site will be considered suitable if the 95% Upper Confidence Limit (UCL) of the mean concentration of all contaminants of potential concern (COPC) are less than the site assessment criteria (SAC). Based on the previous environmental assessment, the decisions for the assessment are: • Are there contaminant concentrations within the soil on the site that exceed the SAC?

3. Identify Inputs to the Decision	A variety of data inputs have been identified to allow informed and measured decisions regarding the suitability of the site's current/proposed land use. The inputs required to the decision are: • Information gained from reviewing previous environmental assessments; • Grid-based and targeted soil sampling to delineate the identified COPC within AEC 1 and AEC 2; • Results of the chemical analysis of the soil samples; • Statistical analysis of the analytical data (where required); • Assessment of the analytical results against the SAC; • Assessment of the suitability of the obtained data against the Data Quality Indicators (DQIs).
4. Define the Study Boundaries	The temporal boundary of the assessment is the date the site works were undertaken on 8 and 9 December 2020. The spatial boundary of the assessment is limited to the site boundary, refer to **Figure 2**. The vertical boundary for the assessment was the extent of the fill material until natural soil was observed or refusal (whichever occurred first).
5. Develop a Decision Rule	The decision rules for the assessment are: • If concentrations of the COPCs in the soil are reported to be below the SAC, the soil will be considered suitable from a contamination perspective and no further investigation/remediation will be required at the site; • If concentrations of the COPCs in the soil are reported to exceed the SAC, further investigation/remediation will be required to make the site suitable for the current/proposed land use from a contamination perspective. The SAC utilised in this assessment is defined in **Section 7**. Decision criteria for quality assurance and quality control (QA/QC) measures are defined in **Section 11**.
6. Specify Limits on Decision Errors	Two (2) primary decision errors may occur which would affect the outcome of the validation of the assessment areas: • The site (or part thereof) is assessed as suitable for the current/proposed land use when it is actually unsuitable (Type 1 error); • The site (or part thereof) is assessed as unsuitable for the current/proposed land use when the site is actually suitable (Type 2 error). The ASC NEPM (2013) states that the 95% upper confidence limit (UCL) of the arithmetic mean provides a 95% confidence level that the true population mean will be less than or equal to this value. Therefore, a limit on decision error will be 5% that a conclusive statement will be incorrect. Factors that may contribute to decision errors may include sampling design errors, measurement errors and/or interpretive error. The strategy to minimise the risk of a decision error from occurring is the implementation of DQI, in the context of Precision, Accuracy, Representativeness, Completeness and Comparability. DQI objectives for this assessment are defined in **Section 12**.
7. Optimise the Design for Obtaining Data	The most resource-effective design for obtaining the data to achieve the specified DQOs above is presented in **Section 6**.

6 SAMPLE DESIGN

The site covers an area of approximately 5,700 m^2 of which approximately 4,900 m^2 comprises open grassed areas with some vegetation, trees, and natural occurring rocks outcrop in the centre of the site. The remainder of the site comprises of buildings (*Art Cube* building, an associated shed of the art room and a storage shed), paved areas for driveways and carparks with no access to soil. The site also includes an approximate area of 70 m^2 at the southwest corner of the Snowy Shed building where a former UST was located.

To assess AEC 1 and AEC 2 Robson undertook both targeted and grid-based sampling regimes in accordance with the NSW (1995) '*Sampling Design Guidelines'.*

<u>AEC 1 – Potential fill material and historical contaminating activities across the site associated with bulk fuel storage, metal fabrication, use of lead paint and use of the site as a historic workshop of the Snowy Mountains Hydro Electric Authority</u>

AEC 1 is described as potential fill material related to historical commercial/industrial activities and land-use across the entire site. Fill material may have been used to level the buildings (art room, associated shed) and/or adjacent school facility areas. A subsurface fill layer may have been disturbed in the past as the site was used as a workshop of the Snowy Mountains Hydro Electric Authority. Likewise, the potential fill material used across the site may have originated from the site as ex-situ material, or it may have been imported from offsite. As AEC 1 covers the entire site (5,700 m^2) 17 sample locations were selected which satisfies the minimum number of sample locations required to characterise this area. The locations were set out in a grid-based pattern with a bias toward the built infrastructure and the former UST.

<u>AEC 2 – Soil and backfill material within the UST excavation pit and associated infrastructure (historic bowser)</u>

As described previously, the site contained an UST and bowser which had been removed by SMHEA in 2001. No validation report regarding the decommissioning works of the UST and its associated infrastructure was made available during the PSI, therefore the characteristics of the backfill material and surrounding soil of the UST excavation pit is unknown. The UST and its associated infrastructure were presumably located off the southwest corner of the Snowy maintenance shed. Hence, to determine whether the soil associated to the decommissioned UST at the site presents COPC above the SAC, a total of four (4) target sample location were considered to be representative to investigate this AEC.

6.1 Analytical Schedule

Based on the field observations, all surface samples and nine (9) samples at depth collected from AEC 1 were selected for analysis and submitted to NATA accredited laboratories. Similarly, eight (8) samples at depth and one (1) surface sample collected from AEC 2 were selected for analysis and submitted to a NATA accredited laboratory. Laboratory analysis of the soil samples included the following:

- Total recoverable hydrocarbons (TRH);
- Benzene, toluene, ethyl benzene and xylene (BTEX);
- Polycyclic aromatic hydrocarbons (PAH);
- Phenols;
- Organochlorine pesticides (OCP);
- Organophosphorus pesticides (OPPs)

- Polychlorinated biphenyls (PCBs);
- Eight (8) heavy metals (including arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc);
- Asbestos (WA Guidelines) (soil samples from AEC 1 and AEC 2);

Furthermore, five (5) samples in total from AEC 1 were analyzed for pH, cation exchange capacity (CEC) and percent (%) clay to allow calculation of the site-specific ecological investigation level (EIL) criteria.

Additionally, even though the PSI did not recommend the investigation of phenols in soil at the site, Robson recommended during the DSI to include testing for phenols since phenols is a common contaminant of concern in sites designated for development.

6.2 Laboratory Analysis

SGS Laboratories Pty Ltd (SGS) were the primary laboratory, while Envirolab Pty Ltd (Envirolab) was the secondary laboratory. Both laboratories are NATA accredited for the analytical suite assessed. The laboratory analytical schedule is summarised in **Table D** below.

Table D: Laboratory Analytical Schedule

Area to be Investigated	Number of Samples Allowed	Analytes
AEC 1 – Potential fill material and historical contaminating activities across the site	17 sample locations: • 16 test pits; • One (1) borehole for both AECs Selected primary soil samples for analysis: • 17 surface samples (One (1) for both AECs); • Eleven (11) samples at depth (Two (2) for both AECs). Total No. of primary soil samples analysed: 28	▪ TRH; ▪ BTEX; ▪ PAH; ▪ Phenols; ▪ PCBs, ▪ OCPs; ▪ OPPs; ▪ Eight (8) heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc), and ▪ Asbestos (WA Guidelines).
	Five (5) sample locations to establish the site specific EIL criteria.	▪ pH, ▪ Cation exchange capacity (CEC); and ▪ Percent (%) of clay.

Area to be Investigated	Number of Samples Allowed	Analytes
AEC 2 - Soil and backfill material within the UST excavation pit and associated infrastructure	Four (4) sample locations: • Four (4) borehole locations (One (1) borehole for both AECs) Selected primary soil samples for analysis: • One (1) surface sample (for both AECs); • Eight (8) samples at depth (Two (2) for both AECs). Total No. of primary soil samples analysed: Nine (9)	▪ TRH; ▪ BTEX; ▪ PAH; ▪ Phenols; ▪ PCBs, ▪ OCPs; ▪ OPPs; ▪ Eight (8) heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc), and Asbestos (WA Guidelines).
QA/QC Samples	Three (3) duplicate and three (3) triplicate samples. Total No. of field QA/QC samples: 6.	Same as primary soil samples (except asbestos).
	One (1) trip spike and one (1) trip blank per day. Total No. of samples: Four (4)	TRH (C_6 – C_9) and BTEX.

Notes: QA: Quality Assurance; **QC:** Quality Control; **TRH**: total recoverable hydrocarbons; **BTEX**: benzene, toluene, ethylbenzene, xylenes; **PAH:** polycyclic aromatic hydrocarbons; **OCP:** organochlorine pesticides; **PCB:** polychlorinated biphenyl; **pH:** A measure of acidity; **Heavy metals:** arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc.

7 SITE ASSESSMENT CRITERIA

7.1 Assessment Criteria for Soil

Investigation and screening level criteria are the concentrations of contaminants used to evaluate the potential risk of contaminants to human health and surrounding ecosystems. Where contaminant concentrations exceed the screening criteria, further investigation and assessment may be required as defined in the ASC NEPM (2013) which is endorsed by the NSW EPA.

The site is currently zoned as '*R1 – General Residential'* and utilised as part of the SMGS grounds. It is understood that the site is to be redeveloped to facilitate the construction of a new school building as shown in **Appendix A**. For the purposes of the DSI, the analytical results will be assessed against the current and future land use criteria for both human and ecological health.

Therefore, it is considered that the applicable human health assessment criteria are the Health-based Investigation Level (HIL) 'A' '*Residential with garden accessible soil and includes sensitive land uses such as childcare centres, preschools and primary schools'*, sourced from the ASC NEPM (2013).

The ASC NEPM (2013) provides health screening levels (HSLs) for petroleum hydrocarbon compounds. It is considered that the dominant exposure pathway to petroleum hydrocarbon compounds would likely be via vapour inhalation and dermal contact, and therefore criteria sourced from Table 1A (3) of the ASC NEPM (2013) have been adopted for the purpose of screening during this assessment. For this site, the soil type has been identified as silt for AEC 1and sand for AEC2. The depth to source threshold of 0 - 1 m has been selected for AEC 1 and 0 - 3 m for AEC 2.

In addition to the above, the ASC NEPM (2013) provides Ecological Screening Levels (ESLs) and guidance on the calculation of site-specific Ecological Investigation Levels (EILs). EILs and ESLs should generally be applied to contaminants in the top 2 m of soil at the finished surface/ground level for generic land use settings. The urban residential and public open space exposure setting for fine soil texture has been applied for this assessment.

To assist in the determination of the EILs the pH, cation exchange capacity (CEC) and clay content of five (5) representative soil samples were analysed as part of the Robson (2020) DSI. The copper, chromium, nickel, and zinc EIL criteria were calculated based on the physicochemical properties for each analysed sample and the lowest criteria for each analyte were used as the site-specific assessment criteria, which is considered to be a conservative approach. The assessment criteria were calculated using the ASC NEPM (2013) EIL toolbox spreadsheet the results of which are summarised in **Table 1**.

Furthermore, the criteria adopted to assess the potential risk of asbestos concentrations in soil to human health and the environment has been sourced from the ASC NEPM (2013). The applicable criteria for the site is the Health-based Investigation Level (HIL) 'A' – Residential with garden/ accessible soil (home grown produce <10% and vegetable intake, (no poultry), also includes childcare centres, preschools, and primary schools.

As briefly described above, the primary SAC for soils on the site are the ASC NEPM (2013) HIL/HSL 'A' and EIL/ESL urban residential and public open space assessment criteria which are summarised in **Table E** overleaf.

Table E: HIL/HSL and EIL/ESL Site Assessment Criteria

Contaminant	HIL[1]/HSL A[2] Silt 0m - <1m (mg/kg)	HIL[1]/HSL A[2] Sand 2m - <4m (mg/kg)	EIL[3,4,5]/ESL[6] Urban Res Fine (mg/kg)
BTEXN			
Benzene	0.6	0.5	65
Toluene	390	310	105
Ethylbenzene	NL	NL	125
Xylenes	95	95	45
Naphthalene	4	NL	170
TRH			
F1 (TRH C_6 – C_{10} minus BTEX)	40	110	180
F2 (TRH > C_{10} - C_{16} minus naphthalene)	230	440	120
F3 (TRH >C_{16}-C_{34})	NE	NE	1300
F4 (TRH >C_{34}-C_{40})	NE	NE	5,600
PAH			
Benzo(a)Pyrene (TEQ)	3	3	0.7
Total PAH	300	300	NE
Phenols			
Total Phenols	3,000	3,000	NE
OCP			
DDT+DDE+DDD	240	240	180
Aldrin + Dieldrin	6	6	NE
Chlordane	50	50	NE
Endosulfan	270	270	NE
Endrin	10	10	NE
Heptachlor	6	6	NE
HCB	10	10	NE
Methoxychlor	300	300	NE

Contaminant	HIL[1]/HSL A[2] Silt 0m - <1m (mg/kg)	HIL[1]/HSL A[2] Sand 2m - <4m (mg/kg)	EIL[3,4,5]/ESL[6] Urban Res Fine (mg/kg)
Mirex	10	10	NE
Toxaphene	20	20	NE
OPP			
Chlorpyrifos	160	160	NE
PCB			
Total PCBs	1	1	NE
Heavy Metals			
Arsenic	100	100	40
Cadmium	20	20	NE
Chromium	100 (Cr VI)	100 (Cr VI)	380 (Cr III+VI)
Copper	6,000	6,000	80
Lead	300	300	1,100
Mercury	40	40	NE
Nickel	400	400	15
Zinc	7,400	7,400	240
Asbestos			
Bonded ACM	0.01%		NE
Fibrous Asbestos and Asbestos Fines (Friable Asbestos)	0.001%		NE
All Forms of Asbestos	No Visible Asbestos for surface soil		NE

Notes: NL: Non-Limiting, **NE**: Not Established, **TRH**: total recoverable hydrocarbons; **BTEX**: benzene, toluene, ethylbenzene, xylenes; **PAH:** polycyclic aromatic hydrocarbons; **OCP:** organochlorine pesticides; **PCB:** polychlorinated biphenyl; **heavy metals:** arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc.

1. ASC NEPM (2013) – Schedule B (1) - Table 1A (1) HIL A: '*Residential with garden accessible soil and includes sensitive land uses such as childcare centres, preschools, and primary schools'*, sourced from Table 1A (1).
2. ASC NEPM (2013) – Schedule B (1) - Table 1A (3) HSL A/B – '*Urban Residential and public open space',* Use of the HSL A/B criteria assumes that the lithology is predominantly silt with a depth of 0 to 1 mbgl.
3. ASC NEPM (2013) – Schedule B (1) - Table 1B(4) '*Generic added contaminant limits for Lead in soils irrespective of their physicochemical properties'*.

4. ASC NEPM (2013) – Schedule B (1) - Table 1B(5) '*Generic EILs for aged Arsenic, fresh DDT and fresh Naphthalene in soils irrespective of their physicochemical properties'*.
5. ASC NEPM (2013) – Schedule B (1) - Table 7 *'Health screening levels for asbestos contamination in soil'* of Schedule B1 *'Guideline on Investigation Levels for Soil and Groundwater ',* HSL A: Residential (Low density).
6. NEPC (2010) 'Ecological Investigation Level Calculation Sheet'. Refer to **Table 1**.
7. ASC NEPM (2013) – Schedule B (1) - Table 1B(6) '*ESLs for TPH fraction F1-F4, BTEX and benzo(a)pyrene in soils' (Urban residential and public open space: fine criteria)*;

7.2 Evaluation of Assessment Criteria

The laboratory limit of reporting (LOR) for the analytical methods used by the primary laboratory were compared with the assessment criteria. This was to ensure that the assessment criteria values exceeded the laboratory LOR. In summary, the laboratory LORs for the soil assessment were below the site assessment criteria.

The standard laboratory analysis for chromium provides a total concentration (that is, the result is unspeciated for chromium (III) and chromium (VI)). As the HIL 'A' assessment criteria for chromium (VI) is 100 milligrams per kilogram (mg/kg), it was considered that should the measured concentration of total chromium exceed this, then the sample would be re-analysed and speciated to measure the chromium (VI) concentration.

7.3 Statistical Evaluation

Statistical evaluation of soil analytical results may be necessary in the event of exceedances of the adopted assessment criteria. Statistical analysis should adhere to the following criteria as specified in the ASC NEPM (2013):

- No single analytical result is to be greater than 250 % of the site criterion;
- The arithmetic mean of sample analytical results must be below the site criterion;
- The standard deviation must be less than 50 % of the site criterion.

In addition, the NSW EPA (1995) '*Sampling Design Guidelines*' indicates that a site or sampling area cannot be considered to be uncontaminated or successfully remediated if the 95 % UCL of the arithmetic average concentration exceeds the assessment criterion. Where sample concentrations above the assessment criteria are recorded the 95 % UCL has therefore been considered as a tool to establish the requirement for and/or subsequent efficacy of remediation works.

8 SAMPLING METHODOLOGY

8.1 Soil Sampling

Field methods for soil sampling are presented below. The work was completed in general accordance with the following guidelines and procedures:

- Australian Standard AS 4482.1-2005 'Guide to the sampling and investigation of potentially contaminated soil – Part 1: Non-volatile and semi-volatile compounds';
- ASC NEPM (2013);
- Robson SOP (2010) '*Soil Sampling and Logging*' (Robson reference EAR-SOP003).

Soil samples were collected in general accordance with Robson SOP '*Soil Sampling and Logging*' (EAR-SOP003). At each location in AEC 1, primary soil samples were generally collected at the near surface (0.0-0.2 mbgl), 0.4-0.6 mbgl and 1.0 mbgl, each metre thereafter or at changes in lithology or potential contamination horizons, until the targeted depth of 0.3 m into natural was achieved or refusal. The target depth for AEC 2 was 3.0 m or refusal. The test pits and boreholes were backfilled upon completion.

Additionally, samples collected for the identified COPC were placed into a clean laboratory-supplied glass jar marked with unique sample identification and sealed with a Teflon-lined screw cap, and immediately placed into an ice cooled container for transport to NATA accredited laboratory. Chain of custody (COC) documentation was completed and accompanied the samples to the laboratory.

A sub-sample of each primary soil sample was screened in the field with a portable hand-held PID to assess the potential for ionisable volatile compounds in soil. The sensitivity of the PID is dependent on the organic compound and varies for different mixtures of hydrocarbons. The PID was calibrated prior to use with a standard reference gas of known concentration (isobutylene 100 parts per million (ppm)) and fresh air. Calibration records for the PID are presented in **Appendix B**.

For QA/QC purposes, blind duplicate and triplicate samples were collected and analysed at a rate of one (1) in twenty (20) as per AS4482.1-2005. The duplicate and triplicate samples were used to assess the reproducibility of the sampling and analytical methods used. QC samples were labelled with no reference to the parent sample on the sample container or COC to ensure analytical results were not biased by the laboratory.

One (1) trip blank and trip spike sample were carried in an ice cooled esky with the collected samples each day of the field work and during transport to the primary laboratory. These were submitted to the laboratory to assess for potential cross contamination and volatile loss during sample collection and transportation.

9 FIELD WORK AND OBSERVATIONS

The soil sampling was conducted on site by a SQEC from Robson on the 08 and 09 of December 2020. Borehole and test pit logs including soil sample descriptions and recorded PID measurements are provided in **Appendix C**. A summary of the field work and observations is provided below, with photographs provided in **Appendix D**.

9.1 Soil Sampling

In summary, the fieldwork consisted of the excavation of 16 test pits (identified as TP01 to TP16) to depths of between 0.8 and 1.6 mbgl, and four (4) boreholes (identified as BH17 to BH20) to a depth of 3.0 mbgl. The test pit and borehole locations are shown on **Figure 2**, and the field observations are summarised below:

- Soil conditions generally encountered during the test pit excavations (AEC 1) are as follows with the test pit logs included in **Appendix C**:
  - Fill material (topsoil material) consisting of a dark brown clayey sandy silt, dry, hard, loose, with high organic matter (roots and rootlets) and some minor rocks;
  - Natural soil layer underlying the fill material consisting of a brown silty sand, moist to dry, medium to fine grain size with weathered granite.
- Soil conditions generally encountered during the borehole excavations (AEC 1 and 2) are as follows with the borehole logs included in **Appendix C**:
  - Fill material (surface depth) consisting of a light brown silty sand, soft, dry, loose, minor bitumen fragments and gravel rocks;
  - Underlaying fill material consisting of a brown clayey sand with red mottles of clay, medium grain size, dry, hard, loose, quartz and gravel rocks;
  - Natural soil layer underlying the fill material consisting of a brown clayey sand, moist, soft, medium grain size, loose, weathered granite.
- Anthropogenic material consisting of bitumen fragments and gravel rocks were observed in borehole BH18, BH19 and BH20 presumably as part of the road base of the asphalted car park of the SMGS;
- An electrical conduit was observed in test pit TP14 at a depth of 0.2 m.
- The depth of fill material (topsoil) across AEC 1 at the site ranged from 0.0 to a maximum of 1.2 m;
- Fill material presumably used to backfill the former UST location in AEC 2 at the site was observed from a range of 0.3 to 1.9 m;
- No odours or visual indications of staining were observed within any of the boreholes or test pits;
- No fragments of potential ACM were observed within any of the sample locations or on surface of the site (refer to **Table 5**);
- A sub sample of each soil sample was screened with the PID. In summary, the samples recorded readings of between 0.0 parts per million (ppm) and 2.7 ppm indicating a negligible potential for the presence of volatile ionisable hydrocarbon species.

The following QA/QC samples were collected as part of the assessment:

- Samples QC01 and QC02 which were a duplicate and triplicate of primary sample BH18 (0.4-0.6);

- Samples QC03 and QC04 which were a duplicate and triplicate of primary sample TP06 (0.0-0.2);
- Samples QC05 and QC06 which were a duplicate and triplicate of primary sample TP09 (0.4-0.6);
- Two (2) trip blank samples identified as TB01 and TB02 and two (2) trip spike samples identified as TS01 and TS02 which accompanied all collected samples during collection and transportation on 8 and 9 December 2020, respectively.

10 ANALYTICAL RESULTS

Certified laboratory reports, sample receipt advice and COC documentation are included in **Appendix E**. The analytical results for the primary and QA/QC samples are presented in **Table 1** to **Table 4** and are summarised below.

10.1 Soil Analytical Results

All samples collected recorded analytical results below the ASC NEPM (2013) HIL/HSL 'A' and EIL/ESL urban residential and public open space SAC, except for the following:

- Sample TP03 (0.0-0.2) presented a concentration of TRH F3 (C_{16}-C_{34}) of 360 milligrams per kilogram (mg/kg) which is above the ASC NEPM (2013) ESL urban residential and public open space (300 mg/kg).
- However, after conducting the UCL statistics of all TRH F3 (C_{16}-C_{34}) validation soil sample concentrations the calculated statistic was 108.9 mg/kg (95% Student's-t UCL) which is well below the ESL for TRH F3 (C_{16}-C_{34}) of 300 mg/kg. The UCL statistical calculation is outlined in **Appendix F**.
- Therefore, as defined in Section 7.3, this exceedance is not considered of concern since the statistical evaluation of TRH F3 (C_{16}-C_{34}) of all samples demonstrates that it complies with the statistical evaluation criteria specified in the ASC NEPM (2013).
- Furthermore, all other samples analysed for TRH F3 (C_{16}-C_{34}) were below the laboratory LOR.

The analytical results are summarised below:

- All BTEX, phenols, PCBs, OCPs, OPPs and asbestos results in all samples were below the laboratory LOR;
- All TRH results were below the laboratory LOR with the exception of the following samples:
  - TP03 (0.0-0.2) presented concentrations of TRH C_{10}-C_{14} of 33 mg/kg, TRH C_{10}-C_{16} of 71 mg/kg, TRH C_{15}-C_{28} of 260 mg/kg, TRH C_{29}-C_{36} of 220 mg/kg, TRH C_{10}-C_{16} (F2) of 71 mg/kg, TRH C_{16}-C_{34} of 360 mg/kg, TRH C_{10}-C_{35} (sum of total) of 510 mg/kg and TRH C_{10}-C_{40} (Sum of total) of 430 mg/kg;
  - TP14 (0.0-0.2) presented concentrations of TRH C_{10}-C_{16} of 32 mg/kg, TRH C_{15}-C_{28} of 70 mg/kg and TRH C_{10}-C_{16} (F2) of 32 mg/kg;
- All heavy metal results were above the laboratory LOR in all samples with the exception of cadmium and mercury. Refer to **Table 2** for detected concentrations;
- No visible ACM fragments were observed in any of the soil samples or any test pit or borehole.

11 QUALITY ASSURANCE AND QUALITY CONTROL RESULTS

11.1 Field Quality Control

Duplicate and Triplicate Samples

Duplicate and triplicate samples were collected and analysed to assess the reproducibility of the sampling procedure and the laboratory analytical methods used. This was assessed via calculation of the relative percent difference (RPD) for the laboratory results for a primary soil sample and corresponding field duplicate sample. The RPD is a method of normalising two values and allows a comparison between values and represents the difference between the primary and QC sample, divided by the average of the two results expressed as a percentage. The RPD is calculated with the following formula:

$$RPD = \frac{Result\ No.1\ - Result\ No.2}{Mean\ Result} \times 100\%$$

Calculated RPD results would be considered acceptable when the value is less than or equal to 50 % or where the concentration is less than 5 times the LOR (in which case any RPD is considered acceptable). Should the RPD value exceed 50 percent (%), then further investigation to the cause of the difference between the primary and QC results would be undertaken.

Three (3) duplicate and three (3) triplicate soil samples were collected during the assessment. Results of the RPD calculations for the primary and duplicate/triplicate pairs are presented in **Table 3**. In summary, all the RPD values were within the acceptable range for the primary and duplicate/triplicate samples.

Trip Blank Sample

The trip blank samples TB01 and TB02 collected on 8 and 9 December 2020, respectively, recorded results below the respective analyte LORs (refer to **Table 4**). The results indicate that there was negligible potential for cross contamination (particularly of volatile constituents) to have occurred between soil samples during transit from the site to the laboratory.

Trip Spike Samples

The trip spike samples TS01 and TS02 collected on 8 and 9 December 2020, respectively, recorded recoveries within the acceptable range for volatile constituents, with a range from 98 % to 107 % (refer to **Table 4**). The results indicated that there was negligible potential for volatile loss from the samples during transport to the laboratory.

11.2 Laboratory Quality Control

The results of the laboratory internal quality control program are included along with the laboratory reports in **Appendix E**. The acceptable limits for the laboratory QA/QC are presented overleaf in **Table F**.

Table F: Summary of Acceptable Laboratory QA/QC Limits

Sample Type	Acceptable Limits
Surrogate Spikes	60% - 140%
Duplicate Sample	Maximum allowable difference (MAD) criteria where: MAD = 100 x Statistical Detection Limit (SDL) / Mean + Limiting Repeatability (LR)
Matrix Spikes	70% - 130% (metals) and 60% - 140% (organics)
Method Blanks	Less than the LOR

In summary, the laboratory QA/QC results indicated the following:

- The surrogate recovery results were within the laboratory's acceptable range, except for the following:
  - One (1) item failed the acceptance criteria for volatile organic compounds (VOCs) in soil, d4-1,2 dichloroethane (surrogate). The report notes that at least two (2) of three (3) surrogates are within the acceptance criteria;
  - One (1) item failed the acceptance criteria for volatile petroleum hydrocarbons in soil, d4-1,2 dichloroethane (surrogate). The report notes that at least two (2) of three (3) surrogates are within the acceptance criteria.
- The matrix spike recovery results were within the laboratory's acceptable range, except for the following:
  - One (1) item failed the acceptance criteria for TRH in soil, TRH >C_{16}-C_{34} (F3). The report notes that the RPD failed acceptance criteria due to sample heterogeneity.
- The laboratory control samples, which were run with each batch of samples analysed, were within acceptable QC limits set by the laboratory;
- The concentrations of the laboratory blanks, which were run with each batch of samples analysed, were below the laboratory's LOR;
- The laboratory duplicate sample analyses were within the acceptable range;
- The laboratory extraction dates were within the laboratory's suggested criteria, except for the following:
  - Five (5) items failed the acceptance criteria for extraction date for pH in soil. The report notes that due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.
- The laboratory analysis dates were within the laboratory's suggested criteria, except for the following:
  - All items failed the acceptance criteria for analysis date for moisture content in soil. The report notes that due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.
- Based on the above information and assessment process (use of the highest of the primary/duplicate analyte concentrations), the laboratory control data indicates that the analytical procedures are considered to be of acceptable quality.

12 DATA QUALITY INDICATORS

Data Quality Indicators (DQIs) are used to assess the performance in achieving the DQO's of the site investigation works, and to determine whether the data obtained is reliable and useful for the assessment purposes. In summary, DQI's include the following:

- Accuracy – Accuracy is a measure of the closeness of a reported result against the true value;
- Comparability – Comparability is the confidence that data can be considered equivalent for each sampling and analytical event;
- Completeness – Completeness is a measure of the useable data from a sampling event;
- Precision – Precision is a measure of the reproducibility of a result;
- Representativeness – Representativeness is an expression of the confidence that data are representative of each media present on the site.

Based on the information summarised in **Table G** overleaf Robson consider the DQOs have been met for the assessment works.

Table G: Summary of the DQO and DQI

Data Quality Objective	Required Rate	Data Quality Indicator	Result/Outcome
Precision			
Duplicate Samples	1/20 primary samples	RPD between 0% and 50%	Acceptable (100%)
Triplicate Samples	1/20 primary samples	RPD between 0% and 50%	Acceptable (100%)
Rinsate Samples	Per day of sampling	<LOR	Not required
Trip Blanks	Per day of sampling	<LOR	Acceptable (100%)
Trip Spikes	Per day of sampling	60% - 140% recovery	Acceptable (100%)
Laboratory Duplicates	Per laboratory batch (report)	Maximum allowable difference (MAD)[1] criteria.	Acceptable (100%)
Accuracy			
Surrogate Spikes	Per laboratory batch (report)	60% - 140% recovery	Acceptable (99%)
Matrix Spikes	Per laboratory batch (report)	70% - 130% (metals) and 60% - 140% (organics)	Acceptable (99%)
Method Blanks	Per laboratory batch (report)	Less than the LOR	Acceptable (100%)
Representativeness			
Appropriate sampling methods for media and analytes	All Samples	All samples collected as per Robson SOP	YES
Appropriate sampling density and depths	All Samples	All samples collected as per the DQOs	YES
Assessment of identified site COPC	All Samples	All samples analysed as per analytical schedule	YES
Laboratory Blanks	Per laboratory batch (report)	<LOR	YES
Samples extracted and analysed within holding times	All Samples	As per Laboratory reports	Acceptable (95%)
Comparability			
Experienced personnel and consistent SOPs for sample collection	All Samples	All Samples	YES
Consistent Laboratory Methodology and LORs	All Samples	All Samples	YES
NATA accredited laboratory analysis	All Samples	All Samples	YES
Completeness			
Sample Field Documentation/Observations	All Samples	All Samples	YES
Sample COC Documentation	All Samples	All Samples	YES
Appropriate QA/QC rate and acceptable RPD results	All QA/QC samples	95%	YES
Valid data from critical samples/locations	All Samples	Critical (boundary/delineation) samples are valid.	YES
Appropriate analytical methods and LOR for adopted site assessment criteria	All Samples	LOR<Site assessment criteria	YES

Notes: [1] MAD = 100 x Statistical Detection Limit (SDL) / Mean + Limiting Repeatability (LR)

13 CONCEPTUAL SITE MODEL

This DSI has been undertaken to assess the site for potential contamination that may impact on the suitability of the site for its proposed land use. The Safe Work & Environments (November 2020) PSI, undertaken prior to the DSI indicated the following:

13.1 Potential On-Site Sources of Contamination

AEC 1 – Potential fill material and historical contaminating activities across the site associated with bulk fuel storage, metal fabrication, use of lead paint and use of the site as a historic workshop of the Snowy Mountains Hydro Electric Authority

AEC 1 is described as potential fill material related to historical commercial/industrial activities and land-use across the entire site. Fill material may have been used to level the buildings (art room, associated shed) and/or adjacent school facility areas. A subsurface fill layer may have been disturbed in the past as the site was used as a workshop of the Snowy Mountains Hydro Electric Authority. Likewise, the potential fill material used across the site may have originated from the site as ex-situ material, or it may have been imported from offsite.

The COPC associated with AEC 1 as fill material, surface runoff and historical land use application from an unknown source include TRH, BTEX, OCPs, OPPs, PAHs, eight (8) heavy metals (including arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc) and asbestos.

Due to the potential for uncontrolled fill material on the site, the PSI recommended a soil assessment be undertaken of the fill material prior to redevelopment works.

AEC 2 – Soil and backfill material within the UST excavation pit and associated infrastructure (historic bowser)

The site contained an UST and bowser which had been removed by SMHEA in 2001. As no validation report regarding the decommissioning works of the UST and its associated infrastructure was made available during the PSI, the characteristics of the backfill material and surrounding soil of the UST excavation pit is unknown.

The UST and its associated infrastructure were presumably located off the southwest corner of the Snowy maintenance shed. A small depression and change in groundcover are the only indicators of its presence in that location. During the site inspection no remnant fuel storage infrastructure was able to be located, indicating removal.

Based on the PSI, the potential contaminants associated with the UST and its associated infrastructure (historic bowser) are TRH, BTEX and lead (Pb). The PSI recommended further assessment of the site is required to determine if the site is suitable from a contamination perspective for the proposed development works.

13.2 Potential Off-Site Sources of Contamination

No potential off-site sources of contamination were identified during the PSI assessment.

13.3 Conceptual Site Model

Contaminant Source and COPC

Based on the results of the DSI, all the identified COPCs and its analytical results were below the evaluation assessment criteria for the identified AECs (AEC 1 and AEC 2).

Therefore, based on the DSI analytical results the site presents no potential contamination for the proposed land use of the site.

Sensitive Receptors

The current sensitive human receptors include workers and visitors to the site. Future sensitive human receptors include construction workers and visitors during the redevelopment works.

Exposure Pathways

Even though no COPC exceeds the evaluation criteria of this DSI, potential exposure pathways between any unexpected findings at the site and sensitive human receptors could occur through dermal and direct contact, inhalation, and ingestion through the disturbance of the infrastructure and/or civil works.

Potential exposure is likely to occur during decommissioning of existing infrastructure, construction works, and maintenance works in the redevelopment area, where the pathway would be considered to be complete.

Management Options

While impacted soil with any of the COPCs of the analytical schedule of this DSI was not identified in the proposed build area of the site, the potential to discover unexpected finds during the development works shall remain as a precautionary approach. Therefore, to manage the risk during redevelopment works a construction environment management plan (CEMP) which includes an unexpected finds protocol (UFP) should be in place to manage the risk.

CONCLUSIONS AND RECOMMENDATIONS

13.4 Conclusions

Based on the DSI fieldwork observations and laboratory results, Robson makes the following conclusions:

- No uncontrolled or impacted fill material was observed in AEC 1;
- Fill material was observed in AEC 2 as part of the backfill material used in the UST excavation pit;
- Based on the borehole logs, the fill material within AEC 2 ranged in depth from 0.3 metres below ground level (mbgl) to 1.9 mbgl;
- Anthropogenic material such a mix of gravel with clay was observed within the fill material in AEC 2 that presumably facilitated compacting works during the backfilling of the UST excavation pit;
- Indications of low-level hydrocarbon contamination was detected in TP03 (0.0-0.2) and TP14 (0.0-0.2) but as the concentrations did not exceed the SAC and diminished at depth the hydrocarbon impacts are not considered to be of concern;
- Indications of low-level PAH contamination was detected in BH17 (0.0-0.2) but as the concentrations did not exceed the SAC, the sample was close to the bitumen surface of the carpark and the PAH concentration diminished at depth, the PAH impacts are not considered to be of concern;
- All samples collected recorded soil analytical results below the ASC NEPM (2013) HIL/HSL 'A' and EIL/ESL urban residential and public open space site assessment criteria (SAC).

Based on the field observations and the analytical results AEC 1 and AEC 2 identified at the SMGS are no longer considered to be areas of concern and the site is considered suitable for the current and proposed land use. However, the following soil management recommendations should be implemented prior to redevelopment works at the site.

13.5 Recommendations

Robson recommends the following:

- The drafting and implementation of a Construction Environment Management Plan (CEMP) which includes an Unexpected Finds Protocol (UFP) which has been prepared by a SQEC, to manage any suspicious hazardous materials (e.g., ACM) in soil/fill material or potential olfactory and/or visual signs of potential contamination if they are encountered onsite during redevelopment works. Initial inductions into the UFP must be performed by a SQEC. Subsequent inductions can then be performed by senior site personnel previously inducted by the SQEC. Furthermore, as current on-site infrastructure is to be demolished (art room and associated shed) during the redevelopment works, the demolishment works shall adhere to the CEMP and UFP.
- As portions of the SMGS are proposed to be demolished, refurbished, or disturbed as part of the redevelopment works, the developer should follow the recommendations set up in the Pre-Demolition Hazardous Materials Survey and Management Plan issued by Robson in October 2020 (Document reference: T-10332_Snowy Mountains Grammar School Art Room & storage shed -20201008).
- If soil is required to be removed from site as part of the redevelopment works the soil must be assessed by a SQEC in accordance with the NSW EPA (2014) '*Waste Classification Guidelines, Part 1: Classification of Waste*'. All soil must remain on site

until approval is given by a NSW licensed land fill facility for acceptance of the material.

14 REFERENCES

ANZECC (1992) '*Guidelines for the Assessment and Management of Contaminated Sites*'.

Environment Planning and Assessment Planning Act 1979 (13 November 2020);

National Environment Protection Council (NEPC) 1999 '*National Environment Protection (Assessment of Site Contamination) Measure 1999*' (amended version of 2013);

NSW Contaminated Land Management Act 1997 (8 January 2019);

NSW Contaminated Land Management Regulation 2008;

NSW EPA (1995) 'Sampling Design Guidelines';

the NSW EPA (2020) '*Consultants reporting on contaminated land – Contaminated Land Guidelines'*

Robson (2012) '*Soil Sampling and Logging*' (Robson reference EAR-SOP003);

Safe Work & Environments (November 2020) '*Stage 1 Environmental Site Assessment Part of Lot 4 DP874113 & Lot 12 DP242010 – Kosciuszko Road, Jindabyne NSW 2627'*, dated November 2020, report reference C109271A.v1;

Robson (2020) '*Pre-Demolition Hazardous Materials Survey & Management Plan, Snowy Mountains Grammar School, Art Room, associated storage shed, and surrounding areas, Lot 12 DP242010 – 6339 Kosciuszko Road, Jindabyne NSW 2627'*, dated October 2020, report reference T-10332;

Standards Australia AS 4482.1-2005 '*Guide to the sampling and investigation of potentially contaminated soil – Part 1: Non-volatile and semi-volatile compounds'*;

State Environmental Planning Policy 55 – Remediation of Land (SEPP 55).

Work Health and Safety Act 2011;

Work Health and Safety Regulations 2011.

15 ABBREVIATIONS

Abbreviations	
ACM	Asbestos Containing Material
AEC	Area of Environmental Concern
AHD	Australian Height Datum
AMP	Asbestos Management Plan
ANZECC	Australian and New Zealand Environment Conservation Council
ASC	Assessment of Site Contamination
AST	Aboveground Storage Tank
BH	Borehole Sample
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CEMP	Construction Environmental Management Plan
COC	Chain of Custody
COPC	Contaminant of Potential Concern
DQI	Data Quality Indicators
DQO	Data Quality Objectives
DSI	Detailed Site Investigation
EPA	Environment Protection Authority
EPD	Environment and Planning Directorate
EQ	Environmental Quality
km	Kilometre
L	Litre
LOR	Limit of Reporting
m	Metres
m^2	Square Metres
mbgl	Metres Below Ground Level
mg/L	Milligrams per Litre
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NSW	New South Wales
OCP	Organochlorine Pesticides
OEH	Office of Environment and Heritage
ORS	Office of Regulatory Services
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PSI	Preliminary Site Investigation
R	Rinsate Sample

Abbreviations	
RPD	Relative Percentage Difference
SA	Soil Assessment
SAC	Site Assessment Criteria
SQEC	Suitable Qualified Environmental Consultant
TB	Trip Blank
TP	Test Pit
TS	Trip Spike
TDS	Total Dissolved Solids
TRH	Total Recoverable Hydrocarbons
UFP	Unexpected Finds Protocol
UST	Underground Storage Tank
>	Greater than
<	Less than
%	Percent

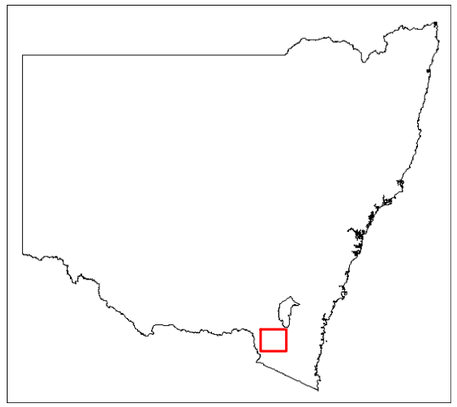
16 STATEMENT OF LIMITATIONS

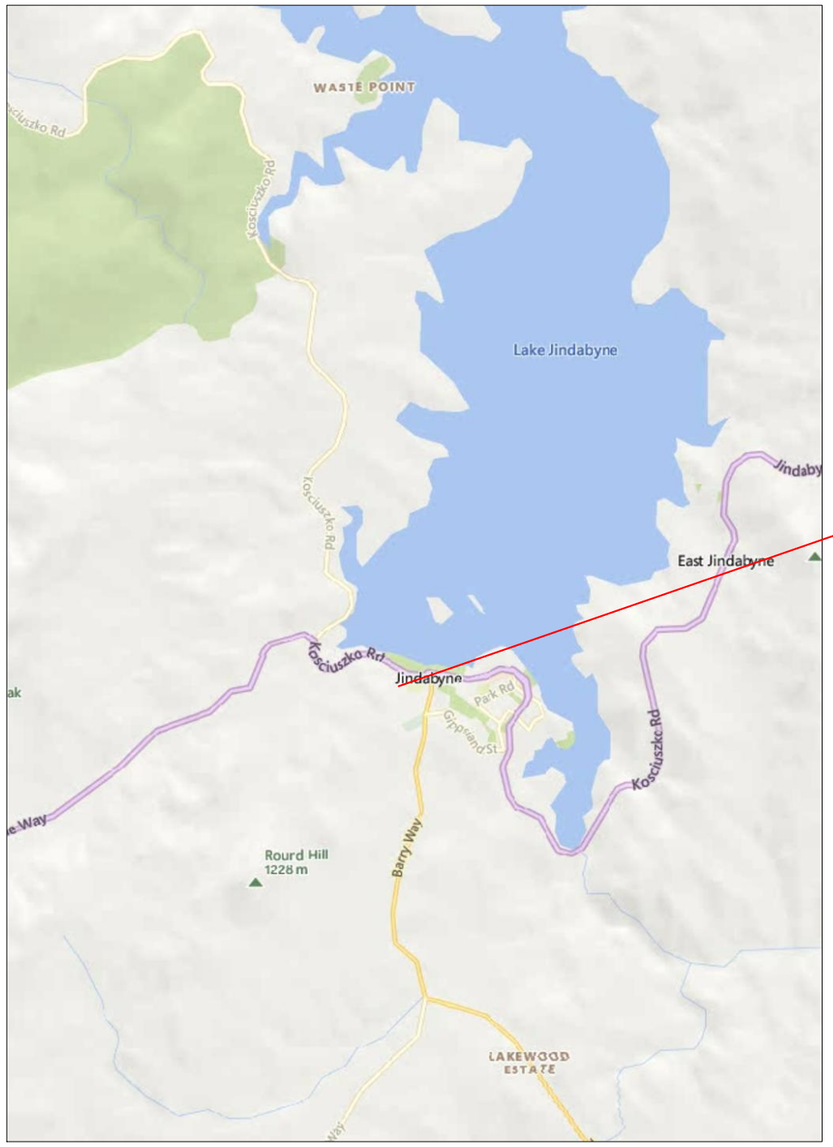
The DSI documented within this report was undertaken in order to assess the possible risk of contamination at the site at 6339 Kosciuszko Road, Jindabyne NSW 2627 (a portion of Lot 4, DP 874113 and Lot 12, DP 242010).

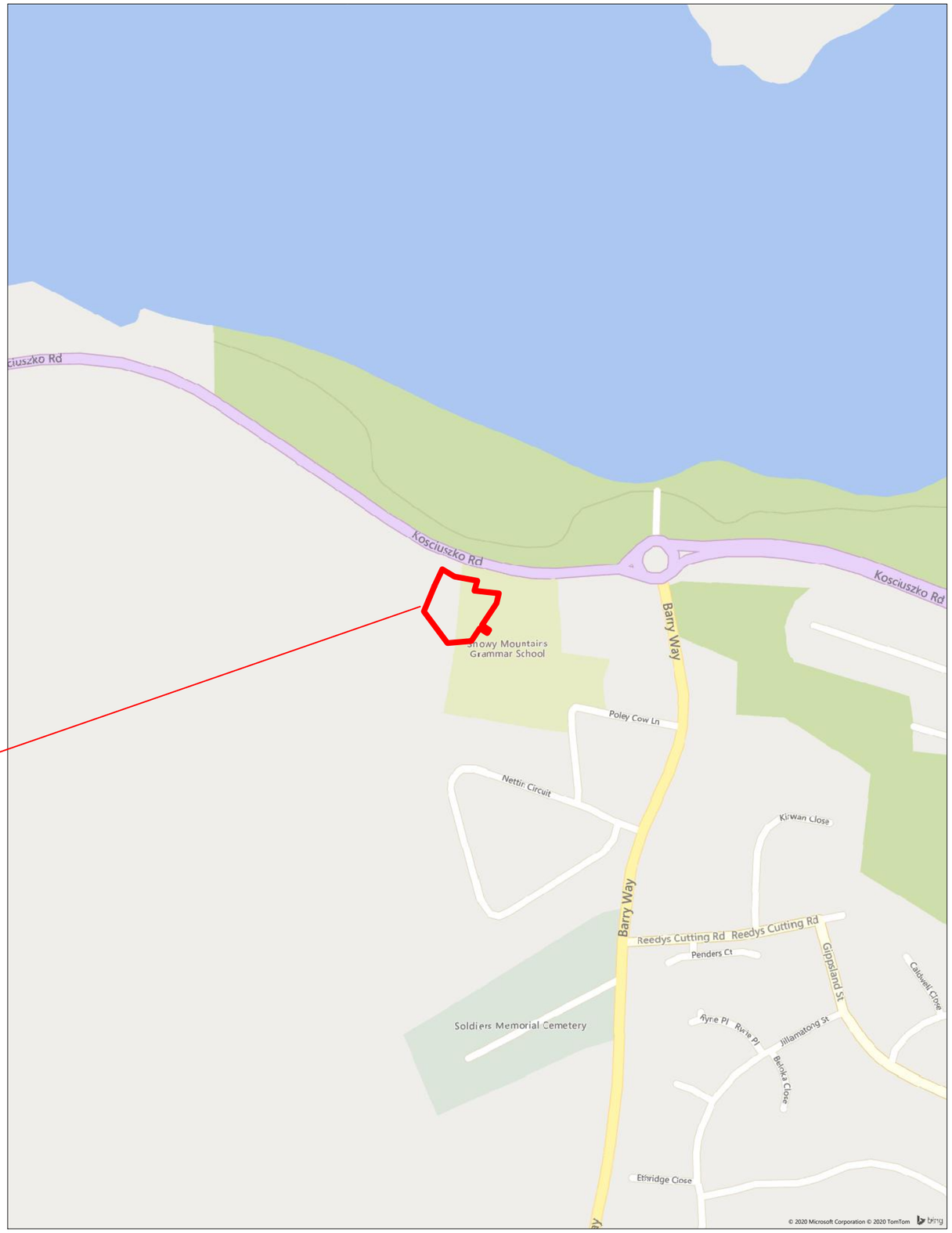
The findings contained within this report are the result of the interpretation of site history enquiries, a site walkover undertaken and soil sampling in accordance with normal practices and standards. To the best of Robson's knowledge, our assessment of the data represents a reasonable interpretation of the general condition of the site. Under no circumstances, however, can it be considered that these findings represent the actual state of the entire site. In addition, the assessment did not include the direct sampling and analysis of soil vapour or groundwater.

THIS REPORT MUST NOT BE REPRODUCED EXCEPT IN FULL AND MUST BE READ IN CONJUNCTION WITH THE REPORT TERMS AND CONDITIONS INCLUDED AFTER THE STATEMENT OF LIMITATIONS SECTION IN THIS REPORT.

FIGURES







LEGEND

SITE BOUNDARY

NOTES

Scale, locations, and boundaries are approximate only.

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CLIENT:	SITE:	PROJECT:	SCALE (m):	DRAWN:	FIGURE:	DATE:
SPECTRUM PROPERTY & PROJECTS L6, 60 CLARANCE STREET SYDNEY NSW 2000	SNOWY MOUNTAINS GRAMMAR SCHOOL 6339 KOSCIUSZKO ROAD JINDABYNE NSW 2627 (A PORTION OF LOT 4 DP 874113 AND LOT 12 DP 242010)	DETAILED SITE INVESTIGATION	0 15 30	AG	1	15/01/2021
		TITLE: SITE LOCATION PLAN	REF: MICROSOFT 2020 HERE 2020	CHECKED: BK	PROJECT: 11213	REV: A

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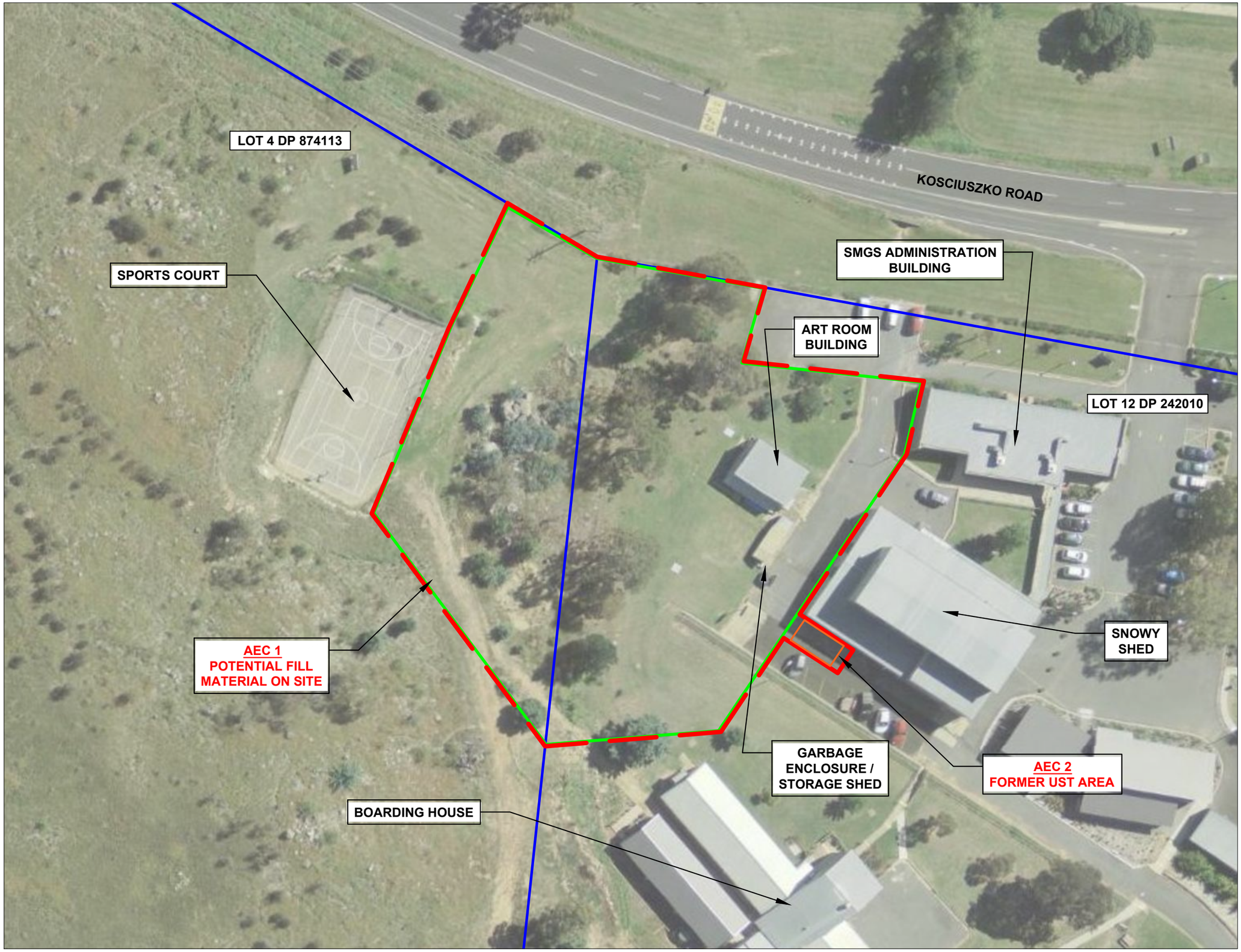

LEGEND

- LOT/DP BOUNDARY
- SITE BOUNDARY
- AREA OF ENVIRONMENTAL CONCERN 1 (AEC 1) - POTENTIAL FILL MATERIAL
- AEC 2 - SOIL AND BACKFILL MATERIAL WITHIN THE UST EXCAVATION PIT AND ASSOCIATED INFRASTRUCTURE

NOTES

Scale, locations, and boundaries are approximate only.
AEC = Area of environmental concern
SMGS = Snowy Mountain Grammar School

KEY PLAN - INSET

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CLIENT:	SITE:	PROJECT:	SCALE (m):	DRAWN:	FIGURE:	DATE:
SPECTRUM PROPERTY & PROJECTS L6, 60 CLARANCE STREET SYDNEY NSW 2000	SNOWY MOUNTAINS GRAMMAR SCHOOL 6339 KOSCIUSZKO ROAD JINDABYNE NSW 2627 (A PORTION OF LOT 4 DP 874113 AND LOT 12 DP 242010)	DETAILED SITE INVESTIGATION	0 5 10	AG	2	15/01/2021
		TITLE: GENERAL SITE PLAN	REF: SIXMAPS NSW 2020	CHECKED: BK	PROJECT: 11213	REV: A

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LEGEND

- LOT/DP BOUNDARY
- SITE BOUNDARY
- AREA OF ENVIRONMENTAL CONCERN 1 (AEC 1) - POTENTIAL FILL MATERIAL
- AEC 2 - SOIL AND BACKFILL MATERIAL WITHIN THE UST EXCAVATION PIT AND ASSOCIATED INFRASTRUCTURE
- TEST PIT SAMPLE LOCATION
- TEST PIT SAMPLE LOCATION. EXCEEDANCE ABOVE SAC IN TP03 (0.0-0.2). HOWEVER, UCL STATISTICS IS BELOW SAC.
- BOREHOLE SAMPLE LOCATION

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CLIENT:	SITE:	PROJECT:	SCALE (m):	DRAWN:	FIGURE:	DATE:
SPECTRUM PROPERTY & PROJECTS L6, 60 CLARANCE STREET SYDNEY NSW 2000	SNOWY MOUNTAINS GRAMMAR SCHOOL 6339 KOSCIUSZKO ROAD JINDABYNE NSW 2627 (A PORTION OF LOT 4 DP 874113 AND LOT 12 DP 242010)	DETAILED SITE INVESTIGATION	0 4 8	AG	3	15/01/2021
		TITLE: SAMPLE LOCATION PLAN	REF: SIXMAPS NSW 2020	CHECKED: BK	PROJECT: 11213	REV: A

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LEGEND

- LOT/DP BOUNDARY
- SITE BOUNDARY
- AREA OF ENVIRONMENTAL CONCERN 1 (AEC 1) - POTENTIAL FILL MATERIAL
- AEC 2 - SOIL AND BACKFILL MATERIAL WITHIN THE UST EXCAVATION PIT AND ASSOCIATED INFRASTRUCTURE

NOTES

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CLIENT:	SITE:	PROJECT:	SCALE (m):	DRAWN:	FIGURE:	DATE:
SPECTRUM PROPERTY & PROJECTS L6, 60 CLARANCE STREET SYDNEY NSW 2000	SNOWY MOUNTAINS GRAMMAR SCHOOL 6339 KOSCIUSZKO ROAD JINDABYNE NSW 2627 (A PORTION OF LOT 4 DP 874113 AND LOT 12 DP 242010)	DETAILED SITE INVESTIGATION	0 50 100	AG	4	15/01/2021
		TITLE: CONCEPTUAL SITE MODEL ECOLOGICAL AND GROUNDWATER BUFFER	REF: SIXMAPS NSW 2020	CHECKED: BK	PROJECT: 11213	REV: A

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TABLES

11213 DSI: Detailed Site Investigation
Table 1: Physicochemical Criteria Calculation Results
Location: A Portion of Lot 4, DP 874113 and Lot 12, DP 242010
11/01/2021

		Laboratory Identification	SE214803	SE214803	SE214803	SE214803	SE214803
		Sample Identification	TP01(0.4-0.6)	TP03(0.0-0.2)	TP09(0.4-0.6)	TP12(0.0-0.2)	TP14(0.0-0.2)
		Sample Depth	0.4-0.6	0.0-0.2	0.4-0.6	0.0-0.2	0.0-0.2
Lithology			Silty SAND, brown, moist, soft, medium to fine grain size	Clayey Sandy SILT, dark brown, dry, hard, loose	Clayey Sandy SILT, dark brown, dry, loose, fine grain size	Clayey Sandy SILT, light brown, dry, hard, fine grain size	Silty SAND, light brown, coarse grain size, dry, hard
Sample Collection Date			8/12/2020	8/12/2020	9/12/2020	8/12/2020	9/12/2020
	Analyte	**Units**					
Physicochemical Properties	CEC	meq/100g	3.3	7.4	8.4	4.3	22
	Clay %	% w/w	8	8	12	14	8
	pH	pH_Units	7	7.1	7.2	7.4	7.1
Criteria	Copper	mg/kg	**80**	160	180	95	230
	Nickel	mg/kg	**15**	85	120	30	290
	Cr(III)	mg/kg	**380**	**380**	430	450	**380**
	Zinc	mg/kg	**240**	390	430	280	830

Additional Calculation Parameters/Information:
NSW
Aged
Current land use: 'R1 – General Residential'
Propose land use: 'R1 – General Residential'
Assessment criteria: Urban residential/public open space
BOLD: Criteria shown in bold were used for the assessment

Notes:
QA/QC = Quality Assurance/Quality Control, BH = Borehole Sample
meQ = milli equivalence, mg/kg = milligrams per kilogram
CEC = Cation Exchange Capacity, % = Percent, < = Less than

Criteria:
NEPC (2010) *'Ecological Investigation Level Calculation Sheet'* , Aged, Residential exposure setting. The lowest EILs criteria were applied in this case from Schedule B1 *'Guideline on Investigation Levels for Soil and Groundwater'* Table 1B(1), Table 1B(2), Table 1B(3), Table 1B(4) and Table 1B(5). Zinc, Chromium, Nickel and Copper specific concentration limits were based on CEC, Clay% and pH specific to the site, as determined from the analytical results of soil samples TP01(0.4-0.6), TP03(0.0-0.2), TP09(0.4-0.6), TP12(0.0-0.2) and TP14(0.0-0.2).

ASC NEPM toolbox (December 2010), Ecological investigation levels - Interactive (Excel) Calculation Spreadsheet, sourced from: http://www.nepc.gov.au/nepms/assessment-site-contamination/toolbox

| Location Code | | |

Location Code			BH18			BH18			TP06			TP06			TP09			TP09		
Field ID			BH18(0.4-0.6)	QC01		BH18(0.4-0.6)	QC-02		TP06(0.0-0.2)	QC03		TP06(0.0-0.2)	QC-04		TP09(0.4-0.6)	QC05		TP09(0.4-0.6)	QC-06	
Date			8/12/2020	8/12/2020		8/12/2020	8/12/2020		8/12/2020	8/12/2020		8/12/2020	8/12/2020		9/12/2020	9/12/2020		9/12/2020	8/12/2020	
Lab Report Number			SE214803	SE214803	RPD (%)	SE214803	258031	RPD (%)	SE214803	SE214803	RPD (%)	SE214803	258031	RPD (%)	SE214803	SE214803	RPD (%)	SE214803	258031	RPD (%)
	Unit	EQL																		
Particle Size																				
+75µm	%	1	-	-	-	-	-	-	-	-	-	-	-	-	**71**	-	-	**71**	-	-
Passing 75µm	%w/w	1	-	-	-	-	-	-	-	-	-	-	-	-	**29**	-	-	**29**	-	-
Clay in soils <2um	%w/w	0.1	-	-	-	-	-	-	-	-	-	-	-	-	**12**	-	-	**12**	-	-
Benzene, Toluene, Ethylbenzene and Xylenes (BTEX)																				
Benzene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.2	0	<0.1	<0.1	0	<0.1	<0.2	0	<0.1	<0.1	0	<0.1	<0.2	0
Toluene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.5	0	<0.1	<0.1	0	<0.1	<0.5	0	<0.1	<0.1	0	<0.1	<0.5	0
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<1	0	<0.1	<0.1	0	<0.1	<1	0	<0.1	<0.1	0	<0.1	<1	0
Xylene (m & p)	mg/kg	0.2	<0.2	<0.2	0	<0.2	<2	0	<0.2	<0.2	0	<0.2	<2	0	<0.2	<0.2	0	<0.2	<2	0
Xylene (o)	mg/kg	0.1	<0.1	<0.1	0	<0.1	<1	0	<0.1	<0.1	0	<0.1	<1	0	<0.1	<0.1	0	<0.1	<1	0
Xylene Total	mg/kg	0.3	<0.3	<0.3	0	<0.3	<3	0	<0.3	<0.3	0	<0.3	<3	0	<0.3	<0.3	0	<0.3	<3	0
Total BTEX	mg/kg	0.6	<0.6	<0.6	0	<0.6	-	-	<0.6	<0.6	0	<0.6	-	-	<0.6	<0.6	0	<0.6	-	-
Total Recoverable Hydrocarbons (TRH)																				
C6-C9	mg/kg	20	<20	<20	0	<20	<25	0	<20	<20	0	<20	<25	0	<20	<20	0	<20	<25	0
C6-C10	mg/kg	25	<25	<25	0	<25	<25	0	<25	<25	0	<25	<25	0	<25	<25	0	<25	<25	0
C10-C14	mg/kg	20	<20	<20	0	<20	<50	0	<20	<20	0	<20	<50	0	<20	<20	0	<20	<50	0
C10-C16	mg/kg	25	<25	<25	0	<25	<50	0	<25	<25	0	<25	<50	0	<25	<25	0	<25	<50	0
C15-C28	mg/kg	45	<45	<45	0	<45	<100	0	<45	<45	0	<45	<100	0	<45	<45	0	<45	<100	0
C29-C36	mg/kg	45	<45	<45	0	<45	<100	0	<45	<45	0	<45	<100	0	<45	<45	0	<45	<100	0
C6-C10 (F1)	mg/kg	25	<25	<25	0	<25	<25	0	<25	<25	0	<25	<25	0	<25	<25	0	<25	<25	0
C10-C16 (F2)	mg/kg	25	<25	<25	0	<25	<50	0	<25	<25	0	<25	<50	0	<25	<25	0	<25	<50	0
C16-C34 (F3)	mg/kg	90	<90	<90	0	<90	<100	0	<90	<90	0	<90	<100	0	<90	<90	0	<90	<100	0
C34-C40 (F4)	mg/kg	100	<120	<120	0	<120	<100	0	<120	<120	0	<120	<100	0	<120	<120	0	<120	<100	0
C10-C36 (Sum of total)	mg/kg	110	<110	<110	0	<110	-	-	<110	<110	0	<110	-	-	<110	<110	0	<110	-	-
C10-C40 (Sum of total)	mg/kg	50	<210	<210	0	<210	<50	0	<210	<210	0	<210	<50	0	<210	<210	0	<210	<50	0
Metals																				
Arsenic	mg/kg	1	**7**	**6**	15	**7**	**6**	15	<1	<1	0	<1	<4	0	**1**	**1**	0	**1**	<4	0
Cadmium	mg/kg	0.3	<0.3	<0.3	0	<0.3	<0.4	0	<0.3	<0.3	0	<0.3	<0.4	0	<0.3	<0.3	0	<0.3	<0.4	0
Calcium (filtered)	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-	**1,300**	-	-	**1,300**	-	-
Chromium (III+VI)	mg/kg	0.5	**11**	**10**	10	**11**	**13**	17	**13**	**12**	8	**13**	**15**	14	**14**	**12**	15	**14**	**14**	0
Copper	mg/kg	0.5	**15**	**14**	7	**15**	**20**	29	**8.9**	**8.6**	3	**8.9**	**11**	21	**12**	**12**	0	**12**	**13**	8
Lead	mg/kg	1	**6**	**6**	0	**6**	**6**	0	**6**	**6**	0	**6**	**7**	15	**5**	**5**	0	**5**	**4**	22
Magnesium (filtered)	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-	**190**	-	-	**190**	-	-
Mercury	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0
Nickel	mg/kg	0.5	**7.5**	**7.1**	5	**7.5**	**9**	18	**5.0**	**4.8**	4	**5.0**	**6**	18	**5.3**	**5.0**	6	**5.3**	**5**	6
Potassium (filtered)	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-	**100**	-	-	**100**	-	-
Zinc	mg/kg	1	**48**	**45**	6	**48**	**45**	6	**29**	**28**	4	**29**	**27**	7	**35**	**31**	12	**35**	**25**	33
Polycyclic Aromatic Hydrocarbons (PAH)																				
PAHs (Sum of positives)	mg/kg	0.05	<0.8	<0.8	0	<0.8	**0.06**	0	<0.8	<0.8	0	<0.8	<0.05	0	<0.8	<0.8	0	<0.8	<0.05	0
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.3	<0.3	<0.3	0	<0.3	<0.5	0	<0.3	<0.3	0	<0.3	<0.5	0	<0.3	<0.3	0	<0.3	<0.5	0
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.2	<0.2	<0.2	0	<0.2	<0.5	0	<0.2	<0.2	0	<0.2	<0.5	0	<0.2	<0.2	0	<0.2	<0.5	0
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.2	<0.2	<0.2	0	<0.2	<0.5	0	<0.2	<0.2	0	<0.2	<0.5	0	<0.2	<0.2	0	<0.2	<0.5	0
1-Methylnaphthalene	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
Acenaphthene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Anthracene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Benz(a)anthracene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Benzo(a) pyrene	mg/kg	0.05	<0.1	<0.1	0	<0.1	**0.06**	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Benzo(b+j)fluoranthene	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
Benzo(g,h,i)perylene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
Chrysene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Dibenz(a,h)anthracene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Fluoranthene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Fluorene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Naphthalene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Phenanthrene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Pyrene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
PAHs (Sum of total)	mg/kg	0.8	<0.8	<0.8	0	<0.8	-	-	<0.8	<0.8	0	<0.8	-	-	<0.8	<0.8	0	<0.8	-	-
Phenols																				
2,3,4,6 & 2,3,5,6-Tetrachlorophenol	mg/kg	1	<1	<1	0	<1	-	-	<1	<1	0	<1	-	-	<1	<1	0	<1	-	-
3&4-Methylphenol (m&p-cresol)	mg/kg	1	<1	<1	0	<1	-	-	<1	<1	0	<1	-	-	<1	<1	0	<1	-	-
2,4,5-Trichlorophenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-
2,4,6-Trichlorophenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-
2,4-Dichlorophenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-
2,4-Dimethylphenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-
2,4-Dinitrophenol	mg/kg	2	<2	<2	0	<2	-	-	<2	<2	0	<2	-	-	<2	<2	0	<2	-	-
2,6-Dichlorophenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-
2-Chlorophenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-
2-Methylphenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-
2-Nitrophenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-
4-chloro-3-methylphenol	mg/kg	2	<2	<2	0	<2	-	-	<2	<2	0	<2	-	-	<2	<2	0	<2	-	-
4-Nitrophenol	mg/kg	1	<1	<1	0	<1	-	-	<1	<1	0	<1	-	-	<1	<1	0	<1	-	-
Cresol Total	mg/kg	1.5	<1.5	<1.5	0	<1.5	-	-	<1.5	<1.5	0	<1.5	-	-	<1.5	<1.5	0	<1.5	-	-
Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-
Phenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-
Phenolics Total	mg/kg	5	-	-	-	-	<5	-	-	-	-	-	<5	-	-	-	-	-	<5	-
Polychlorinated Biphenyls (PCBs)																				
Arochlor 1016	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0
Arochlor 1221	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0
Arochlor 1232	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0
Arochlor 1242	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0
Arochlor 1248	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0
Arochlor 1254	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0
Arochlor 1260	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	0	<0.2	-	-	<0.2	<0.2	0	<0.2	-	-	<0.2	<0.2	0	<0.2	-	-
Aroclor 1262	mg/kg	0.2	<0.2	<0.2	0	<0.2	-	-	<0.2	<0.2	0	<0.2	-	-	<0.2	<0.2	0	<0.2	-	-
PCBs (Sum of total)	mg/kg	0.1	<1	<1	0	<1	<0.1	0	<1	<1	0	<1	<0.1	0	<1	<1	0	<1	<0.1	0
Organochlorine Pesticides (OCPs)																				
Chlordane (trans)	mg/kg	0.1	-	-	-	-	<0.1	-	-	-	-	-	<0.1	-	-	-	-	-	<0.1	-
o,p-DDD	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
2,4-DDT	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
DDD	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
4,4-DDE	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
DDT	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Aldrin	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
a-BHC	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
b-BHC	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
d-BHC	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Chlordane (cis)	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
gamma-Chlordane	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
Dieldrin	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0
Endosulfan I	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0
Endosulfan II	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Endrin	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Endrin ketone	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
g-BHC (Lindane)	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Heptachlor	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Isodrin	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
Methoxychlor	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Mirex	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
DDT+DDE+DDD	mg/kg	0.1	-	-	-	-	<0.1	-	-	-	-	-	<0.1	-	-	-	-	-	<0.1	-
Organophosphorous Pesticides (OPPs)																				
Azinophos methyl	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0
Bromophos-ethyl	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0
Chlorpyrifos	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0
Chlorpyrifos-methyl	mg/kg	0.1	-	-	-	-	<0.1	-	-	-	-	-	<0.1	-	-	-	-	-	<0.1	-
Diazinon	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
Dichlorvos	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
Dimethoate	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
Ethion	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0
Fenitrothion	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0
Malathion	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0
Methidathion	mg/kg	0.5	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	-	-
Parathion	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0
Ronnel	mg/kg	0.1	-	-	-	-	<0.1	-	-	-	-	-	<0.1	-	-	-	-	-	<0.1	-
Asbestos																				
Weight of sample	g	1	**669**	-	-	**669**	-	-	**680**	-	-	**680**	-	-	-	-	-	-	-	-
Mass ACM	g	0.001	<0.001	-	-	<0.001	-	-	<0.001	-	-	<0.001	-	-	-	-	-	-	-	-
Mass Asbestos in FA & AF	g	0.00001	<0.00001	-	-	<0.00001	-	-	<0.00001	-	-	<0.00001	-	-	-	-	-	-	-	-
Mass asbestos in AF	g	0.00001	<0.00001	-	-	<0.00001	-	-	<0.00001	-	-	<0.00001	-	-	-	-	-	-	-	-
Asbestos in soil (>7mm ACM)	%w/w	0.01	<0.01	-	-	<0.01	-	-	<0.01	-	-	<0.01	-	-	-	-	-	-	-	-
Asbestos in soil (<7mm AF/FA)	%w/w	0.001	<0.001	-	-	<0.001	-	-	<0.001	-	-	<0.001	-	-	-	-	-	-	-	-
Asbestos in soil (>2mm <7mm AF/FA)	%w/w	0.001	<0.001	-	-	<0.001	-	-	<0.001	-	-	<0.001	-	-	-	-	-	-	-	-
Asbestos in soil (<2mm AF/FA)	%w/w	0.001	<0.001	-	-	<0.001	-	-	<0.001	-	-	<0.001	-	-	-	-	-	-	-	-
Inorganics																				
Moisture	%	0.1	-	-	-	-	**7.4**	-	-	-	-	-	**7.1**	-	-	-	-	-	**6.9**	-
Exchangeable Calcium (filtered)	meq/100g		-	-	-	-	-	-	-	-	-	-	-	-	**6.4**	-	-	**6.4**	-	-
Exchangeable Magnesium (filtered)	meq/100g		-	-	-	-	-	-	-	-	-	-	-	-	**1.5**	-	-	**1.5**	-	-
Exchangeable Potassium (filtered)	meq/100g		-	-	-	-	-	-	-	-	-	-	-	-	**0.25**	-	-	**0.25**	-	-
Exchangeable Sodium (filtered)	meq/100g		-	-	-	-	-	-	-	-	-	-	-	-	**0.21**	-	-	**0.21**	-	-
Exchangeable Sodium Percent (filtered)	%		-	-	-	-	-	-	-	-	-	-	-	-	**2.5**	-	-	**2.5**	-	-
Exchangeable Calcium Percent (filtered)	%		-	-	-	-	-	-	-	-	-	-	-	-	**76.2**	-	-	**76.2**	-	-
Exchangeable Magnesium Percent (filtered)	%		-	-	-	-	-	-	-	-	-	-	-	-	**18.3**	-	-	**18.3**	-	-
Exchangeable Potassium Percent (filtered)	%		-	-	-	-	-	-	-	-	-	-	-	-	**3.0**	-	-	**3.0**	-	-
CEC (filtered)	meq/100g	0.02	-	-	-	-	-	-	-	-	-	-	-	-	**8.4**	-	-	**8.4**	-	-

Notes:

TP = Test pit, QA/QC = Quality Assurance/Quality Control, SP = Stockpile Sample, SS = Surface Sample, , EX = Excavation Sample, BH = Borehole Sample
LOR = Limit of Reporting, NE = Guideline not established, mg/kg = milligrams per kilogram, EQL = Estimated Quantitation Limit
NL = Non Limiting, HIL = Health Investigation Level, HSL = Health Screening Level, NC = Not Calculable
EIL = Ecological Investigation Level, ESL = Ecological Screening Level, EX = Excavation
% = Percent, < = Less than, # = All constituents are below LOR, - = Not analysed
TB = Trip Blank sample, TS = Trip Spike sample

Assessment Criteria:

*RPDs have only been considered where a concentration is greater than 5 times the EQL.
**High RPDs are in bold (Acceptable RPDs 0-50 (>5 x EQL))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories.

RESULT	RPD exceeds 50% but is less than 5 x the LOR and is therefore considered suitable
RESULT	Result exceeds the RPD acceptance criteria

11213_EAR_DSI_Table

		Location Code	11213			
		Field ID	TB01	TB02	TS01	TS02
		Date	8/12/2020	9/12/2020	8/12/2020	9/12/2020
		Lab Report Number	SE214803	SE214803	SE214803	SE214803
	Unit	EQL				
Benzene, Toluene, Ethylbenzene and Xylenes (BTEX)						
Benzene	mg/kg	0.1	<0.1	<0.1	[99%]	[99%]
Toluene	mg/kg	0.1	<0.1	<0.1	[107%]	[103%]
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	[106%]	[98%]
Xylene (m & p)	mg/kg	0.2	<0.2	<0.2	[107%]	[98%]
Xylene (o)	mg/kg	0.1	<0.1	<0.1	[105%]	[98%]
Xylene Total	mg/kg	0.3	<0.3	<0.3	-	-
Total BTEX	mg/kg	0.6	<0.6	<0.6	-	-
Total Recoverable Hydrocarbons (TRH)						
C6-C9	mg/kg	20	<20	<20	-	-
C6-C10	mg/kg	25	<25	<25	-	-
C6-C10 (F1)	mg/kg	25	<25	<25	-	-
Polycyclic Aromatic Hydrocarbons (PAH)						
Naphthalene	mg/kg	0.1	<0.1	<0.1	-	-

Notes:
TB = Trip Blank sample, R = Rinsate sample, TS = Trip Spike sample
ND = Not detected, µg/L = micrograms per litre
- = Not analysed, LOR = Limit of reporting, EQL = Estimated Quantitation Limit
< = Less than, mg/L = milligrams per litre, µg/L = micrograms per litre

Assessment Criteria:
Acceptable rinsate results are less than laboratory LOR

RESULTS	Results in highlighted cells exceed the adopted assessment criteria

Table 5: Field Asbestos in Soil Estimations
11213 DSI: Detailed Site Investigation
A Portion of Lot 4, DP 874113 and Lot 12, DP 242010
December 2020

Sample Location and Depth	Weight of Soil (kg)	Potential ACM Observed	ACM Type	Weight of ACM (kg)	Density (kg/L)	% [1]Asbestos Content	Soil Asbestos (%w/w)	ASC NEPM (2013) HSL 'A' - ACM
TP01(0.0-0.2)	18.77	None	None	0	NC	NC	NC	
TP01(0.4-0.6)	17.93	None	None	0	NC	NC	NC	
TP01(0.9-1.1)	17.05	None	None	0	NC	NC	NC	
TP02(0.0-0.2)	14.93	None	None	0	NC	NC	NC	
TP02(0.4-0.6)	17.09	None	None	0	NC	NC	NC	
TP03(0.0-0.2)	16.19	None	None	0	NC	NC	NC	
TP03(0.4-0.6)	16.37	None	None	0	NC	NC	NC	
TP03(0.9-1.0)	17.1	None	None	0	NC	NC	NC	
TP04(0.0-0.2)	15.97	None	None	0	NC	NC	NC	
TP04(0.4-0.6)	17.6	None	None	0	NC	NC	NC	
TP04(0.8-1.0)	15.86	None	None	0	NC	NC	NC	
TP05(0.0-0.2)	14.9	None	None	0	NC	NC	NC	
TP05(0.4-0.6)	16.27	None	None	0	NC	NC	NC	
TP05(0.9-1.1)	16.8	None	None	0	NC	NC	NC	
TP06(0.0-0.2)	18.4	None	None	0	NC	NC	NC	
TP06(0.4-0.6)	17.9	None	None	0	NC	NC	NC	
TP08(0.0-0.2)	15.6	None	None	0	NC	NC	NC	
TP08(0.4-0.6)	15.43	None	None	0	NC	NC	NC	
TP08(0.8-1.0)	15.6	None	None	0	NC	NC	NC	
TP09(0.0-0.2)	15.09	None	None	0	NC	NC	NC	
TP09(0.4-0.6)	15.89	None	None	0	NC	NC	NC	
TP09(0.9-1.1)	15.6	None	None	0	NC	NC	NC	
TP10(0.0-0.2)	14.96	None	None	0	NC	NC	NC	
TP10(0.4-0.6)	16.95	None	None	0	NC	NC	NC	
TP11(0.0-0.2)	15.21	None	None	0	NC	NC	NC	0.01 %w/w
TP11(0.4-0.6)	16.48	None	None	0	NC	NC	NC	
TP12(0.0-0.2)	18.95	None	None	0	NC	NC	NC	
TP12(0.4-0.6)	17.42	None	None	0	NC	NC	NC	
TP13(0.0-0.2)	18.71	None	None	0	NC	NC	NC	
TP13(0.4-0.6)	18.39	None	None	0	NC	NC	NC	
TP14(0.0-0.2)	15.61	None	None	0	NC	NC	NC	
TP14(0.4-0.6)	15.55	None	None	0	NC	NC	NC	
TP15(0.0-0.2)	17.62	None	None	0	NC	NC	NC	
TP16(0.0-0.2)	15.39	None	None	0	NC	NC	NC	
TP16(0.4-0.6)	14.9	None	None	0	NC	NC	NC	
BH17(0.0-0.2)	14.6	None	None	0	NC	NC	NC	
BH17(0.3-0.5)	16.51	None	None	0	NC	NC	NC	
BH17(0.8-1.0)	16.5	None	None	0	NC	NC	NC	
BH17(1.8-2.0)	14.6	None	None	0	NC	NC	NC	
BH18(0.0-0.2)	19.1	None	None	0	NC	NC	NC	
BH18(0.4-0.6)	19.47	None	None	0	NC	NC	NC	
BH18(0.8-1.0)	15.4	None	None	0	NC	NC	NC	
BH19(0.0-0.2)	19.46	None	None	0	NC	NC	NC	
BH19(0.4-0.6)	18.42	None	None	0	NC	NC	NC	
BH19(0.8-1.0)	16.67	None	None	0	NC	NC	NC	
BH19(1.8-2.0)	17.59	None	None	0	NC	NC	NC	
BH20(0.0-0.2)	20.05	None	None	0	NC	15%	NC	
BH20(0.4-0.6)	17.75	None	None	0	NC	NC	NC	
BH20(0.8-1.0)	14.1	None	None	0	NC	NC	NC	
BH20(1.8-2.0)	16.8	None	None	0	NC	NC	NC	

Notes:

[1] = Allowed 15% for general asbestos product; - = Not calculable, kg = Kilograms, % = Percent, kg/L = Kilograms per litre, %w/w = Percent weight per weight.

Assessment Criteria

[1]ASC NEPM (2013) – Table 7 'Health screening levels for asbestos contamination in soil' of Schedule B1 'Guideline on Investigation Levels for Soil and Groundwater', (HIL) 'A' – Residential with garden/ accessible soil (home grown produce <10% and vegetable intake, (no poultry), also includes childcare centres, preschools and primary schools.

RESULTS	Detected ACM
RESULTS	Exceeds NEPM (2013) 'HIL/HSL A – Residential

APPENDICES

Appendix A

Spectrum Pre-Application Development Plan

LEGEND

- DEMOLITION WORKS UNDER SEPARATE PLANNING PATHWAYS INCLUDING;
  - COMPLYING DEVELOPMENT
  - EXEMPT DEVELOPMENT: DEMOUNTABLE, GENERAL LANDSCAPE WORKS
  - REF: INTERNAL ALTERATION & FITOUT TO EXISTING BUILDING A,G,H,I & L
  - TREE REMOVAL PERMIT
- DEMOLITION WORKS UNDER DEVELOPMENT APPLICATION
- NO WORKS
- TREES BEING REVIEWED AND REMOVED TO SEPARATE APPROVAL

MUNNS SLY MOORE architects

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NO.	DATE	DESCRIPTION
1	24/11/2020	PRE APP DA

24/11/2020 3:19:48 PM C:\Revit\My Documents\4186_SMGS_Stage 1_CF_jsmeal@munnsslymoore.com.au.rvt

NOTES
1. Use figured dimensions. Do not scale from drawings.
2. All dimensions are in millimetres, except levels and drawings to scale of 1:500 and smaller which are given in metres.
3. Drawings to be read in conjunction with specifications and/or schedules.
4. Contractor to verfiy all dimensions and levels on site prior to commencing any work or making of shop drawings, and seek instructions if any discrepancies are found.

NEW LEARNING ENVIRONMENTS

Spectrum Property & Projects

SNOWY MOUNTAINS GRAMMAR SCHOOL
CHALLENGE BELONG EXPLORE

PROJECT
SMGS - SENIOR SCHOOL

CLIENT

1 : 500 @ A1

DRAWING
SITE PLAN EXISTING

STATUS PSP

DATE 24/11/2020 FILE C:\Revit\My Documents\4186_SMGS_Stage 1_CF_jsmeal@munnsslymoore.com.au.rvt

DRAWN Author CHECKED Checker VERIFIED Checker

LOT: DP: ADDRESS: PROJECT ADDRESS

MUNNS SLY MOORE ARCHITECTS PTY LTD ABN 30 008 534 049
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Nominated Architect Robert Sly FAIA ACT #331 NSW #6712 www.munnsslymoore.com.au

PROJECT NO. 4186
DRAWING NO. DA 004
REVISION 1

Appendix B

PID Calibration Records

Field Calibration Register

Issued Date : 9/08/2010
Doc No: EAR-F005
Printed: 30/11/2020 4:12 PM

Electronic version current

Uncontrolled copy valid only at time of printing

Project Number and Name: 11213 - DSI
Client: Spectrum Property & Projects
Location: 6339 Kosciuszko Road Jindabyne NSW 2627
Project Manager: BK
Field Personnel: AS/AG
Date: 08/12/20

Photoionisation Detector (PID)

MiniRAE 2000 (100-900758) ☑ MiniRAE 3000 (592-901208) ☐ Other/hire ☐
Equipment Serial/ID Number:

Calibration and Service Details

Frequency required by manufacturer: 6 months
Calibration (Fresh Air): 0.0 ppm
Calibrated by (personnel and company name): Active Environmental Solutions (AES)
Calibration (Span Gas - Isobutylene): 100.0 ppm
Date last calibration (by qualified technician): 07/10/2020 (MiniRAE 2000) 25/05/2020 (MiniRAE 3000)

Field Challenge Details

Date	Time	Zero-Fresh Air	Span-Isobutylene
08/12/20	08:30	0.0 ppm	102 ppm

Date	Time	Zero-Fresh Air	Span-Isobutylene

Water Quality Meter (WQM)

YSI 556 MPS (06E2510 AF) ☐ Other/hire ☐ Equipment Serial/ID Number:

Calibration and Service Details

Frequency required by manufacturer: 12 months
Calibrated by (personnel and company name): Xylem Analytics
Calibration standard / Comments:
Date last calibration (by qualified technician): 14/05/2019 (YSI 556 MPS)

Field Challenge Details

Date	Time	pH	EC (ms/cm)(µScm)	DO (%) (ppm)	Redox - ORP (mV)

Interface Probe (IP)

Solinst Interface Meter (122 010029-1) ☐ Other/hire ☐ Equipment Serial/ID Number:

Maintenance Details

Frequency required by manufacturer: 12 months
Calibrated by (personnel and company name): Thermofisher Scientific
Comments: In house service and repair performed - Nov 2017
Date last calibration (by qualified technician): 28/04/2016 (Solinst IP 122)

Field Maintenance Details

Date	Time	Cleaning Method

Gas Monitor (CO_2, H_2S, LEL, O_2)

Equipment Serial/ID Number:
Equipment Description:

Calibration and Service Details

Frequency required by manufacturer:
Date last calibration (by qualified technician):
Calibration standard / Comments:
Calibrated by (personnel and company name):

Field Challenge Details

Date	Time	CO	H_2S	LEL	O_2

Field Calibration Register

Issued Date : 9/08/2010
Doc No: EAR-F005
Printed: 30/11/2020 4:12 PM

Electronic version current

Uncontrolled copy valid only at time of printing

Project Number and Name: 11213 - DSI
Client: Spectrum Property & Projects
Location: 6339 Kosciuszko Road Jindabyne NSW 2627
Project Manager: BK
Field Personnel: AS/AG
Date: 09/12/20

Photoionisation Detector (PID)

MiniRAE 2000 (100-900758) ☑ MiniRAE 3000 (592-901208) ☐ Other/hire ☐
Equipment Serial/ID Number:

Calibration and Service Details

Frequency required by manufacturer: 6 months
Calibrated by (personnel and company name): Active Environmental Solutions (AES)
Date last calibration (by qualified technician): 07/10/2020 (MiniRAE 2000) 25/05/2020 (MiniRAE 3000)
Calibration (Fresh Air): 0.0 ppm
Calibration (Span Gas - Isobutylene): 100.0 ppm

Field Challenge Details

Date	Time	Zero-Fresh Air	Span-Isobutylene
09/12/20	08:15	0.0 ppm	100 ppm

Date	Time	Zero-Fresh Air	Span-Isobutylene

Water Quality Meter (WQM)

YSI 556 MPS (06E2510 AF) ☐ Other/hire ☐ Equipment Serial/ID Number:

Calibration and Service Details

Frequency required by manufacturer: 12 months
Calibrated by (personnel and company name): Xylem Analytics
Date last calibration (by qualified technician): 14/05/2019 (YSI 556 MPS)
Calibration standard / Comments:

Field Challenge Details

Date	Time	pH	EC (ms/cm)(µScm)	DO (%) (ppm)	Redox - ORP (mV)

Interface Probe (IP)

Solinst Interface Meter (122 010029-1) ☐ Other/hire ☐ Equipment Serial/ID Number:

Maintenance Details

Frequency required by manufacturer: 12 months
Calibrated by (personnel and company name): Thermofisher Scientific
Date last calibration (by qualified technician): 28/04/2016 (Solinst IP 122)
Comments: In house service and repair performed - Nov 2017

Field Maintenance Details

Date	Time	Cleaning Method

Gas Monitor (CO_2, H_2S, LEL, O_2)

Equipment Serial/ID Number:
Equipment Description:

Calibration and Service Details

Frequency required by manufacturer:
Date last calibration (by qualified technician):
Calibrated by (personnel and company name):
Calibration standard / Comments:

Field Challenge Details

Date	Time	CO	H_2S	LEL	O_2

AES
sensing safety

Calibration and Service Report – PID

Company:	Robson Environmental Pty Ltd	**Manufacturer:**	RAE	**Serial #:**	110-900758
Contact:	Aaron Sarlija	**Instrument:**	MINIRAE 2000 SN: 110-900758	**Asset #:**	
Address:		**Model:**	MiniRAE 2000	**Part #:**	011-0201-100
		Configuration:	VOC 10.6EV	**Sold:**	15.08.2006
		Wireless:	-	**Last Cal:**	30.03.2020
Phone:	02 6239 5656	**Network ID:**	-	**Job #:**	119969
Fax:		**Unit ID:**	-	**Cal Spec:**	
Email:	aaron@robsonenviro.com.au	**Details:**		**Order #:**	23

Item	Test	Pass/Fail	Comments	Serial Number
Battery	NiCd, NiMH, Dry cell, LiIon	P		
Charger	Power Supply	-		
	Cradle, Travel Charger	-		
Pump	Flow	P	>450ml/min	
Filter	Filter, fitting, etc	x	Replaced	
Alarms	Audible, visual, vibration	P		
Display	Operation	P		
Switches	Operation	P		
PCB	Operation	P		
Connectors	Condition	P		
Firmware	Version	P		
Datalogger	Operation	P		
Monitor Housing	Condition	P		
Case	Condition / Type	-		
Sensors				
PID	Lamp	P	Cleaned	
PID	Sensor	P	Cleaned	
THP	Sensor	P		

Engineer's Report

Cleaned lamp, lamp housing and electrode
Cleaned porous metal filter, checked flowrate and stall values
Checked moisture sensitivity
Checked unit settings and configuration
Unit serviced and calibrated.

AES
sensing safety

Calibration Certificate

Sensor	Type	Serial No.	Span Gas	Concentration	Traceability Lot #	CF	Reading	
							Zero	Span
Oxygen								
LEL								
PID	050-0000-000. 10.6EV 1/2_ PID LAMP	1062PB21067	Isobutylene	100ppm	3075-2-1		0	100
Battery	012-3051-000E. NIMH BATTERY PACK 7800	NIMH S/N: 170G5W0627						
Toxic 1								
Toxic 2								
Toxic 3								
Toxic 4								
Toxic 5								
Toxic 6								

Calibrated/Repaired by: JERRY JI Date: 07.10.2020 Next Due: 07.04.2021

Appendix C

Test Pit & Borehole Logs

T: (02) 6239 5656
E: admin@robsonenviro.com.au
140 Gladstone Street Fyshwick ACT 2609

ENVIRONMENTAL TEST PIT TP01

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 08/12/20 **COMPLETED** 08/12/20 **TOTAL DEPTH** 1.1 m **PIT LENGTH** 1.5 m
EXCAVATION CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **PIT WIDTH** 0.8 m
EQUIPMENT Excavator Case 580ST **COORDINATES** , **LOGGED BY** AG / AS
TEST PIT LOCATION North west boundary of the site (AEC 1) **COORD SYS** **CHECKED BY** BK
COMMENTS Surface conditions: Gravel

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
BH	0.2 0.4		MLS	Clayey Sandy SILT, dark brown, dry, stiff, compacted, with some gravel and rocks	TP01(0.0-0.2) *	0.0	Fill Material. No odours or ACM observed
	0.6 0.8 1.0		SM	Silty SAND, brown, moist, soft, medium to fine grain size	TP01(0.4-0.6) * TP01(0.9-1.1)	0.0 0.0	Natural
				Test Pit TP01 terminated at 1.1m - Targeted Depth Reached			

Notes:
BH = backhoe bucket, * = Sample was analysed by laboratory

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ENVIRONMENTAL TEST PIT TP02

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 08/12/20 **COMPLETED** 08/12/20 **TOTAL DEPTH** 1.2 m **PIT LENGTH** 1.5 m
EXCAVATION CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **PIT WIDTH** 0.8 m
EQUIPMENT Excavator Case 580ST **COORDINATES** , **LOGGED BY** AG / AS
TEST PIT LOCATION East of the basketball court (AEC 1) **COORD SYS** **CHECKED BY** BK
COMMENTS Surface conditions: Grass

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
BH	0.2		MLS	Clayey Sandy SILT, dark brown, dry, hard, loose, high organic matter with some minor rocks	TP02(0.0-0.2) *	0.4	Fill material. No ACM, no staining or odours observed.
	0.4						
	0.6				TP02(0.4-0.6)	0.0	
	0.8						
	1.0		SM	Silty SAND, brown, moist, soft, medium to fine grain size	TP02(1.0-1.2)	0.2	Natural
	1.2			Test Pit TP02 terminated at 1.2m - Targeted Depth Reached			

Notes:
BH = backhoe bucket, * = Sample was analysed by laboratory

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ENVIRONMENTAL TEST PIT TP03

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 08/12/20 **COMPLETED** 08/12/20 **TOTAL DEPTH** 1.6 m **PIT LENGTH** 1.5 m
EXCAVATION CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **PIT WIDTH** 0.8 m
EQUIPMENT Excavator Case 580ST **COORDINATES** , **LOGGED BY** AG / AS
TEST PIT LOCATION North of the site near Kosciuszko Road (AEC 1) **COORD SYS** **CHECKED BY** BK
COMMENTS Surface conditions: Grass

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
BH	0.2		MLS	Clayey Sandy SILT, dark brown, dry, hard, loose, high organic matter with some minor rocks	TP03(0.0-0.2) *	0.0	Fill material, no ACM, no staining or odours observed.
	0.4						
	0.6				TP03(0.4-0.6)	0.0	
	0.8						
	1.0				TP03(0.8-1.0)	0.0	
	1.2						
	1.4		CLS	Silty SAND, brown, moist, soft, loose, medium grain size			Natural
	1.6				TP03(1.4-1.6) *	0.0	
				Test Pit TP03 terminated at 1.6m - Targeted Depth Reached			

Notes:
BH = backhoe bucket, * = Sample was analysed by laboratory

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ENVIRONMENTAL TEST PIT TP04

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 09/12/20 **COMPLETED** 09/12/20 **TOTAL DEPTH** 1 m **PIT LENGTH** 1.5 m
EXCAVATION CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **PIT WIDTH** 0.8 m
EQUIPMENT Excavator Case 580ST **COORDINATES** , **LOGGED BY** AG / AS
TEST PIT LOCATION North west corner of site (AEC 1) **COORD SYS** **CHECKED BY** BK
COMMENTS Surface conditions: Grass

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
BH			MLS	Sandy SILT, dark brown, dry, loose, hard, minor concrete fragments	TP04(0.0-0.2) *	0.4	Fill material, no ACM, no staining or odours observed.
	0.2						
	0.4				TP04(0.4-0.6)	0.3	
	0.6						
	0.8		SM	Silty SAND, dark brown, rootlets, dry, hard, fine grain size	TP04(0.8-1.0) *	0.2	Natural
	1.0						
				Test Pit TP04 terminated at 1m - Targeted Depth Reached			

Notes:
BH = backhoe bucket, * = Sample was analysed by laboratory

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ENVIRONMENTAL TEST PIT TP05

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 09/12/20 **COMPLETED** 09/12/20 **TOTAL DEPTH** 1.1 m **PIT LENGTH** 1.5 m
EXCAVATION CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **PIT WIDTH** 0.8 m
EQUIPMENT Excavator Case 580ST **COORDINATES** , **LOGGED BY** AG / AS
TEST PIT LOCATION North of site, north west corner of shed (AEC 1) **COORD SYS** **CHECKED BY** BK
COMMENTS Surface conditions: Grass

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
BH	0.2		MLS	Clayey Sandy SILT, dark brown, dry, hard, loose, fine grain size, high organic matter, roots and rootlets	TP05(0.0-0.2) *	0.2	Fill material. No ACM, no staining or odours observed.
	0.4						
	0.6				TP05(0.4-0.6)	0.2	
	0.8						
	1.0		SM	Silty SAND, brown, dry, firm, medium grain size with minor rootlets	TP05(0.9-1.1)	0.0	Natural
				Test Pit TP05 terminated at 1.1m - Targeted Depth Reached			

Notes:
BH = backhoe bucket, * = Sample was analysed by laboratory

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ENVIRONMENTAL TEST PIT TP06

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 08/12/20 **COMPLETED** 08/12/20 **TOTAL DEPTH** 1 m **PIT LENGTH** 1.5 m
EXCAVATION CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **PIT WIDTH** 0.8 m
EQUIPMENT Excavator Case 580ST **COORDINATES** , **LOGGED BY** AG / AS
TEST PIT LOCATION East of basketball court (AEC 1) **COORD SYS** **CHECKED BY** BK
COMMENTS Surface conditions: Bare ground

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
BH	0.2 0.4		MLS	Clayey Sandy SILT, dark brown, dry, Hard, fine grain size with minor rocks	TP06(0.0-0.2) *	0.2	Fill material. No ACM, no staining or odours observed.
					TP06(0.4-0.6)	0.3	
	0.6 0.8 1.0		SM	Silty SAND, brown, moist, soft, medium grain size	TP06(0.8-1.0)	0.0	Natural
				Test Pit TP06 terminated at 1m - Targeted Depth Reached			

Notes:
BH = backhoe bucket, * = Sample was analysed by laboratory

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ENVIRONMENTAL TEST PIT TP07

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 09/12/20 **COMPLETED** 09/12/20 **TOTAL DEPTH** 1.1 m **PIT LENGTH** 1.5 m
EXCAVATION CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **PIT WIDTH** 0.8 m
EQUIPMENT Excavator Case 580ST **COORDINATES** , **LOGGED BY** AG / AS
TEST PIT LOCATION Centre of site, rocks outcrop area (AEC 1) **COORD SYS** **CHECKED BY** BK
COMMENTS Surface conditions: Grass

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
BH			MLS	Clayey Sandy SILT, dark brown,fine grain size, dry, hard, loose, roots			Fill material. No ACM, no staining or odours observed.
			SM	Silty SAND, brown, dry, hard, medium grain size, high organic matter, weathered granite	TP07(0.0-0.2) *	0.3	
	0.2						
	0.4				TP07(0.4-0.6) *	0.4	Natural
	0.6						
	0.8						
	1.0				TP07(0.9-1.1)	0.1	
				Test Pit TP07 terminated at 1.1m - Targeted Depth Reached			

Notes:
BH = backhoe bucket, * = Sample was analysed by laboratory

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ENVIRONMENTAL TEST PIT TP08

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 09/12/20 **COMPLETED** 09/12/20 **TOTAL DEPTH** 1 m **PIT LENGTH** 1.5 m
EXCAVATION CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **PIT WIDTH** 0.8 m
EQUIPMENT Excavator Case 580ST **COORDINATES** , **LOGGED BY** AG / AS
TEST PIT LOCATION Centre of site, west of shed (AEC 1) **COORD SYS** **CHECKED BY** BK
COMMENTS Surface conditions: Grass

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
BH	0.2		MLS	Sandy SILT, dark brown, dry, hard, fine grain size, loose, high organic matter	TP08(0.0-0.2) *	0.4	Fill material. No ACM, no staining or odours observed, one quartz rock.
	0.4		SM	Silty SAND, brown, dry, hard, medium grain size, weathered granite	TP08(0.4-0.6) *	0.3	Natural
	0.6						
	0.8				TP08(0.8-1.0)	0.1	
	1.0			Test Pit TP08 terminated at 1m - Targeted Depth Reached			

Notes:
BH = backhoe bucket, * = Sample was analysed by laboratory

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ENVIRONMENTAL TEST PIT TP09

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 09/12/20 **COMPLETED** 09/12/20 **TOTAL DEPTH** 1.1 m **PIT LENGTH** 1.5 m
EXCAVATION CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **PIT WIDTH** 0.8 m
EQUIPMENT Excavator Case 580ST **COORDINATES** , **LOGGED BY** AG / AS
TEST PIT LOCATION West of site south of shed (AEC 1) **COORD SYS** **CHECKED BY** BK
COMMENTS Surface conditions: Grass

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
BH	0.2		MLS	Clayey Sandy SILT, dark brown, dry, loose, fine grain size	TP09(0.0-0.2) *	0.2	Fill material. No ACM, no staining or odours observed.
	0.4						
	0.6				TP09(0.4-0.6) *	0.2	
	0.8						
	1.0		SM	Silty SAND, brown, dry, hard, medium grain size	TP09(0.9-1.1)	0.0	Natural
				Test Pit TP09 terminated at 1.1m - Targeted Depth Reached			

Notes:
BH = backhoe bucket, * = Sample was analysed by laboratory

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ENVIRONMENTAL TEST PIT TP10

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 09/12/20 **COMPLETED** 09/12/20 **TOTAL DEPTH** 1.1 m **PIT LENGTH** 1.5 m
EXCAVATION CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **PIT WIDTH** 0.8 m
EQUIPMENT Excavator Case 580ST **COORDINATES** , **LOGGED BY** AG / AS
TEST PIT LOCATION West of site behind the basketball ring (AEC 1) **COORD SYS** **CHECKED BY** BK
COMMENTS Surface conditions: Grass

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
BH	0.2 0.4		MLS	Clayey Sandy SILT, brown, dry, hard, fine grain size, high organic matter with roots and rootlets	TP10(0.0-0.2) *	0.5	Fill material. No ACM, no staining or odours observed.
	0.6 0.8 1.0		SM	Silty SAND, dark brown, dry, hard, medium grain size, weathered granite	TP10(0.4-0.6) TP10(0.9-1.1)	0.3 0.1	Natural
				Test Pit TP10 terminated at 1.1m - Targeted Depth Reached			

Notes:
BH = backhoe bucket, * = Sample was analysed by laboratory

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ENVIRONMENTAL TEST PIT TP11

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 09/12/20 **COMPLETED** 09/12/20 **TOTAL DEPTH** 0.8 m **PIT LENGTH** 1.5 m
EXCAVATION CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **PIT WIDTH** 0.8 m
EQUIPMENT Excavator Case 580ST **COORDINATES** , **LOGGED BY** AG / AS
TEST PIT LOCATION Centre of site, rocks outcrop area (AEC 1) **COORD SYS** **CHECKED BY** BK
COMMENTS Surface conditions: Grassy soil

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
BH			MLS	Clayey Sandy SILT, dark brown, dry, hard, loose, fine grain size	TP11(0.0-0.2) *	0.3	Topsoil, no ACM, no staining or odours observed
	0.2		SM	Silty SAND, brown, dry, hard, coarse grain size, some small rocks and a big rock, weathered granite			Natural, big rock at 0.8m
	0.4				TP11(0.4-0.6)	0.0	
	0.6						
	0.8			Test Pit TP11 terminated at 0.8m - Targeted Depth Reached			

Notes:
BH = backhoe bucket, * = Sample was analysed by laboratory

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ENVIRONMENTAL TEST PIT TP12

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 08/12/20 **COMPLETED** 08/12/20 **TOTAL DEPTH** 1 m **PIT LENGTH** 1.5 m
EXCAVATION CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **PIT WIDTH** 0.8 m
EQUIPMENT Excavator Case 580ST **COORDINATES** , **LOGGED BY** AG / AS
TEST PIT LOCATION Southeast corner of basketball field (AEC 1) **COORD SYS** **CHECKED BY** BK
COMMENTS Surface conditions: Bare ground

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
BH	0.2		MLS	Clayey Sandy SILT, light brown, dry, hard, fine grain size	TP12(0.0-0.2) *	0.3	Topsoil, no ACM, no staining or odours observed
	0.4		SM	Silty SAND, light brown, dry, hard, medium grain size			Natural
					TP12(0.4-0.6)	0.1	
	0.6						
	0.8				TP12(0.8-1.0)	0.0	
	1.0						
				Test Pit TP12 terminated at 1m - Targeted Depth Reached			

Notes:
BH = backhoe bucket, * = Sample was analysed by laboratory

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ENVIRONMENTAL TEST PIT TP13

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 09/12/20 **COMPLETED** 09/12/20 **TOTAL DEPTH** 1.1 m **PIT LENGTH** 1.5 m
EXCAVATION CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **PIT WIDTH** 0.8 m
EQUIPMENT Excavator Case 580ST **COORDINATES** , **LOGGED BY** AG / AS
TEST PIT LOCATION South west of site (AEC 1) **COORD SYS** **CHECKED BY** BK
COMMENTS Surface conditions: Bare ground

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
BH	0.2		MLS	Clayey Sandy SILT, brown, dry, hard, roots and rootlets, high organic matter with minor rocks	TP13(0.0-0.2) *	0.7	Fill material. No ACM, no staining or odours observed.
	0.4		SM	Silty SAND, brown with dark brown mottles, dry, hard, minor roots and rootlets with some minor rocks and weathered granite	TP13(0.4-0.6) *	0.5	Natural
	0.6						
	0.8						
	1.0				TP13(0.9-1.1)	0.1	
				Test Pit TP13 terminated at 1.1m - Targeted Depth Reached			

Notes:
BH = backhoe bucket, * = Sample was analysed by laboratory

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ENVIRONMENTAL TEST PIT TP14

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 09/12/20 **COMPLETED** 09/12/20 **TOTAL DEPTH** 1 m **PIT LENGTH** 1.5 m
EXCAVATION CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **PIT WIDTH** 0.8 m
EQUIPMENT Excavator Case 580ST **COORDINATES** , **LOGGED BY** AG / AS
TEST PIT LOCATION Centre of site (AEC 1) **COORD SYS** **CHECKED BY** BK
COMMENTS Surface conditions: Grass and bare ground

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
BH	0.2		SM	Silty SAND, light brown, coarse grain size, dry, hard, roots and rootlets with some minor rocks	TP14(0.0-0.2) *	0.4	Topsoil, no ACM, no staining or odours observed, electrical conduit at 0.2m
	0.4		SM	Silty SAND, brown, hard, dry, coarse grain size, weathered granite			Natural
	0.6				TP14(0.4-0.6)	0.3	
	0.8						
	1.0				TP14(0.8-1.0) *	0.0	
				Test Pit TP14 terminated at 1m - Targeted Depth Reached			

Notes:
BH = backhoe bucket, * = Sample was analysed by laboratory

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ENVIRONMENTAL TEST PIT TP15

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 08/12/20 **COMPLETED** 08/12/20 **TOTAL DEPTH** 1 m **PIT LENGTH** 1.5 m
EXCAVATION CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **PIT WIDTH** 0.8 m
EQUIPMENT Excavator Case 580ST **COORDINATES** , **LOGGED BY** AG / AS
TEST PIT LOCATION South boundary of the site (AEC 1) **COORD SYS** **CHECKED BY** BK
COMMENTS Surface conditions: Bare ground

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
BH	0.2		SM	Silty SAND, brown, dry, hard, roots and rootlets, high organic matter, weathered granite with minor rocks	TP15(0.0-0.2) *	0.1	Natural
	0.4						
	0.6				TP15(0.4-0.6)	0.1	
	0.8						
	1.0				TP15(0.8-1.0)	0.1	
				Test Pit TP15 terminated at 1m - Targeted Depth Reached			

Notes:
BH = backhoe bucket, * = Sample was analysed by laboratory

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ENVIRONMENTAL TEST PIT TP16

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 09/12/20 **COMPLETED** 09/12/20 **TOTAL DEPTH** 1 m **PIT LENGTH** 1.5 m
EXCAVATION CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **PIT WIDTH** 0.8 m
EQUIPMENT Excavator Case 580ST **COORDINATES** , **LOGGED BY** AG / AS
TEST PIT LOCATION South east boundary of the site (AEC 1) **COORD SYS** **CHECKED BY** BK
COMMENTS Surface conditions: Grass

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
BH	0.2		MLS	Clayey Sandy SILT, brown, dry, hard, fine grain size, roots and rootlets with minor concrete fragments	TP16(0.0-0.2) *	0.5	Fill material. No ACM, no staining or odours observed.
	0.4		SM	Silty SAND, brown, hard, dry, medium grain size, loose, weathered granite	TP16(0.4-0.6) *	0.3	Natural
	0.6						
	0.8				TP16(0.8-1.0)	0.4	
	1.0			Test Pit TP16 terminated at 1m - Targeted Depth Reached			

Notes:
BH = backhoe bucket, * = Sample was analysed by laboratory

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ENVIRONMENTAL BOREHOLE BH17

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 08/12/20 **COMPLETED** 08/12/20 **TOTAL DEPTH** 3 m **HOLE SIZE** 300 mm
DRILLING CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **LOGGED BY** AG / AS
EQUIPMENT Excavator Case 580ST **COORDINATES** , **CHECKED BY** BK
HOLE LOCATION North west from former UST (AEC 1 and AEC 2) **COORD SYS**
COMMENTS Surface conditions: Ashphalt

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
ADV			SC	Clayey SAND, brown, moist, soft, coarse grain size, loose, weathered granite	BH17(0.0-0.2) *	0.4	Natural
	0.5				BH17(0.4-0.6)	0.4	
	1.0				BH17(0.8-1.0) *	0.3	
	1.5						
	2.0				BH17(1.8-2.0)	0.1	
	2.5						
	3.0				BH17(2.8-3.0) *	0.1	
				Borehole BH17 terminated at 3m - Targeted Depth Reached			

Notes:
ADV = auger drilling + V bit
* = Sample was analysed by laboratory

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ENVIRONMENTAL BOREHOLE BH18

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 08/12/20 **COMPLETED** 08/12/20 **TOTAL DEPTH** 3 m **HOLE SIZE** 300 mm
DRILLING CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **LOGGED BY** AG / AS
EQUIPMENT Excavator Case 580ST **COORDINATES** , **CHECKED BY** BK
HOLE LOCATION Middle of former UST (AEC 2) **COORD SYS**
COMMENTS Surface conditions: Ashphalt

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
ADV			SM	Silty SAND, light brown, soft, dry, asphalt, gravel, rocks, bitumen	BH18(0.0-0.2)	0.5	Fill material, no ACM, no staining or odours observed
			SC	Clayey SAND, brown with red mottles of clay, gravel, medium grain size, dry, hard			Fill material, no ACM, no staining or odours observed
	0.5				BH18(0.4-0.6) *	0.2	
					BH18(0.8-1.0)	0.1	
	1.0						
	1.5		SM	Silty SAND, light brown with weathered granite, well sorted, medium grain size, loose, dry, hard			Natural
					BH18(1.8-2.0) *	0.0	
	2.0						
	2.5						
					BH18(2.8-3.0)	0.1	
	3.0						
				Borehole BH18 terminated at 3m - Targeted Depth Reached			

Notes:
ADV = auger drilling + V bit
* = Sample was analysed by laboratory

T: (02) 6239 5656
E: admin@robsonenviro.com.au
140 Gladstone Street Fyshwick ACT 2609

ENVIRONMENTAL BOREHOLE BH19

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 08/12/20 **COMPLETED** 08/12/20 **TOTAL DEPTH** 3 m **HOLE SIZE** 300 mm
DRILLING CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **LOGGED BY** AG / AS
EQUIPMENT Excavator Case 580ST **COORDINATES** , **CHECKED BY** BK
HOLE LOCATION South west of former UST (AEC 2) **COORD SYS**
COMMENTS Surface conditions: Ashphalt

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
ADV			SM	Silty SAND, light brown with gravel, loose, dry, soft, asphalt, bitumen, some rocks	BH19(0.0-0.2)	0.6	Fill material, no ACM, no staining or odours observed
			SC	Clayey SAND, brown with red mottles of clay, medium grain size, dry, hard, loose, quartz and gravel rocks			Fill material, no ACM, no staining or odours observed
	0.5				BH19(0.4-0.6)	0.0	
					BH19(0.8-1.0) *	0.2	
	1.0						
	1.5						
					BH19(1.8-2.0)	0.3	
	2.0		SC	Clayey SAND, light brown, well sorted, loose, medium grain size, dry, soft, weathered granite			Natural
	2.5						
					BH19(2.8-3.0) *	0.8	
	3.0						
				Borehole BH19 terminated at 3m - Targeted Depth Reached			

Notes:
ADV = auger drilling + V bit
* = Sample was analysed by laboratory

T: (02) 6239 5656
E: admin@robsonenviro.com.au
140 Gladstone Street Fyshwick ACT 2609

ENVIRONMENTAL BOREHOLE BH20

CLIENT Spectrum Property & Projects
PROJECT NAME Detailed Site Investigation
PROJECT NUMBER 11213
PROJECT LOCATION 6339 Kosciuszko Road, Jindabyne, NSW 2627

DATE STARTED 08/12/20 **COMPLETED** 08/12/20 **TOTAL DEPTH** 3 m **HOLE SIZE** 300 mm
DRILLING CONTRACTOR Mr A Michielsen **R.L. SURFACE** mAHD **LOGGED BY** AG / AS
EQUIPMENT Excavator Case 580ST **COORDINATES** , **CHECKED BY** BK
HOLE LOCATION South east of former UST (AEC 2) **COORD SYS**
COMMENTS Surface conditions: Ashphalt

Method	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples	PID (ppm)	Additional Observations
ADV			SM	Silty SAND, light brown, soft, dry, loose, ashphalt, bitumen, gravel rocks	BH20(0.0-0.2)	2.7	Fill material, no ACM, no staining or odours observed
			SC	Clayey SAND, brown, moist, soft, medium grain size, loose, weathered granite			Natural
	0.5				BH20(0.4-0.6)	0.7	
	1.0				BH20(0.8-1.0) *	0.9	
	1.5						
	2.0				BH20(1.8-2.0)	0.6	
	2.5						
	3.0				BH20(2.8-3.0) *	0.7	
				Borehole BH20 terminated at 3m - Targeted Depth Reached			

Notes:
ADV = auger drilling + V bit
* = Sample was analysed by laboratory

Appendix D

Site Photographs

Photograph 1 **Date:** 08/12/2020	Clearance of test pit and borehole locations by a Telstra accredited service locator.

Photograph 2 **Date:** 08/12/2020	Borehole BH19 excavation with mechanical auger. View to the northwest.

Photograph 3 **Date:** 08/12/2020	Primary soil samples and quality control samples from BH18.

Photograph 4 **Date:** 08/12/2020	General view of AEC 2 to the west after soil sampling and backfill of boreholes.

Photograph 5 **Date:** 08/12/2020	Measure of final depth of test pit TP01. General view to the north.

Photograph 6 **Date:** 08/12/2020	Excavation of test pit TP12. General view to the east.

Photograph 7 **Date:** 09/12/2020	Excavation of test pit TP16. General view to the east.

Photograph 8 **Date:** 09/12/2020	Electric conduit found during excavation of test pit TP14.

Photograph 9 **Date:** 09/12/2020	Excavation of test pit TP05. General view to the northeast.

Photograph 10 **Date:** 09/12/2020	Close-up of samples from test pit TP09 and quality control samples.

Photograph 11 **Date:** 09/12/2020	Excavation of test pit TP10. General view to the east.

Photograph 12 **Date:** 09/12/2020	Measure of maximum depth of test pit TP08.

Photograph 13 **Date:** 09/12/2020	General view to the west of the SMGS's art room (*Art Cube* building).

Photograph 14 **Date:** 09/12/2020	General view to the west of the SMGS's art room associated shed and storage shed.

Appendix E

Sample Receipt Advice, COC Documentation and Certified Laboratory Reports

Robson ENVIRONMENTAL

Occupational Hygiene
Health Safety &
Environmental Consulting

CHAIN OF CUSTODY
2

Quote No. :LVM1DX

Job No. : 11213

From: Robson Environmental Pty Ltd
PO Box 112 Fyshwick ACT 2609
140 Gladstone Street
Fyshwick ACT 2609
ABN: 55 008 660 900

Contact: Ben Kendon
Phone: (02) 6239 5656
Mobile: 0437 008 278
Fax: (02) 6239 5669
Email: results@robsonenviro.com.au
andrey@robsonenviro.com.au

Client Information: Spectrum Property and Projects

Site Address: 6339 Kosciuszko Rd. Jindabyne NSW 2627

Sampled by: AS, AG

Job Name: DSI

ESDAT Files YES
NEPM Report YES

Required Turnaround Time:
24hr [ ] 48hr [ ] 5-7 days [x]
36hr [ ] 72hr [ ]

To:
SGS
33 Maddox Street
Alexandria NSW 2015

Contact: Irfan Sayeed
Phone: (02) 8594 0404
Mobile:0400 588 130
Fax: (02) 8594 0499
Email:
ABN:44 000 964 278

Quote: LVM1DX

Analysis Required

Lab ID	Sample ID	Sample Depth (m)	Date Sampled	Sample Location	No. of Sample Jars	Sample Type	Sample Preservation (Ice, Acid, Ambient)	Asbestos WA	CL15	CL4	%Clay, pH, CEC						Comments:HOLD
1	TP01(0.0-0.2)	0.0-0.2	8/12/2020	TP01	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								
2	TP01(0.4-0.6)	0.4-0.6	8/12/2020	TP01	1 Jar and 1 Ziplock bag	Soil	Ice		X		X						
	TP01(0.9-1.1)	0.9-1.1	8/12/2020	TP01	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								HOLD
3	TP02(0.0-0.2)	0.0-0.2	8/12/2020	TP02	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								
	TP02(0.4-0.6)	0.4-0.6	8/12/2020	TP02	1 Jar and 1 Ziplock bag	Soil	Ice		X								HOLD
	TP02(1.0-1.2)	1.0-1.2	8/12/2020	TP02	1 Jar and 1 Ziplock bag	Soil	Ice		X								HOLD
4	TP03(0.0-0.2)	0.0-0.2	8/12/2020	TP03	1 Jar and 1 Ziplock bag	Soil	Ice	X	X		X						
	TP03(0.4-0.6)	0.4-0.6	8/12/2020	TP03	1 Jar and 1 Ziplock bag	Soil	Ice		X								HOLD
	TP03(0.8-1.0)	0.8-1.0	8/12/2020	TP03	1 Jar and 1 Ziplock bag	Soil	Ice		X								HOLD
5	TP03(1.4-1.6)	1.4-1.6	8/12/2020	TP03	1 Jar	Soil	Ice		X								
6	TP04(0.0-0.2)	0.0-0.2	9/12/2020	TP04	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								
	TP04(0.4-0.6)	0.4-0.6	9/12/2020	TP04	1 Jar and 1 Ziplock bag	Soil	Ice		X								HOLD
7	TP04(0.8-1.0)	0.8-1.0	9/12/2020	TP04	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								
8	TP05(0.0-0.2)	0.0-0.2	9/12/2020	TP05	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								
	TP05(0.4-0.6)	0.4-0.6	9/12/2020	TP05	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								HOLD
	TP05(0.9-1.1)	0.9-1.1	9/12/2020	TP05	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								HOLD
9	TP06(0.0-0.2)	0.0-0.2	8/12/2020	TP06	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								
	TP06(0.4-0.6)	0.4-0.6	8/12/2020	TP06	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								HOLD
	TP06(0.8-1.0)	0.8-1.0	8/12/2020	TP06	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								HOLD
10	TP07(~~0.4-0.6~~)	0.0-0.2	9/12/2020	TP07	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								
11	TP07(~~0.0-0.2~~)	0.4-0.6	9/12/2020	TP07	1 Jar and 1 Ziplock bag	Soil	Ice		X								
	TP07(0.9-1.1)	0.9-1.1	9/12/2020	TP07	1 Jar	Soil	Ice		X								HOLD

SGS EHS Sydney COC
SE214803

Relinquished by:	Aaron Sarlija	Date: 10/12/2020	Time: 2pm	Received by:	Time: 11/12/20 @ 10.50
Relinquished by:		Date:	Time:	Received by:	Time:
Relinquished by:		Date:	Time:	Received by:	Time:

CL6: TRH, BTEX & Pb
CL2: 8 Heavy metals (As, Cd, Cr, Cu, Ni, Pb, Zn, Hg)
CL15: TRH, BTEX, PAH, Phenols, OC, OP, PCB & 8 Heavy Metals
RS3: TRH, BTEX, PAH, Phenols, OC, PCB & 8 Heavy Metals
Mirco 2: E.Coli, Faecal Coliforms, Total Coliforms
CL4: TRH C_6-C_9 and BTEX

Robson ENVIRONMENTAL

Occupational Hygiene
Health Safety &
Environmental Consulting

CHAIN OF CUSTODY
2

Quote No. :LVM1DX

Job No. : 11213

From: Robson Environmental Pty Ltd
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140 Gladstone Street
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Contact: Ben Kendon
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andrey@robsonenviro.com.au

Client Information: Spectrum Property and Projects

Site Address: 6339 Kosciuszko Rd. Jindabyne NSW 2627

Sampled by: AS, AG

Job Name: DSI

ESDAT Files YES
NEPM Report YES

Required Turnaround Time:
24hr [ ] 48hr [ ] 5-7 days [x]
36hr [ ] 72hr [ ]

To:
SGS
33 Maddox Street
Alexandria NSW 2015

Contact: Irfan Sayeed
Phone: (02) 8594 0404
Mobile:0400 588 130
Fax: (02) 8594 0499
Email:
ABN:44 000 964 278

Quote: LVM1DX

Analysis Required

Lab ID	Sample ID	Sample Depth (m)	Date Sampled	Sample Location	No. of Sample Jars	Sample Type	Sample Preservation (Ice, Acid, Ambient)	Asbestos WA	CL15	CL4	%Clay, pH, CEC						Comments:HOLD
12	TP08(0.0-0.2)	0.0-0.2	9/12/2020	TP08	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								
13	TP08(0.4-0.6)	0.4-0.6	9/12/2020	TP08	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								
	TP08(0.8-1.0)	0.8-1.0	9/12/2020	TP08	1 Jar and 1 Ziplock bag	Soil	Ice		X								HOLD
14	TP09(0.0-0.2)	0.0-0.2	9/12/2020	TP09	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								
15	TP09(0.4-0.6)	0.4-0.6	9/12/2020	TP09	1 Jar and 1 Ziplock bag	Soil	Ice		X		X						
	TP09(0.9-1.1)	0.9-1.1	9/12/2020	TP09	1 Jar and 1 Ziplock bag	Soil	Ice		X								HOLD
16	TP10(0.0-0.2)	0.0-0.2	9/12/2020	TP10	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								
	TP10(0.4-0.6)	0.4-0.6	9/12/2020	TP10	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								HOLD
	TP10(0.9-1.1)	0.9-1.1	9/12/2020	TP10	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								HOLD
17	TP11(0.0-0.2)	0.0-0.2	9/12/2020	TP11	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								
	TP11(0.4-0.6)	0.4-0.6	9/12/2020	TP11	1 Jar and 1 Ziplock bag	Soil	Ice		X								HOLD
	TP11(0.9-1.1)	0.9-1.1	9/12/2020	TP11	1 Ziplock bag	Soil	Ice										HOLD
18	TP12(0.0-0.2)	0.0-0.2	8/12/2020	TP12	1 Jar and 1 Ziplock bag	Soil	Ice	X	X		X						
	TP12(0.4-0.6)	0.4-0.6	8/12/2020	TP12	1 Jar and 1 Ziplock bag	Soil	Ice		X								HOLD
	TP12(0.8-1.0)	0.8-1.0	8/12/2020	TP12	1 Jar	Soil	Ice		X								HOLD
19	TP13(0.0-0.2)	0.0-0.2	9/12/2020	TP13	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								
20	TP13(0.4-0.6)	0.4-0.6	9/12/2020	TP13	1 Jar and 1 Ziplock bag	Soil	Ice		X								
	TP13(0.9-1.1)	0.9-1.1	9/12/2020	TP13	1 Jar	Soil	Ice		X								HOLD
21	TP14(0.0-0.2)	0.0-0.2	9/12/2020	TP14	1 Jar and 1 Ziplock bag	Soil	Ice	X	X		X						
	TP14(0.4-0.6)	0.4-0.6	9/12/2020	TP14	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								HOLD
22	TP14(0.8-1.0)	0.8-1.0	9/12/2020	TP14	1 Jar	Soil	Ice	X	X								
23	TP15(0.0-0.2)	0.0-0.2	8/12/2020	TP15	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								
	TP15(0.4-0.6)	0.4-0.6	8/12/2020	TP15	1 Jar and 1 Ziplock bag	Soil	Ice		X								HOLD
	TP15(0.8-1.0)	0.8-1.0	8/12/2020	TP15	1 Jar and 1 Ziplock bag	Soil	Ice		X								HOLD
24	TP16(0.0-0.2)	0.0-0.2	9/12/2020	TP16	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								
25	TP16(0.4-0.6)	0.4-0.6	9/12/2020	TP16	1 Jar and 1 Ziplock bag	Soil	Ice		X								
	TP16(0.8-1.0)	0.8-1.0	9/12/2020	TP16	1 Jar	Soil	Ice		X								HOLD

Relinquished by:	Aaron Sarlija	Date: 10/12/2020	Time: 2pm	Received by:	Time: 11/12/20 @ 10:50
Relinquished by:		Date:	Time:	Received by:	Time:
Relinquished by:		Date:	Time:	Received by:	Time:

CL6: TRH, BTEX & Pb	**CL15:** TRH, BTEX, PAH, Phenols, OC, OP, PCB & 8 Heavy Metals	**Mirco 2:** E.Coli, Faecal Coliforms, Total Coliforms
CL2: 8 Heavy metals (As, Cd, Cr, Cu, Ni, Pb, Zn, Hg)	**RS3:** TRH, BTEX, PAH, Phenols, OC, PCB & 8 Heavy Metals	**CL4:** TRH C_6-C_9 and BTEX

Robson ENVIRONMENTAL

Occupational Hygiene
Health Safety &
Environmental Consulting

CHAIN OF CUSTODY
2

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To:
SGS
33 Maddox Street
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Contact: Irfan Sayeed
Phone: (02) 8594 0404
Mobile:0400 588 130
Fax: (02) 8594 0499
Email:
ABN:44 000 964 278

Quote: LVM1DX

Analysis Required

Lab ID	Sample ID	Sample Depth (m)	Date Sampled	Sample Location	No. of Sample Jars	Sample Type	Sample Preservation (Ice, Acid, Ambient)	Asbestos WA	CL15	CL4	%Clay, pH, CEC						Comments:HOLD
26	BH17(0.0-0.2)	0.0-0.2	8/12/2020	BH17	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								
	BH17(0.4-0.6)	0.4-0.6	8/12/2020	BH17	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								HOLD
27	BH17(0.8-1.0)	0.8-1.0	8/12/2020	BH17	1 Jar and 1 Ziplock bag	Soil	Ice		X								
	BH17(1.8-2.0)	1.8-2.0	8/12/2020	BH17	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								HOLD
28	BH17(2.8-3.0)	2.8-3.0	8/12/2020	BH17	1 Jar and 1 Ziplock bag	Soil	Ice		X								
	BH18(0.0-0.2)	0.0-0.2	8/12/2020	BH18	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								HOLD
29	BH18(0.4-0.6)	0.4-0.6	8/12/2020	BH18	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								
	BH18(0.8-1.0)	0.8-1.0	8/12/2020	BH18	1 Jar and 1 Ziplock bag	Soil	Ice		X								HOLD
30	BH18(1.8-2.0)	1.8-2.0	8/12/2020	BH18	1 Jar and 1 Ziplock bag	Soil	Ice		X								
	BH18(2.8-3.0)	2.8-3.0	8/12/2020	BH18	1 Jar and 1 Ziplock bag	Soil	Ice		X								HOLD
	BH19(0.0-0.2)	0.0-0.2	8/12/2020	BH19	1 Jar and 1 Ziplock bag	Soil	Ice		X								HOLD
	BH19(0.4-0.6)	0.4-0.6	8/12/2020	BH19	1 Jar and 1 Ziplock bag	Soil	Ice		X								HOLD
31	BH19(0.8-1.0)	0.8-1.0	8/12/2020	BH19	1 Jar and 1 Ziplock bag	Soil	Ice	X	X								
	BH19(1.9-2.0)	1.8-2.0	8/12/2020	BH19	1 Jar and 1 Ziplock bag	Soil	Ice		X								HOLD
32	BH19(2.8-3.0)	2.8-3.0	8/12/2020	BH19	1 Jar and 1 Ziplock bag	Soil	Ice		X								
	BH20(0.0-0.2)	0.0-0.2	8/12/2020	BH20	1 Jar and 1 Ziplock bag	Soil	Ice		X								HOLD
	BH20(0.4-0.6)	0.4-0.6	8/12/2020	BH20	1 Jar and 1 Ziplock bag	Soil	Ice		X								HOLD
33	BH20(0.8-1.0)	0.8-1.0	8/12/2020	BH20	1 Jar and 1 Ziplock bag	Soil	Ice		X								
	BH20(1.8-2.0)	1.8-2.0	8/12/2020	BH20	1 Jar and 1 Ziplock bag	Soil	Ice		X								HOLD
34	BH20(2.8-3.0)	2.8-3.0	8/12/2020	BH20	1 Jar and 1 Ziplock bag	Soil	Ice		X								
35	QC01		8/12/2020	QA/QC	1 Jar	Soil	Ice		X								
36	QC03		8/12/2020	QA/QC	1 Jar	Soil	Ice		X								
37	QC05		9/12/2020	QA/QC	1 Jar	Soil	Ice		X								
38	TB01		8/12/2020	QA/QC	1 Vial	Soil	Ice			X							
39	TS01		8/12/2020	QA/QC	1 Vial	Soil	Ice			X							
40	TB02		9/12/2020	QA/QC	1 Vial	Soil	Ice			X							
41	TS02		9/12/2020	QA/QC	1 Vial	Soil	Ice			X							

Relinquished by:	Aaron Sarlija	Date: 10/12/2020	Time: 2pm	Received by:	Time:	11/12/20 @10:50
Relinquished by:		Date:	Time:	Received by:	Time:	
Relinquished by:		Date:	Time:	Received by:	Time:	

CL6: TRH, BTEX & Pb	**CL15**: TRH, BTEX, PAH, Phenols, OC, OP, PCB & 8 Heavy Metals	**Mirco 2**: E.Coli, Faecal Coliforms, Total Coliforms
CL2: 8 Heavy metals (As, Cd, Cr, Cu, Ni, Pb, Zn, Hg)	**RS3**: TRH, BTEX, PAH, Phenols, OC, PCB & 8 Heavy Metals	**CL4**: TRH C_6-C_9 and BTEX

Yin, Emily (Sydney)

From: Andrey Gallegos <andrey@robsonenviro.com.au>
Sent: Monday, 14 December 2020 2:56 PM
To: Yin, Emily (Sydney)
Cc: Ben Kendon
Subject: [EXTERNAL] RE: 11213

*** WARNING: this message is from an EXTERNAL SENDER. Please be cautious, particularly with links and attachments. ***

Hi Emily,

Please put on hold those samples.

Only we need for lab analysis the samples that do not say "HOLD".

Thanks for your help.

Kind regards

Robson ENVIRONMENTAL CELEBRATING 30 YEARS

Andrey Gallegos
Environmental Scientist
BEng (Biotechnology), MEM

Phone: 02 6239 5656
Direct: 02 6171 4624
Mobile: 04 7866 6406
Fax: 02 6239 5669
Email: andrey@robsonenviro.com.au
Web: www.robsonenviro.com.au

140 Gladstone St Fyshwick ACT 2609 ~ PO Box 112 Fyshwick ACT 2609
Best Practice Certification for AS/NZS ISO 9001:2008 - Quality ~ ISO 14001:2004 - OHS ~ AS/NZS 4801:2001 - Environment

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From: Yin, Emily (Sydney) <Emily.Yin@sgs.com>
Sent: Monday, 14 December 2020 2:53 PM
To: Andrey Gallegos <andrey@robsonenviro.com.au>
Subject: FW: 11213

Dear Andrey,

Samples has both Hold and analysis x on the COC.
Do you want them to be put on hold or to be analysed?
Please advise as soon as possible.
Thank You.

Regards,

SAMPLE RECEIPT ADVICE

SE214803

CLIENT DETAILS

Contact	Ben Kendon
Client	Robson Environmental Pty Ltd
Address	140 Gladstone Street, FYSHWICK PO Box 112, FYSHWICK ACT 2609
Telephone	(02) 6239 5656
Facsimile	(02) 6239 5669
Email	ben@robsonenviro.com.au
Project	**11213 DSI 6339 Kosciuszko Rd Jindabyne**
Order Number	(Not specified)
Samples	41

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 11/12/2020
Report Due	Mon 21/12/2020
SGS Reference	**SE214803**

SUBMISSION DETAILS

This is to confirm that 41 samples were received on Friday 11/12/2020. Results are expected to be ready by COB Monday 21/12/2020. Please quote SGS reference SE214803 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	41 Soil
Date documentation received	11/12/2020	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	9.7°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS

%Clay subcontracted to SGS Cairns, 2/58 Comport St, Portsmith QLD 4870, NATA Accreditation Number: 2562, Site Number: 3146.
35 samples have been placed on hold as no tests have been assigned for them by the client. These samples will not be processed.

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SAMPLE RECEIPT ADVICE

SE214803

CLIENT DETAILS

Client Robson Environmental Pty Ltd

Project 11213 DSI 6339 Kosciuszko Rd Jindabyne

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Speciated Phenols in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	TP01(0.0-0.2)	29	14	26	11	18	10	11	7
002	TP01(0.4-0.6)	29	14	26	11	18	10	11	7
003	TP02(0.0-0.2)	29	14	26	11	18	10	11	7
004	TP03(0.0-0.2)	29	14	26	11	18	10	11	7
005	TP03(1.4-1.6)	29	14	26	11	18	10	11	7
006	TP04(0.0-0.2)	29	14	26	11	18	10	11	7
007	TP04(0.8-1.0)	29	14	26	11	18	10	11	7
008	TP05(0.0-0.2)	29	14	26	11	18	10	11	7
009	TP06(0.0-0.2)	29	14	26	11	18	10	11	7
010	TP07(0.4-0.6)	29	14	26	11	18	10	11	7
011	TP07(0.0-0.2)	29	14	26	11	18	10	11	7
012	TP08(0.0-0.2)	29	14	26	11	18	10	11	7
013	TP08(0.4-0.6)	29	14	26	11	18	10	11	7
014	TP09(0.0-0.2)	29	14	26	11	18	10	11	7
015	TP09(0.4-0.6)	29	14	26	11	18	10	11	7
016	TP10(0.0-0.2)	29	14	26	11	18	10	11	7
017	TP11(0.0-0.2)	29	14	26	11	18	10	11	7
018	TP12(0.0-0.2)	29	14	26	11	18	10	11	7
019	TP13(0.0-0.2)	29	14	26	11	18	10	11	7
020	TP13(0.4-0.6)	29	14	26	11	18	10	11	7
021	TP14(0.0-0.2)	29	14	26	11	18	10	11	7
022	TP14(0.8-1.0)	29	14	26	11	18	10	11	7
023	TP15(0.0-0.2)	29	14	26	11	18	10	11	7
024	TP16(0.0-0.2)	29	14	26	11	18	10	11	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 .

SAMPLE RECEIPT ADVICE

SE214803

CLIENT DETAILS

Client Robson Environmental Pty Ltd

Project 11213 DSI 6339 Kosciuszko Rd Jindabyne

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Speciated Phenols in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
025	TP16(0.4-0.6)	29	14	26	11	18	10	11	7
026	BH17(0.0-0.2)	29	14	26	11	18	10	11	7
027	BH17(0.8-1.0)	29	14	26	11	18	10	11	7
028	BH17(2.8-3.0)	29	14	26	11	18	10	11	7
029	BH18(0.4-0.6)	29	14	26	11	18	10	11	7
030	BH18(1.8-2.0)	29	14	26	11	18	10	11	7
031	BH19(0.8-1.0)	29	14	26	11	18	10	11	7
032	BH19(2.8-3.0)	29	14	26	11	18	10	11	7
033	BH20(0.8-1.0)	29	14	26	11	18	10	11	7
034	BH20(2.8-3.0)	29	14	26	11	18	10	11	7
035	QC01	29	14	26	11	18	10	11	7
036	QC03	29	14	26	11	18	10	11	7
037	QC05	29	14	26	11	18	10	11	7
038	TB01	-	-	-	-	-	-	11	7
039	TS01	-	-	-	-	-	-	11	-
040	TB02	-	-	-	-	-	-	11	7
041	TS02	-	-	-	-	-	-	11	-

CONTINUED OVERLEAF

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SAMPLE RECEIPT ADVICE

SE214803

CLIENT DETAILS

Client Robson Environmental Pty Ltd

Project 11213 DSI 6339 Kosciuszko Rd Jindabyne

SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Mercury in Soil	Moisture Content	Particle sizing of soils by sieving	pH in soil (1:5)	Total Recoverable Elements in Soil/Waste
001	TP01(0.0-0.2)	-	1	1	-	-	7
002	TP01(0.4-0.6)	13	1	1	2	1	7
003	TP02(0.0-0.2)	-	1	1	-	-	7
004	TP03(0.0-0.2)	13	1	1	2	1	7
005	TP03(1.4-1.6)	-	1	1	-	-	7
006	TP04(0.0-0.2)	-	1	1	-	-	7
007	TP04(0.8-1.0)	-	1	1	-	-	7
008	TP05(0.0-0.2)	-	1	1	-	-	7
009	TP06(0.0-0.2)	-	1	1	-	-	7
010	TP07(0.4-0.6)	-	1	1	-	-	7
011	TP07(0.0-0.2)	-	1	1	-	-	7
012	TP08(0.0-0.2)	-	1	1	-	-	7
013	TP08(0.4-0.6)	-	1	1	-	-	7
014	TP09(0.0-0.2)	-	1	1	-	-	7
015	TP09(0.4-0.6)	13	1	1	2	1	7
016	TP10(0.0-0.2)	-	1	1	-	-	7
017	TP11(0.0-0.2)	-	1	1	-	-	7
018	TP12(0.0-0.2)	13	1	1	2	1	7
019	TP13(0.0-0.2)	-	1	1	-	-	7
020	TP13(0.4-0.6)	-	1	1	-	-	7
021	TP14(0.0-0.2)	13	1	1	2	1	7
022	TP14(0.8-1.0)	-	1	1	-	-	7
023	TP15(0.0-0.2)	-	1	1	-	-	7
024	TP16(0.0-0.2)	-	1	1	-	-	7

CONTINUED OVERLEAF

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SAMPLE RECEIPT ADVICE

SE214803

CLIENT DETAILS

Client Robson Environmental Pty Ltd

Project 11213 DSI 6339 Kosciuszko Rd Jindabyne

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury in Soil	Moisture Content	Total Recoverable Elements in Soil/Waste
025	TP16(0.4-0.6)	1	1	7
026	BH17(0.0-0.2)	1	1	7
027	BH17(0.8-1.0)	1	1	7
028	BH17(2.8-3.0)	1	1	7
029	BH18(0.4-0.6)	1	1	7
030	BH18(1.8-2.0)	1	1	7
031	BH19(0.8-1.0)	1	1	7
032	BH19(2.8-3.0)	1	1	7
033	BH20(0.8-1.0)	1	1	7
034	BH20(2.8-3.0)	1	1	7
035	QC01	1	1	7
036	QC03	1	1	7
037	QC05	1	1	7
038	TB01	-	1	-
040	TB02	-	1	-

CONTINUED OVERLEAF

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SE214803

CLIENT DETAILS

Client Robson Environmental Pty Ltd

Project 11213 DSI 6339 Kosciuszko Rd Jindabyne

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Gravimetric Determination of Asbestos in Soil	Particle sizing of soils <75µm by hydrometer
001	TP01(0.0-0.2)	2	9	-
002	TP01(0.4-0.6)	-	-	1
003	TP02(0.0-0.2)	2	9	-
004	TP03(0.0-0.2)	2	9	1
006	TP04(0.0-0.2)	2	9	-
007	TP04(0.8-1.0)	2	9	-
008	TP05(0.0-0.2)	2	9	-
009	TP06(0.0-0.2)	2	9	-
010	TP07(0.4-0.6)	2	9	-
012	TP08(0.0-0.2)	2	9	-
013	TP08(0.4-0.6)	2	9	-
014	TP09(0.0-0.2)	2	9	-
015	TP09(0.4-0.6)	-	-	1
016	TP10(0.0-0.2)	2	9	-
017	TP11(0.0-0.2)	2	9	-
018	TP12(0.0-0.2)	2	9	1
019	TP13(0.0-0.2)	2	9	-
021	TP14(0.0-0.2)	2	9	1
022	TP14(0.8-1.0)	2	9	-
023	TP15(0.0-0.2)	2	9	-
024	TP16(0.0-0.2)	2	9	-

CONTINUED OVERLEAF

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SAMPLE RECEIPT ADVICE

SE214803

CLIENT DETAILS

Client Robson Environmental Pty Ltd

Project 11213 DSI 6339 Kosciuszko Rd Jindabyne

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Gravimetric Determination of Asbestos in Soil
026	BH17(0.0-0.2)	2	9
029	BH18(0.4-0.6)	2	9
031	BH19(0.8-1.0)	2	9

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

Accreditation No. 2562

CLIENT DETAILS

Contact	Ben Kendon
Client	Robson Environmental Pty Ltd
Address	140 Gladstone Street, FYSHWICK PO Box 112, FYSHWICK ACT 2609
Telephone	(02) 6239 5656
Facsimile	(02) 6239 5669
Email	ben@robsonenviro.com.au
Project	**11213 DSI 6339 Kosciuszko Rd Jindabyne**
Order Number	(Not specified)
Samples	41

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	**SE214803 R0**
Date Received	11/12/2020
Date Reported	29/12/2020

COMMENTS

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

%Clay subcontracted to SGS Cairns, 2/58 Comport St, Portsmith QLD 4870, NATA Accreditation Number: 2562, Site Number: 3146. CE149956

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

Asbestos analysed by Approved Identifiers Ravee Sivasubramaniam and Yusuf Kuthpudin .

SIGNATORIES

Akheeqar BENIAMEEN
Chemist

Bennet LO
Senior Organic Chemist/Metals Chemist

Kamrul AHSAN
Senior Chemist

Ly Kim HA
Organic Section Head

Ravee SIVASUBRAMANIAM
Hygiene Team Leader

Shane MCDERMOTT
Inorganic/Metals Chemist

VOC's in Soil [AN433] Tested: 15/12/2020

PARAMETER	UOM	LOR	TP01(0.0-0.2) SOIL - 8/12/2020 SE214803.001	TP01(0.4-0.6) SOIL - 8/12/2020 SE214803.002	TP02(0.0-0.2) SOIL - 8/12/2020 SE214803.003	TP03(0.0-0.2) SOIL - 8/12/2020 SE214803.004	TP03(1.4-1.6) SOIL - 8/12/2020 SE214803.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene	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

PARAMETER	UOM	LOR	TP04(0.0-0.2) SOIL - 9/12/2020 SE214803.006	TP04(0.8-1.0) SOIL - 9/12/2020 SE214803.007	TP05(0.0-0.2) SOIL - 9/12/2020 SE214803.008	TP06(0.0-0.2) SOIL - 8/12/2020 SE214803.009	TP07(0.4-0.6) SOIL - 9/12/2020 SE214803.010
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene	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

PARAMETER	UOM	LOR	TP07(0.0-0.2) SOIL - 9/12/2020 SE214803.011	TP08(0.0-0.2) SOIL - 9/12/2020 SE214803.012	TP08(0.4-0.6) SOIL - 9/12/2020 SE214803.013	TP09(0.0-0.2) SOIL - 9/12/2020 SE214803.014	TP09(0.4-0.6) SOIL - 9/12/2020 SE214803.015
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene	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

PARAMETER	UOM	LOR	TP10(0.0-0.2) SOIL - 9/12/2020 SE214803.016	TP11(0.0-0.2) SOIL - 9/12/2020 SE214803.017	TP12(0.0-0.2) SOIL - 8/12/2020 SE214803.018	TP13(0.0-0.2) SOIL - 9/12/2020 SE214803.019	TP13(0.4-0.6) SOIL - 9/12/2020 SE214803.020
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene	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

VOC's in Soil [AN433] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	TP14(0.0-0.2) SOIL - 9/12/2020 SE214803.021	TP14(0.8-1.0) SOIL - 9/12/2020 SE214803.022	TP15(0.0-0.2) SOIL - 8/12/2020 SE214803.023	TP16(0.0-0.2) SOIL - 9/12/2020 SE214803.024	TP16(0.4-0.6) SOIL - 9/12/2020 SE214803.025
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
Naphthalene	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

PARAMETER	UOM	LOR	BH17(0.0-0.2) SOIL - 8/12/2020 SE214803.026	BH17(0.8-1.0) SOIL - 8/12/2020 SE214803.027	BH17(2.8-3.0) SOIL - 8/12/2020 SE214803.028	BH18(0.4-0.6) SOIL - 8/12/2020 SE214803.029	BH18(1.8-2.0) SOIL - 8/12/2020 SE214803.030
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
Naphthalene	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

PARAMETER	UOM	LOR	BH19(0.8-1.0) SOIL - 8/12/2020 SE214803.031	BH19(2.8-3.0) SOIL - 8/12/2020 SE214803.032	BH20(0.8-1.0) SOIL - 8/12/2020 SE214803.033	BH20(2.8-3.0) SOIL - 8/12/2020 SE214803.034	QC01 SOIL - 8/12/2020 SE214803.035
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
Naphthalene	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

PARAMETER	UOM	LOR	QC03 SOIL - 8/12/2020 SE214803.036	QC05 SOIL - 9/12/2020 SE214803.037	TB01 SOIL - 8/12/2020 SE214803.038	TS01 SOIL - 8/12/2020 SE214803.039	TB02 SOIL - 9/12/2020 SE214803.040
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	[99%]	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	[107%]	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	[106%]	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	[107%]	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	[105%]	<0.1
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	-	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	-	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	-	<0.6

VOC's in Soil [AN433] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	TS02 SOIL - 9/12/2020 SE214803.041
Benzene	mg/kg	0.1	[99%]
Toluene	mg/kg	0.1	[103%]
Ethylbenzene	mg/kg	0.1	[98%]
m/p-xylene	mg/kg	0.2	[98%]
o-xylene	mg/kg	0.1	[98%]
Naphthalene	mg/kg	0.1	-
Total Xylenes	mg/kg	0.3	-
Total BTEX	mg/kg	0.6	-

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 15/12/2020

PARAMETER	UOM	LOR	TP01(0.0-0.2) SOIL - 8/12/2020 SE214803.001	TP01(0.4-0.6) SOIL - 8/12/2020 SE214803.002	TP02(0.0-0.2) SOIL - 8/12/2020 SE214803.003	TP03(0.0-0.2) SOIL - 8/12/2020 SE214803.004	TP03(1.4-1.6) SOIL - 8/12/2020 SE214803.005
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
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	TP04(0.0-0.2) SOIL - 9/12/2020 SE214803.006	TP04(0.8-1.0) SOIL - 9/12/2020 SE214803.007	TP05(0.0-0.2) SOIL - 9/12/2020 SE214803.008	TP06(0.0-0.2) SOIL - 8/12/2020 SE214803.009	TP07(0.4-0.6) SOIL - 9/12/2020 SE214803.010
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
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	TP07(0.0-0.2) SOIL - 9/12/2020 SE214803.011	TP08(0.0-0.2) SOIL - 9/12/2020 SE214803.012	TP08(0.4-0.6) SOIL - 9/12/2020 SE214803.013	TP09(0.0-0.2) SOIL - 9/12/2020 SE214803.014	TP09(0.4-0.6) SOIL - 9/12/2020 SE214803.015
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	TP10(0.0-0.2) SOIL - 9/12/2020 SE214803.016	TP11(0.0-0.2) SOIL - 9/12/2020 SE214803.017	TP12(0.0-0.2) SOIL - 8/12/2020 SE214803.018	TP13(0.0-0.2) SOIL - 9/12/2020 SE214803.019	TP13(0.4-0.6) SOIL - 9/12/2020 SE214803.020
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	TP14(0.0-0.2) SOIL - 9/12/2020 SE214803.021	TP14(0.8-1.0) SOIL - 9/12/2020 SE214803.022	TP15(0.0-0.2) SOIL - 8/12/2020 SE214803.023	TP16(0.0-0.2) SOIL - 9/12/2020 SE214803.024	TP16(0.4-0.6) SOIL - 9/12/2020 SE214803.025
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
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	BH17(0.0-0.2) SOIL - 8/12/2020 SE214803.026	BH17(0.8-1.0) SOIL - 8/12/2020 SE214803.027	BH17(2.8-3.0) SOIL - 8/12/2020 SE214803.028	BH18(0.4-0.6) SOIL - 8/12/2020 SE214803.029	BH18(1.8-2.0) SOIL - 8/12/2020 SE214803.030
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	BH19(0.8-1.0) SOIL - 8/12/2020 SE214803.031	BH19(2.8-3.0) SOIL - 8/12/2020 SE214803.032	BH20(0.8-1.0) SOIL - 8/12/2020 SE214803.033	BH20(2.8-3.0) SOIL - 8/12/2020 SE214803.034	QC01 SOIL - 8/12/2020 SE214803.035
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
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	QC03 SOIL - 8/12/2020 SE214803.036	QC05 SOIL - 9/12/2020 SE214803.037	TB01 SOIL - 8/12/2020 SE214803.038	TB02 SOIL - 9/12/2020 SE214803.040
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C9	mg/kg	20	<20	<20	<20	<20
TRH C6-C10	mg/kg	25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 15/12/2020

PARAMETER	UOM	LOR	TP01(0.0-0.2) SOIL - 8/12/2020 SE214803.001	TP01(0.4-0.6) SOIL - 8/12/2020 SE214803.002	TP02(0.0-0.2) SOIL - 8/12/2020 SE214803.003	TP03(0.0-0.2) SOIL - 8/12/2020 SE214803.004	TP03(1.4-1.6) SOIL - 8/12/2020 SE214803.005
TRH C10-C14	mg/kg	20	<20	<20	<20	33	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	260	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	220	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	71	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	71	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	360	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	510	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	430	<210

PARAMETER	UOM	LOR	TP04(0.0-0.2) SOIL - 9/12/2020 SE214803.006	TP04(0.8-1.0) SOIL - 9/12/2020 SE214803.007	TP05(0.0-0.2) SOIL - 9/12/2020 SE214803.008	TP06(0.0-0.2) SOIL - 8/12/2020 SE214803.009	TP07(0.4-0.6) SOIL - 9/12/2020 SE214803.010
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	TP07(0.0-0.2) SOIL - 9/12/2020 SE214803.011	TP08(0.0-0.2) SOIL - 9/12/2020 SE214803.012	TP08(0.4-0.6) SOIL - 9/12/2020 SE214803.013	TP09(0.0-0.2) SOIL - 9/12/2020 SE214803.014	TP09(0.4-0.6) SOIL - 9/12/2020 SE214803.015
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	TP10(0.0-0.2) SOIL - 9/12/2020 SE214803.016	TP11(0.0-0.2) SOIL - 9/12/2020 SE214803.017	TP12(0.0-0.2) SOIL - 8/12/2020 SE214803.018	TP13(0.0-0.2) SOIL - 9/12/2020 SE214803.019	TP13(0.4-0.6) SOIL - 9/12/2020 SE214803.020
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	TP14(0.0-0.2) SOIL - 9/12/2020 SE214803.021	TP14(0.8-1.0) SOIL - 9/12/2020 SE214803.022	TP15(0.0-0.2) SOIL - 8/12/2020 SE214803.023	TP16(0.0-0.2) SOIL - 9/12/2020 SE214803.024	TP16(0.4-0.6) SOIL - 9/12/2020 SE214803.025
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	**70**	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	**32**	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	**32**	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH17(0.0-0.2) SOIL - 8/12/2020 SE214803.026	BH17(0.8-1.0) SOIL - 8/12/2020 SE214803.027	BH17(2.8-3.0) SOIL - 8/12/2020 SE214803.028	BH18(0.4-0.6) SOIL - 8/12/2020 SE214803.029	BH18(1.8-2.0) SOIL - 8/12/2020 SE214803.030
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	BH19(0.8-1.0) SOIL - 8/12/2020 SE214803.031	BH19(2.8-3.0) SOIL - 8/12/2020 SE214803.032	BH20(0.8-1.0) SOIL - 8/12/2020 SE214803.033	BH20(2.8-3.0) SOIL - 8/12/2020 SE214803.034	QC01 SOIL - 8/12/2020 SE214803.035
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	QC03 SOIL - 8/12/2020 SE214803.036	QC05 SOIL - 9/12/2020 SE214803.037
TRH C10-C14	mg/kg	20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 15/12/2020

PARAMETER	UOM	LOR	TP01(0.0-0.2) SOIL - 8/12/2020 SE214803.001	TP01(0.4-0.6) SOIL - 8/12/2020 SE214803.002	TP02(0.0-0.2) SOIL - 8/12/2020 SE214803.003	TP03(0.0-0.2) SOIL - 8/12/2020 SE214803.004	TP03(1.4-1.6) SOIL - 8/12/2020 SE214803.005
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	TP04(0.0-0.2) SOIL - 9/12/2020 SE214803.006	TP04(0.8-1.0) SOIL - 9/12/2020 SE214803.007	TP05(0.0-0.2) SOIL - 9/12/2020 SE214803.008	TP06(0.0-0.2) SOIL - 8/12/2020 SE214803.009	TP07(0.4-0.6) SOIL - 9/12/2020 SE214803.010
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	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	TP07(0.0-0.2) SOIL - 9/12/2020 SE214803.011	TP08(0.0-0.2) SOIL - 9/12/2020 SE214803.012	TP08(0.4-0.6) SOIL - 9/12/2020 SE214803.013	TP09(0.0-0.2) SOIL - 9/12/2020 SE214803.014	TP09(0.4-0.6) SOIL - 9/12/2020 SE214803.015
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	TP10(0.0-0.2) SOIL - 9/12/2020 SE214803.016	TP11(0.0-0.2) SOIL - 9/12/2020 SE214803.017	TP12(0.0-0.2) SOIL - 8/12/2020 SE214803.018	TP13(0.0-0.2) SOIL - 9/12/2020 SE214803.019	TP13(0.4-0.6) SOIL - 9/12/2020 SE214803.020
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	TP14(0.0-0.2) SOIL - 9/12/2020 SE214803.021	TP14(0.8-1.0) SOIL - 9/12/2020 SE214803.022	TP15(0.0-0.2) SOIL - 8/12/2020 SE214803.023	TP16(0.0-0.2) SOIL - 9/12/2020 SE214803.024	TP16(0.4-0.6) SOIL - 9/12/2020 SE214803.025
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BH17(0.0-0.2) SOIL - 8/12/2020 SE214803.026	BH17(0.8-1.0) SOIL - 8/12/2020 SE214803.027	BH17(2.8-3.0) SOIL - 8/12/2020 SE214803.028	BH18(0.4-0.6) SOIL - 8/12/2020 SE214803.029	BH18(1.8-2.0) SOIL - 8/12/2020 SE214803.030
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	**0.6**	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	**0.2**	<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	**0.5**	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	**0.3**	<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	**0.2**	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	**0.2**	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	**0.3**	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	**0.2**	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	**0.5**	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	**0.4**	<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	**0.8**	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	**0.6**	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	**0.7**	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	**0.7**	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	**4.7**	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	**4.7**	<0.8	<0.8	<0.8	<0.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	BH19(0.8-1.0) SOIL - 8/12/2020 SE214803.031	BH19(2.8-3.0) SOIL - 8/12/2020 SE214803.032	BH20(0.8-1.0) SOIL - 8/12/2020 SE214803.033	BH20(2.8-3.0) SOIL - 8/12/2020 SE214803.034	QC01 SOIL - 8/12/2020 SE214803.035
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	QC03 SOIL - 8/12/2020 SE214803.036	QC05 SOIL - 9/12/2020 SE214803.037
Naphthalene	mg/kg	0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8

Speciated Phenols in Soil [AN420] Tested: 15/12/2020

PARAMETER	UOM	LOR	TP01(0.0-0.2) SOIL - 8/12/2020 SE214803.001	TP01(0.4-0.6) SOIL - 8/12/2020 SE214803.002	TP02(0.0-0.2) SOIL - 8/12/2020 SE214803.003	TP03(0.0-0.2) SOIL - 8/12/2020 SE214803.004	TP03(1.4-1.6) SOIL - 8/12/2020 SE214803.005
Phenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	<1	<1	<1
Total Cresol	mg/kg	1.5	<1.5	<1.5	<1.5	<1.5	<1.5
2-chlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-nitrophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-nitrophenol	mg/kg	1	<1	<1	<1	<1	<1
2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	<1	<1	<1
Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dinitrophenol	mg/kg	2	<2	<2	<2	<2	<2
4-chloro-3-methylphenol	mg/kg	2	<2	<2	<2	<2	<2

PARAMETER	UOM	LOR	TP04(0.0-0.2) SOIL - 9/12/2020 SE214803.006	TP04(0.8-1.0) SOIL - 9/12/2020 SE214803.007	TP05(0.0-0.2) SOIL - 9/12/2020 SE214803.008	TP06(0.0-0.2) SOIL - 8/12/2020 SE214803.009	TP07(0.4-0.6) SOIL - 9/12/2020 SE214803.010
Phenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	<1	<1	<1
Total Cresol	mg/kg	1.5	<1.5	<1.5	<1.5	<1.5	<1.5
2-chlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-nitrophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-nitrophenol	mg/kg	1	<1	<1	<1	<1	<1
2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	<1	<1	<1
Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dinitrophenol	mg/kg	2	<2	<2	<2	<2	<2
4-chloro-3-methylphenol	mg/kg	2	<2	<2	<2	<2	<2

Speciated Phenols in Soil [AN420] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	TP07(0.0-0.2) SOIL - 9/12/2020 SE214803.011	TP08(0.0-0.2) SOIL - 9/12/2020 SE214803.012	TP08(0.4-0.6) SOIL - 9/12/2020 SE214803.013	TP09(0.0-0.2) SOIL - 9/12/2020 SE214803.014	TP09(0.4-0.6) SOIL - 9/12/2020 SE214803.015
Phenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	<1	<1	<1
Total Cresol	mg/kg	1.5	<1.5	<1.5	<1.5	<1.5	<1.5
2-chlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-nitrophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-nitrophenol	mg/kg	1	<1	<1	<1	<1	<1
2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	<1	<1	<1
Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dinitrophenol	mg/kg	2	<2	<2	<2	<2	<2
4-chloro-3-methylphenol	mg/kg	2	<2	<2	<2	<2	<2

PARAMETER	UOM	LOR	TP10(0.0-0.2) SOIL - 9/12/2020 SE214803.016	TP11(0.0-0.2) SOIL - 9/12/2020 SE214803.017	TP12(0.0-0.2) SOIL - 8/12/2020 SE214803.018	TP13(0.0-0.2) SOIL - 9/12/2020 SE214803.019	TP13(0.4-0.6) SOIL - 9/12/2020 SE214803.020
Phenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	<1	<1	<1
Total Cresol	mg/kg	1.5	<1.5	<1.5	<1.5	<1.5	<1.5
2-chlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-nitrophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-nitrophenol	mg/kg	1	<1	<1	<1	<1	<1
2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	<1	<1	<1
Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dinitrophenol	mg/kg	2	<2	<2	<2	<2	<2
4-chloro-3-methylphenol	mg/kg	2	<2	<2	<2	<2	<2

Speciated Phenols in Soil [AN420] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	TP14(0.0-0.2) SOIL - 9/12/2020 SE214803.021	TP14(0.8-1.0) SOIL - 9/12/2020 SE214803.022	TP15(0.0-0.2) SOIL - 8/12/2020 SE214803.023	TP16(0.0-0.2) SOIL - 9/12/2020 SE214803.024	TP16(0.4-0.6) SOIL - 9/12/2020 SE214803.025
Phenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	<1	<1	<1
Total Cresol	mg/kg	1.5	<1.5	<1.5	<1.5	<1.5	<1.5
2-chlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-nitrophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-nitrophenol	mg/kg	1	<1	<1	<1	<1	<1
2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	<1	<1	<1
Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dinitrophenol	mg/kg	2	<2	<2	<2	<2	<2
4-chloro-3-methylphenol	mg/kg	2	<2	<2	<2	<2	<2

PARAMETER	UOM	LOR	BH17(0.0-0.2) SOIL - 8/12/2020 SE214803.026	BH17(0.8-1.0) SOIL - 8/12/2020 SE214803.027	BH17(2.8-3.0) SOIL - 8/12/2020 SE214803.028	BH18(0.4-0.6) SOIL - 8/12/2020 SE214803.029	BH18(1.8-2.0) SOIL - 8/12/2020 SE214803.030
Phenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	<1	<1	<1
Total Cresol	mg/kg	1.5	<1.5	<1.5	<1.5	<1.5	<1.5
2-chlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-nitrophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-nitrophenol	mg/kg	1	<1	<1	<1	<1	<1
2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	<1	<1	<1
Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dinitrophenol	mg/kg	2	<2	<2	<2	<2	<2
4-chloro-3-methylphenol	mg/kg	2	<2	<2	<2	<2	<2

Speciated Phenols in Soil [AN420] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	BH19(0.8-1.0) SOIL - 8/12/2020 SE214803.031	BH19(2.8-3.0) SOIL - 8/12/2020 SE214803.032	BH20(0.8-1.0) SOIL - 8/12/2020 SE214803.033	BH20(2.8-3.0) SOIL - 8/12/2020 SE214803.034	QC01 SOIL - 8/12/2020 SE214803.035
Phenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	<1	<1	<1
Total Cresol	mg/kg	1.5	<1.5	<1.5	<1.5	<1.5	<1.5
2-chlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-nitrophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-nitrophenol	mg/kg	1	<1	<1	<1	<1	<1
2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	<1	<1	<1
Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dinitrophenol	mg/kg	2	<2	<2	<2	<2	<2
4-chloro-3-methylphenol	mg/kg	2	<2	<2	<2	<2	<2

PARAMETER	UOM	LOR	QC03 SOIL - 8/12/2020 SE214803.036	QC05 SOIL - 9/12/2020 SE214803.037
Phenol	mg/kg	0.5	<0.5	<0.5
2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5
3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1
Total Cresol	mg/kg	1.5	<1.5	<1.5
2-chlorophenol	mg/kg	0.5	<0.5	<0.5
2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5
2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5
2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5
2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5
2-nitrophenol	mg/kg	0.5	<0.5	<0.5
4-nitrophenol	mg/kg	1	<1	<1
2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5
2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1
Pentachlorophenol	mg/kg	0.5	<0.5	<0.5
2,4-dinitrophenol	mg/kg	2	<2	<2
4-chloro-3-methylphenol	mg/kg	2	<2	<2

OC Pesticides in Soil [AN420] Tested: 15/12/2020

PARAMETER	UOM	LOR	TP01(0.0-0.2) SOIL - 8/12/2020 SE214803.001	TP01(0.4-0.6) SOIL - 8/12/2020 SE214803.002	TP02(0.0-0.2) SOIL - 8/12/2020 SE214803.003	TP03(0.0-0.2) SOIL - 8/12/2020 SE214803.004	TP03(1.4-1.6) SOIL - 8/12/2020 SE214803.005
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	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	TP04(0.0-0.2) SOIL - 9/12/2020 SE214803.006	TP04(0.8-1.0) SOIL - 9/12/2020 SE214803.007	TP05(0.0-0.2) SOIL - 9/12/2020 SE214803.008	TP06(0.0-0.2) SOIL - 8/12/2020 SE214803.009	TP07(0.4-0.6) SOIL - 9/12/2020 SE214803.010
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	TP07(0.0-0.2) SOIL - 9/12/2020 SE214803.011	TP08(0.0-0.2) SOIL - 9/12/2020 SE214803.012	TP08(0.4-0.6) SOIL - 9/12/2020 SE214803.013	TP09(0.0-0.2) SOIL - 9/12/2020 SE214803.014	TP09(0.4-0.6) SOIL - 9/12/2020 SE214803.015
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	TP10(0.0-0.2) SOIL - 9/12/2020 SE214803.016	TP11(0.0-0.2) SOIL - 9/12/2020 SE214803.017	TP12(0.0-0.2) SOIL - 8/12/2020 SE214803.018	TP13(0.0-0.2) SOIL - 9/12/2020 SE214803.019	TP13(0.4-0.6) SOIL - 9/12/2020 SE214803.020
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	TP14(0.0-0.2) SOIL - 9/12/2020 SE214803.021	TP14(0.8-1.0) SOIL - 9/12/2020 SE214803.022	TP15(0.0-0.2) SOIL - 8/12/2020 SE214803.023	TP16(0.0-0.2) SOIL - 9/12/2020 SE214803.024	TP16(0.4-0.6) SOIL - 9/12/2020 SE214803.025
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	BH17(0.0-0.2) SOIL - 8/12/2020 SE214803.026	BH17(0.8-1.0) SOIL - 8/12/2020 SE214803.027	BH17(2.8-3.0) SOIL - 8/12/2020 SE214803.028	BH18(0.4-0.6) SOIL - 8/12/2020 SE214803.029	BH18(1.8-2.0) SOIL - 8/12/2020 SE214803.030
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	BH19(0.8-1.0) SOIL - 8/12/2020 SE214803.031	BH19(2.8-3.0) SOIL - 8/12/2020 SE214803.032	BH20(0.8-1.0) SOIL - 8/12/2020 SE214803.033	BH20(2.8-3.0) SOIL - 8/12/2020 SE214803.034	QC01 SOIL - 8/12/2020 SE214803.035
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	QC03 SOIL - 8/12/2020 SE214803.036	QC05 SOIL - 9/12/2020 SE214803.037
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1

OP Pesticides in Soil [AN420] Tested: 15/12/2020

PARAMETER	UOM	LOR	TP01(0.0-0.2) SOIL - 8/12/2020 SE214803.001	TP01(0.4-0.6) SOIL - 8/12/2020 SE214803.002	TP02(0.0-0.2) SOIL - 8/12/2020 SE214803.003	TP03(0.0-0.2) SOIL - 8/12/2020 SE214803.004	TP03(1.4-1.6) SOIL - 8/12/2020 SE214803.005
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	TP04(0.0-0.2) SOIL - 9/12/2020 SE214803.006	TP04(0.8-1.0) SOIL - 9/12/2020 SE214803.007	TP05(0.0-0.2) SOIL - 9/12/2020 SE214803.008	TP06(0.0-0.2) SOIL - 8/12/2020 SE214803.009	TP07(0.4-0.6) SOIL - 9/12/2020 SE214803.010
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	TP07(0.0-0.2) SOIL - 9/12/2020 SE214803.011	TP08(0.0-0.2) SOIL - 9/12/2020 SE214803.012	TP08(0.4-0.6) SOIL - 9/12/2020 SE214803.013	TP09(0.0-0.2) SOIL - 9/12/2020 SE214803.014	TP09(0.4-0.6) SOIL - 9/12/2020 SE214803.015
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

OP Pesticides in Soil [AN420] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	TP10(0.0-0.2) SOIL - 9/12/2020 SE214803.016	TP11(0.0-0.2) SOIL - 9/12/2020 SE214803.017	TP12(0.0-0.2) SOIL - 8/12/2020 SE214803.018	TP13(0.0-0.2) SOIL - 9/12/2020 SE214803.019	TP13(0.4-0.6) SOIL - 9/12/2020 SE214803.020
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	TP14(0.0-0.2) SOIL - 9/12/2020 SE214803.021	TP14(0.8-1.0) SOIL - 9/12/2020 SE214803.022	TP15(0.0-0.2) SOIL - 8/12/2020 SE214803.023	TP16(0.0-0.2) SOIL - 9/12/2020 SE214803.024	TP16(0.4-0.6) SOIL - 9/12/2020 SE214803.025
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BH17(0.0-0.2) SOIL - 8/12/2020 SE214803.026	BH17(0.8-1.0) SOIL - 8/12/2020 SE214803.027	BH17(2.8-3.0) SOIL - 8/12/2020 SE214803.028	BH18(0.4-0.6) SOIL - 8/12/2020 SE214803.029	BH18(1.8-2.0) SOIL - 8/12/2020 SE214803.030
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

OP Pesticides in Soil [AN420] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	BH19(0.8-1.0) SOIL - 8/12/2020 SE214803.031	BH19(2.8-3.0) SOIL - 8/12/2020 SE214803.032	BH20(0.8-1.0) SOIL - 8/12/2020 SE214803.033	BH20(2.8-3.0) SOIL - 8/12/2020 SE214803.034	QC01 SOIL - 8/12/2020 SE214803.035
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	QC03 SOIL - 8/12/2020 SE214803.036	QC05 SOIL - 9/12/2020 SE214803.037
Dichlorvos	mg/kg	0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7

PCBs in Soil [AN420] Tested: 15/12/2020

PARAMETER	UOM	LOR	TP01(0.0-0.2) SOIL - 8/12/2020 SE214803.001	TP01(0.4-0.6) SOIL - 8/12/2020 SE214803.002	TP02(0.0-0.2) SOIL - 8/12/2020 SE214803.003	TP03(0.0-0.2) SOIL - 8/12/2020 SE214803.004	TP03(1.4-1.6) SOIL - 8/12/2020 SE214803.005
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	TP04(0.0-0.2) SOIL - 9/12/2020 SE214803.006	TP04(0.8-1.0) SOIL - 9/12/2020 SE214803.007	TP05(0.0-0.2) SOIL - 9/12/2020 SE214803.008	TP06(0.0-0.2) SOIL - 8/12/2020 SE214803.009	TP07(0.4-0.6) SOIL - 9/12/2020 SE214803.010
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	TP07(0.0-0.2) SOIL - 9/12/2020 SE214803.011	TP08(0.0-0.2) SOIL - 9/12/2020 SE214803.012	TP08(0.4-0.6) SOIL - 9/12/2020 SE214803.013	TP09(0.0-0.2) SOIL - 9/12/2020 SE214803.014	TP09(0.4-0.6) SOIL - 9/12/2020 SE214803.015
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PCBs in Soil [AN420] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	TP10(0.0-0.2) SOIL - 9/12/2020 SE214803.016	TP11(0.0-0.2) SOIL - 9/12/2020 SE214803.017	TP12(0.0-0.2) SOIL - 8/12/2020 SE214803.018	TP13(0.0-0.2) SOIL - 9/12/2020 SE214803.019	TP13(0.4-0.6) SOIL - 9/12/2020 SE214803.020
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	TP14(0.0-0.2) SOIL - 9/12/2020 SE214803.021	TP14(0.8-1.0) SOIL - 9/12/2020 SE214803.022	TP15(0.0-0.2) SOIL - 8/12/2020 SE214803.023	TP16(0.0-0.2) SOIL - 9/12/2020 SE214803.024	TP16(0.4-0.6) SOIL - 9/12/2020 SE214803.025
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	BH17(0.0-0.2) SOIL - 8/12/2020 SE214803.026	BH17(0.8-1.0) SOIL - 8/12/2020 SE214803.027	BH17(2.8-3.0) SOIL - 8/12/2020 SE214803.028	BH18(0.4-0.6) SOIL - 8/12/2020 SE214803.029	BH18(1.8-2.0) SOIL - 8/12/2020 SE214803.030
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PCBs in Soil [AN420] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	BH19(0.8-1.0) SOIL - 8/12/2020 SE214803.031	BH19(2.8-3.0) SOIL - 8/12/2020 SE214803.032	BH20(0.8-1.0) SOIL - 8/12/2020 SE214803.033	BH20(2.8-3.0) SOIL - 8/12/2020 SE214803.034	QC01 SOIL - 8/12/2020 SE214803.035
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	QC03 SOIL - 8/12/2020 SE214803.036	QC05 SOIL - 9/12/2020 SE214803.037
Arochlor 1016	mg/kg	0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1

pH in soil (1:5) [AN101] Tested: 21/12/2020

PARAMETER	UOM	LOR	TP01(0.4-0.6) SOIL - 8/12/2020 SE214803.002	TP03(0.0-0.2) SOIL - 8/12/2020 SE214803.004	TP09(0.4-0.6) SOIL - 9/12/2020 SE214803.015	TP12(0.0-0.2) SOIL - 8/12/2020 SE214803.018	TP14(0.0-0.2) SOIL - 9/12/2020 SE214803.021
pH	pH Units	0.1	7.0	7.1	7.2	7.4	7.1

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122] Tested: 21/12/2020

PARAMETER	UOM	LOR	TP01(0.4-0.6) SOIL - 8/12/2020 SE214803.002	TP03(0.0-0.2) SOIL - 8/12/2020 SE214803.004	TP09(0.4-0.6) SOIL - 9/12/2020 SE214803.015	TP12(0.0-0.2) SOIL - 8/12/2020 SE214803.018	TP14(0.0-0.2) SOIL - 9/12/2020 SE214803.021
Exchangeable Sodium, Na	mg/kg	2	9	7	49	21	58
Exchangeable Sodium, Na	meq/100g	0.01	0.04	0.03	0.21	0.09	0.25
Exchangeable Sodium Percentage*	%	0.1	1.1	0.4	2.5	2.1	1.2
Exchangeable Potassium, K	mg/kg	2	59	140	100	42	70
Exchangeable Potassium, K	meq/100g	0.01	0.15	0.36	0.25	0.11	0.18
Exchangeable Potassium Percentage*	%	0.1	4.6	4.8	3.0	2.5	0.8
Exchangeable Calcium, Ca	mg/kg	2	510	1200	1300	690	3500
Exchangeable Calcium, Ca	meq/100g	0.01	2.6	5.9	6.4	3.4	18
Exchangeable Calcium Percentage*	%	0.1	78.3	78.9	76.2	79.8	81.2
Exchangeable Magnesium, Mg	mg/kg	2	64	140	190	82	440
Exchangeable Magnesium, Mg	meq/100g	0.02	0.52	1.2	1.5	0.67	3.6
Exchangeable Magnesium Percentage*	%	0.1	16.0	15.8	18.3	15.6	16.8
Cation Exchange Capacity	meq/100g	0.02	3.3	7.4	8.4	4.3	22

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 17/12/2020

PARAMETER	UOM	LOR	TP01(0.0-0.2) SOIL - 8/12/2020 SE214803.001	TP01(0.4-0.6) SOIL - 8/12/2020 SE214803.002	TP02(0.0-0.2) SOIL - 8/12/2020 SE214803.003	TP03(0.0-0.2) SOIL - 8/12/2020 SE214803.004	TP03(1.4-1.6) SOIL - 8/12/2020 SE214803.005
Arsenic, As	mg/kg	1	1	<1	1	4	1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	9.3	16	12	18	20
Copper, Cu	mg/kg	0.5	6.5	7.5	8.1	15	13
Lead, Pb	mg/kg	1	6	4	5	29	6
Nickel, Ni	mg/kg	0.5	4.8	6.4	5.1	6.0	8.3
Zinc, Zn	mg/kg	2	25	26	29	59	44

PARAMETER	UOM	LOR	TP04(0.0-0.2) SOIL - 9/12/2020 SE214803.006	TP04(0.8-1.0) SOIL - 9/12/2020 SE214803.007	TP05(0.0-0.2) SOIL - 9/12/2020 SE214803.008	TP06(0.0-0.2) SOIL - 8/12/2020 SE214803.009	TP07(0.4-0.6) SOIL - 9/12/2020 SE214803.010
Arsenic, As	mg/kg	1	1	1	1	<1	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	13	11	13	13	12
Copper, Cu	mg/kg	0.5	19	11	21	8.9	17
Lead, Pb	mg/kg	1	6	4	8	6	3
Nickel, Ni	mg/kg	0.5	5.4	4.8	5.3	5.0	6.4
Zinc, Zn	mg/kg	2	39	32	34	29	43

PARAMETER	UOM	LOR	TP07(0.0-0.2) SOIL - 9/12/2020 SE214803.011	TP08(0.0-0.2) SOIL - 9/12/2020 SE214803.012	TP08(0.4-0.6) SOIL - 9/12/2020 SE214803.013	TP09(0.0-0.2) SOIL - 9/12/2020 SE214803.014	TP09(0.4-0.6) SOIL - 9/12/2020 SE214803.015
Arsenic, As	mg/kg	1	2	1	2	<1	1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	17	11	16	14	14
Copper, Cu	mg/kg	0.5	26	18	22	9.6	12
Lead, Pb	mg/kg	1	5	5	6	5	5
Nickel, Ni	mg/kg	0.5	9.0	4.7	6.4	5.9	5.3
Zinc, Zn	mg/kg	2	60	36	43	29	35

PARAMETER	UOM	LOR	TP10(0.0-0.2) SOIL - 9/12/2020 SE214803.016	TP11(0.0-0.2) SOIL - 9/12/2020 SE214803.017	TP12(0.0-0.2) SOIL - 8/12/2020 SE214803.018	TP13(0.0-0.2) SOIL - 9/12/2020 SE214803.019	TP13(0.4-0.6) SOIL - 9/12/2020 SE214803.020
Arsenic, As	mg/kg	1	1	1	2	1	1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	13	10	5.0	10	13
Copper, Cu	mg/kg	0.5	17	33	4.9	11	11
Lead, Pb	mg/kg	1	8	4	6	4	5
Nickel, Ni	mg/kg	0.5	5.5	4.9	3.2	4.5	5.6
Zinc, Zn	mg/kg	2	43	33	26	33	36

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 17/12/2020

(continued)

PARAMETER	UOM	LOR	TP14(0.0-0.2) SOIL - 9/12/2020 SE214803.021	TP14(0.8-1.0) SOIL - 9/12/2020 SE214803.022	TP15(0.0-0.2) SOIL - 8/12/2020 SE214803.023	TP16(0.0-0.2) SOIL - 9/12/2020 SE214803.024	TP16(0.4-0.6) SOIL - 9/12/2020 SE214803.025
Arsenic, As	mg/kg	1	2	2	2	1	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	13	12	15	13	14
Copper, Cu	mg/kg	0.5	30	64	38	16	23
Lead, Pb	mg/kg	1	5	4	6	5	3
Nickel, Ni	mg/kg	0.5	5.6	5.7	6.1	5.5	7.0
Zinc, Zn	mg/kg	2	42	44	42	35	51

PARAMETER	UOM	LOR	BH17(0.0-0.2) SOIL - 8/12/2020 SE214803.026	BH17(0.8-1.0) SOIL - 8/12/2020 SE214803.027	BH17(2.8-3.0) SOIL - 8/12/2020 SE214803.028	BH18(0.4-0.6) SOIL - 8/12/2020 SE214803.029	BH18(1.8-2.0) SOIL - 8/12/2020 SE214803.030
Arsenic, As	mg/kg	1	1	1	<1	7	<1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	21	12	13	11	11
Copper, Cu	mg/kg	0.5	13	35	19	15	28
Lead, Pb	mg/kg	1	16	2	2	6	3
Nickel, Ni	mg/kg	0.5	8.0	7.0	6.6	7.5	6.1
Zinc, Zn	mg/kg	2	44	47	46	48	45

PARAMETER	UOM	LOR	BH19(0.8-1.0) SOIL - 8/12/2020 SE214803.031	BH19(2.8-3.0) SOIL - 8/12/2020 SE214803.032	BH20(0.8-1.0) SOIL - 8/12/2020 SE214803.033	BH20(2.8-3.0) SOIL - 8/12/2020 SE214803.034	QC01 SOIL - 8/12/2020 SE214803.035
Arsenic, As	mg/kg	1	10	1	1	1	6
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	14	5.9	11	8.1	10
Copper, Cu	mg/kg	0.5	19	5.3	14	23	14
Lead, Pb	mg/kg	1	6	8	3	4	6
Nickel, Ni	mg/kg	0.5	11	3.3	6.6	4.7	7.1
Zinc, Zn	mg/kg	2	64	31	45	45	45

PARAMETER	UOM	LOR	QC03 SOIL - 8/12/2020 SE214803.036	QC05 SOIL - 9/12/2020 SE214803.037
Arsenic, As	mg/kg	1	<1	1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	12	12
Copper, Cu	mg/kg	0.5	8.6	12
Lead, Pb	mg/kg	1	6	5
Nickel, Ni	mg/kg	0.5	4.8	5.0
Zinc, Zn	mg/kg	2	28	31

Mercury in Soil [AN312] Tested: 17/12/2020

PARAMETER	UOM	LOR	TP01(0.0-0.2) SOIL - 8/12/2020 SE214803.001	TP01(0.4-0.6) SOIL - 8/12/2020 SE214803.002	TP02(0.0-0.2) SOIL - 8/12/2020 SE214803.003	TP03(0.0-0.2) SOIL - 8/12/2020 SE214803.004	TP03(1.4-1.6) SOIL - 8/12/2020 SE214803.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP04(0.0-0.2) SOIL - 9/12/2020 SE214803.006	TP04(0.8-1.0) SOIL - 9/12/2020 SE214803.007	TP05(0.0-0.2) SOIL - 9/12/2020 SE214803.008	TP06(0.0-0.2) SOIL - 8/12/2020 SE214803.009	TP07(0.4-0.6) SOIL - 9/12/2020 SE214803.010
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP07(0.0-0.2) SOIL - 9/12/2020 SE214803.011	TP08(0.0-0.2) SOIL - 9/12/2020 SE214803.012	TP08(0.4-0.6) SOIL - 9/12/2020 SE214803.013	TP09(0.0-0.2) SOIL - 9/12/2020 SE214803.014	TP09(0.4-0.6) SOIL - 9/12/2020 SE214803.015
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP10(0.0-0.2) SOIL - 9/12/2020 SE214803.016	TP11(0.0-0.2) SOIL - 9/12/2020 SE214803.017	TP12(0.0-0.2) SOIL - 8/12/2020 SE214803.018	TP13(0.0-0.2) SOIL - 9/12/2020 SE214803.019	TP13(0.4-0.6) SOIL - 9/12/2020 SE214803.020
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP14(0.0-0.2) SOIL - 9/12/2020 SE214803.021	TP14(0.8-1.0) SOIL - 9/12/2020 SE214803.022	TP15(0.0-0.2) SOIL - 8/12/2020 SE214803.023	TP16(0.0-0.2) SOIL - 9/12/2020 SE214803.024	TP16(0.4-0.6) SOIL - 9/12/2020 SE214803.025
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH17(0.0-0.2) SOIL - 8/12/2020 SE214803.026	BH17(0.8-1.0) SOIL - 8/12/2020 SE214803.027	BH17(2.8-3.0) SOIL - 8/12/2020 SE214803.028	BH18(0.4-0.6) SOIL - 8/12/2020 SE214803.029	BH18(1.8-2.0) SOIL - 8/12/2020 SE214803.030
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH19(0.8-1.0) SOIL - 8/12/2020 SE214803.031	BH19(2.8-3.0) SOIL - 8/12/2020 SE214803.032	BH20(0.8-1.0) SOIL - 8/12/2020 SE214803.033	BH20(2.8-3.0) SOIL - 8/12/2020 SE214803.034	QC01 SOIL - 8/12/2020 SE214803.035
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Mercury in Soil [AN312] Tested: 17/12/2020 (continued)

PARAMETER	UOM	LOR	QC03 SOIL - 8/12/2020 SE214803.036	QC05 SOIL - 9/12/2020 SE214803.037
Mercury	mg/kg	0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 15/12/2020

PARAMETER	UOM	LOR	TP01(0.0-0.2) SOIL - 8/12/2020 SE214803.001	TP01(0.4-0.6) SOIL - 8/12/2020 SE214803.002	TP02(0.0-0.2) SOIL - 8/12/2020 SE214803.003	TP03(0.0-0.2) SOIL - 8/12/2020 SE214803.004	TP03(1.4-1.6) SOIL - 8/12/2020 SE214803.005
% Moisture	%w/w	1	5.7	5.0	3.9	33.4	10.4

PARAMETER	UOM	LOR	TP04(0.0-0.2) SOIL - 9/12/2020 SE214803.006	TP04(0.8-1.0) SOIL - 9/12/2020 SE214803.007	TP05(0.0-0.2) SOIL - 9/12/2020 SE214803.008	TP06(0.0-0.2) SOIL - 8/12/2020 SE214803.009	TP07(0.4-0.6) SOIL - 9/12/2020 SE214803.010
% Moisture	%w/w	1	4.8	9.2	4.1	4.7	5.0

PARAMETER	UOM	LOR	TP07(0.0-0.2) SOIL - 9/12/2020 SE214803.011	TP08(0.0-0.2) SOIL - 9/12/2020 SE214803.012	TP08(0.4-0.6) SOIL - 9/12/2020 SE214803.013	TP09(0.0-0.2) SOIL - 9/12/2020 SE214803.014	TP09(0.4-0.6) SOIL - 9/12/2020 SE214803.015
% Moisture	%w/w	1	34.0	4.2	9.7	3.8	6.5

PARAMETER	UOM	LOR	TP10(0.0-0.2) SOIL - 9/12/2020 SE214803.016	TP11(0.0-0.2) SOIL - 9/12/2020 SE214803.017	TP12(0.0-0.2) SOIL - 8/12/2020 SE214803.018	TP13(0.0-0.2) SOIL - 9/12/2020 SE214803.019	TP13(0.4-0.6) SOIL - 9/12/2020 SE214803.020
% Moisture	%w/w	1	4.3	7.6	3.7	5.1	6.6

PARAMETER	UOM	LOR	TP14(0.0-0.2) SOIL - 9/12/2020 SE214803.021	TP14(0.8-1.0) SOIL - 9/12/2020 SE214803.022	TP15(0.0-0.2) SOIL - 8/12/2020 SE214803.023	TP16(0.0-0.2) SOIL - 9/12/2020 SE214803.024	TP16(0.4-0.6) SOIL - 9/12/2020 SE214803.025
% Moisture	%w/w	1	7.4	7.5	7.9	5.0	6.5

PARAMETER	UOM	LOR	BH17(0.0-0.2) SOIL - 8/12/2020 SE214803.026	BH17(0.8-1.0) SOIL - 8/12/2020 SE214803.027	BH17(2.8-3.0) SOIL - 8/12/2020 SE214803.028	BH18(0.4-0.6) SOIL - 8/12/2020 SE214803.029	BH18(1.8-2.0) SOIL - 8/12/2020 SE214803.030
% Moisture	%w/w	1	6.6	4.4	5.8	7.8	5.9

PARAMETER	UOM	LOR	BH19(0.8-1.0) SOIL - 8/12/2020 SE214803.031	BH19(2.8-3.0) SOIL - 8/12/2020 SE214803.032	BH20(0.8-1.0) SOIL - 8/12/2020 SE214803.033	BH20(2.8-3.0) SOIL - 8/12/2020 SE214803.034	QC01 SOIL - 8/12/2020 SE214803.035
% Moisture	%w/w	1	10.2	6.3	5.3	6.3	7.3

Moisture Content [AN002] Tested: 15/12/2020 (continued)

PARAMETER	UOM	LOR	QC03 SOIL - 8/12/2020 SE214803.036	QC05 SOIL - 9/12/2020 SE214803.037	TB01 SOIL - 8/12/2020 SE214803.038	TB02 SOIL - 9/12/2020 SE214803.040
% Moisture	%w/w	1	6.1	6.2	<1.0	<1.0

Particle sizing of soils by sieving [AN005] Tested: 24/12/2020

PARAMETER	UOM	LOR	TP01(0.4-0.6) SOIL - 8/12/2020 SE214803.002	TP03(0.0-0.2) SOIL - 8/12/2020 SE214803.004	TP09(0.4-0.6) SOIL - 9/12/2020 SE214803.015	TP12(0.0-0.2) SOIL - 8/12/2020 SE214803.018	TP14(0.0-0.2) SOIL - 9/12/2020 SE214803.021
Passing 75µm*	%w/w	1	18	31	29	13	54
Retained 75µm*	%w/w	1	82	70	71	87	46

Particle sizing of soils <75µm by hydrometer [AN005] Tested: 24/12/2020

PARAMETER	UOM	LOR	TP01(0.4-0.6) SOIL - 8/12/2020 SE214803.002	TP03(0.0-0.2) SOIL - 8/12/2020 SE214803.004	TP09(0.4-0.6) SOIL - 9/12/2020 SE214803.015	TP12(0.0-0.2) SOIL - 8/12/2020 SE214803.018	TP14(0.0-0.2) SOIL - 9/12/2020 SE214803.021
Clay (<0.002mm)*	%w/w	0.1	8.0	8.0	12	14	8.0

Fibre Identification in soil [AN602] Tested: 18/12/2020

PARAMETER	UOM	LOR	TP01(0.0-0.2) SOIL - 8/12/2020 SE214803.001	TP02(0.0-0.2) SOIL - 8/12/2020 SE214803.003	TP03(0.0-0.2) SOIL - 8/12/2020 SE214803.004	TP04(0.0-0.2) SOIL - 9/12/2020 SE214803.006	TP04(0.8-1.0) SOIL - 9/12/2020 SE214803.007
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	TP05(0.0-0.2) SOIL - 9/12/2020 SE214803.008	TP06(0.0-0.2) SOIL - 8/12/2020 SE214803.009	TP07(0.4-0.6) SOIL - 9/12/2020 SE214803.010	TP08(0.0-0.2) SOIL - 9/12/2020 SE214803.012	TP08(0.4-0.6) SOIL - 9/12/2020 SE214803.013
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	TP09(0.0-0.2) SOIL - 9/12/2020 SE214803.014	TP10(0.0-0.2) SOIL - 9/12/2020 SE214803.016	TP11(0.0-0.2) SOIL - 9/12/2020 SE214803.017	TP12(0.0-0.2) SOIL - 8/12/2020 SE214803.018	TP13(0.0-0.2) SOIL - 9/12/2020 SE214803.019
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	TP14(0.0-0.2) SOIL - 9/12/2020 SE214803.021	TP15(0.0-0.2) SOIL - 8/12/2020 SE214803.023	TP16(0.0-0.2) SOIL - 9/12/2020 SE214803.024	BH17(0.0-0.2) SOIL - 8/12/2020 SE214803.026	BH18(0.4-0.6) SOIL - 8/12/2020 SE214803.029
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH19(0.8-1.0) SOIL - 8/12/2020 SE214803.031
Asbestos Detected	No unit	-	No
Estimated Fibres*	%w/w	0.01	<0.01

Gravimetric Determination of Asbestos in Soil [AN605] Tested: 18/12/2020

PARAMETER	UOM	LOR	TP01(0.0-0.2) SOIL - 8/12/2020 SE214803.001	TP02(0.0-0.2) SOIL - 8/12/2020 SE214803.003	TP03(0.0-0.2) SOIL - 8/12/2020 SE214803.004	TP04(0.0-0.2) SOIL - 9/12/2020 SE214803.006	TP04(0.8-1.0) SOIL - 9/12/2020 SE214803.007
Total Sample Weight*	g	1	669	570	489	391	459
Bonded ACM in >7mm Sample*	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP05(0.0-0.2) SOIL - 9/12/2020 SE214803.008	TP06(0.0-0.2) SOIL - 8/12/2020 SE214803.009	TP07(0.4-0.6) SOIL - 9/12/2020 SE214803.010	TP08(0.0-0.2) SOIL - 9/12/2020 SE214803.012	TP08(0.4-0.6) SOIL - 9/12/2020 SE214803.013
Total Sample Weight*	g	1	604	680	400	475	414
Bonded ACM in >7mm Sample*	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP09(0.0-0.2) SOIL - 9/12/2020 SE214803.014	TP10(0.0-0.2) SOIL - 9/12/2020 SE214803.016	TP11(0.0-0.2) SOIL - 9/12/2020 SE214803.017	TP12(0.0-0.2) SOIL - 8/12/2020 SE214803.018	TP13(0.0-0.2) SOIL - 9/12/2020 SE214803.019
Total Sample Weight*	g	1	600	687	574	375	381
Bonded ACM in >7mm Sample*	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP14(0.0-0.2) SOIL - 9/12/2020 SE214803.021	TP15(0.0-0.2) SOIL - 8/12/2020 SE214803.023	TP16(0.0-0.2) SOIL - 9/12/2020 SE214803.024	BH17(0.0-0.2) SOIL - 8/12/2020 SE214803.026	BH18(0.4-0.6) SOIL - 8/12/2020 SE214803.029
Total Sample Weight*	g	1	250	647	730	688	669
Bonded ACM in >7mm Sample*	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

Gravimetric Determination of Asbestos in Soil [AN605] Tested: 18/12/2020 (continued)

PARAMETER	UOM	LOR	BH19(0.8-1.0) SOIL - 8/12/2020 SE214803.031
Total Sample Weight*	g	1	583
Bonded ACM in >7mm Sample*	g	0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001
Fibre Type*	No unit	-	-

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN005	The particle size distribution of a soil is determined by wet sieving, using a maximum of 900 mL of deionised water to sieve all fractions down to 75 µm. Referenced to AS1289.3.6.1 and AS1141.11.
AN005	Following wet sieving of the sample,(particles smaller than 75 µm) a dispersing solution is added and a hydrometer is used to measure sedimentation. Soil density is determined and the percentage of each size fraction calculated. Referenced to AS1289.3.6.3.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN101	pH in Soil Sludge Sediment and Water: pH is measured electrometrically using a combination electrode and is calibrated against 3 buffers purchased commercially. For soils, sediments and sludges, an extract with water (or 0.01M 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 Lyons, 2011, sections 15D3 and 15N1.-
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602	The sample can be reported “no asbestos found at the reporting limit of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.
AN605	This technique gravimetrically determines the mass of Bonded 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. Any fibrous asbestos (FA) found in this fraction will be added to the 2-7mm fraction and its mass recorded there.
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/respirable fibres which are only observed by standard trace analysis as per AN602.
AN605	Bonded asbestos containing material (Bonded ACM) comprises asbestos-containing-material which is sound in condition. Fibrous asbestos (FA) comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. Asbestos fines (AF) includes free fibres, small fibre bundles and also small fragments of bonded ACM that passes through a 7mm sieve - which implies that the bonded ACM fragments have a substantial degree of damage which increases the potential for fibre release.
AN-605	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 and NEPM 1999 (2013) schedule B1 section 4..

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.
***	Indicates that both * and ** apply.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

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

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

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

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

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

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

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

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Order Number	(Not specified)
Samples	21

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SGS Reference	**SE214803 R0**
Date Received	11 Dec 2020
Date Reported	29 Dec 2020

COMMENTS

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

%Clay subcontracted to SGS Cairns, 2/58 Comport St, Portsmith QLD 4870, NATA Accreditation Number: 2562, Site Number: 3146. CE149956

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

Asbestos analysed by Approved Identifiers Ravee Sivasubramaniam and Yusuf Kuthpudin .

SIGNATORIES

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RESULTS

Fibre Identification in soil — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE214803.001	TP01(0.0-0.2)	Soil	669g Clay, Sand, Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214803.003	TP02(0.0-0.2)	Soil	570g Clay, Sand, Soil, Rocks	08 Dec 2020	No Asbestos Found Organic Fibres Detected	<0.01
SE214803.004	TP03(0.0-0.2)	Soil	489g Clay, Sand, Soil, Rocks	08 Dec 2020	No Asbestos Found Organic Fibres Detected	<0.01
SE214803.006	TP04(0.0-0.2)	Soil	391g Clay, Sand, Soil, Rocks	09 Dec 2020	No Asbestos Found Organic Fibres Detected	<0.01
SE214803.007	TP04(0.8-1.0)	Soil	459g Clay, Sand, Soil	09 Dec 2020	No Asbestos Found	<0.01
SE214803.008	TP05(0.0-0.2)	Soil	604g Clay, Sand, Soil	09 Dec 2020	No Asbestos Found	<0.01
SE214803.009	TP06(0.0-0.2)	Soil	680g Clay, Sand, Soil, Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214803.010	TP07(0.4-0.6)	Soil	400g Clay, Sand, Rocks, Plant matter	09 Dec 2020	No Asbestos Found Organic Fibres Detected	<0.01
SE214803.012	TP08(0.0-0.2)	Soil	475g Clay, Sand, Soil, Rocks	09 Dec 2020	No Asbestos Found	<0.01
SE214803.013	TP08(0.4-0.6)	Soil	414g Clay, Sand, Soil, Rocks	09 Dec 2020	No Asbestos Found	<0.01
SE214803.014	TP09(0.0-0.2)	Soil	600g Clay, Sand, Soil, Rocks	09 Dec 2020	No Asbestos Found	<0.01
SE214803.016	TP10(0.0-0.2)	Soil	687g Clay, Sand, Soil, Rocks	09 Dec 2020	No Asbestos Found	<0.01
SE214803.017	TP11(0.0-0.2)	Soil	574g Clay, Sand, Soil, Rocks	09 Dec 2020	No Asbestos Found	<0.01
SE214803.018	TP12(0.0-0.2)	Soil	375g Clay, Sand, Soil, Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214803.019	TP13(0.0-0.2)	Soil	381g Clay, Sand, Soil, Rocks	09 Dec 2020	No Asbestos Found	<0.01
SE214803.021	TP14(0.0-0.2)	Soil	250g Clay, Sand, Soil, Rocks	09 Dec 2020	No Asbestos Found	<0.01
SE214803.023	TP15(0.0-0.2)	Soil	647g Clay, Sand, Soil, Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214803.024	TP16(0.0-0.2)	Soil	730g Clay, Sand, Soil, Rocks	09 Dec 2020	No Asbestos Found	<0.01
SE214803.026	BH17(0.0-0.2)	Soil	688g Clay, Sand, Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214803.029	BH18(0.4-0.6)	Soil	669g Clay, Sand, Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214803.031	BH19(0.8-1.0)	Soil	583g Clay, Sand, Rocks	08 Dec 2020	No Asbestos Found	<0.01

RESULTS

Fibre Identification in soil	Method	AN602

Gravimetric Determination of Asbestos in Soil [AN605] Tested: 18/12/2020

PARAMETER	UOM	LOR	TP01(0.0-0.2) SOIL - 8/12/2020 SE214803.001	TP02(0.0-0.2) SOIL - 8/12/2020 SE214803.003	TP03(0.0-0.2) SOIL - 8/12/2020 SE214803.004	TP04(0.0-0.2) SOIL - 9/12/2020 SE214803.006	TP04(0.8-1.0) SOIL - 9/12/2020 SE214803.007
Total Sample Weight*	g	1	669	570	489	391	459
Bonded ACM in >7mm Sample*	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP05(0.0-0.2) SOIL - 9/12/2020 SE214803.008	TP06(0.0-0.2) SOIL - 8/12/2020 SE214803.009	TP07(0.4-0.6) SOIL - 9/12/2020 SE214803.010	TP08(0.0-0.2) SOIL - 9/12/2020 SE214803.012	TP08(0.4-0.6) SOIL - 9/12/2020 SE214803.013
Total Sample Weight*	g	1	604	680	400	475	414
Bonded ACM in >7mm Sample*	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP09(0.0-0.2) SOIL - 9/12/2020 SE214803.014	TP10(0.0-0.2) SOIL - 9/12/2020 SE214803.016	TP11(0.0-0.2) SOIL - 9/12/2020 SE214803.017	TP12(0.0-0.2) SOIL - 8/12/2020 SE214803.018	TP13(0.0-0.2) SOIL - 9/12/2020 SE214803.019
Total Sample Weight*	g	1	600	687	574	375	381
Bonded ACM in >7mm Sample*	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP14(0.0-0.2) SOIL - 9/12/2020 SE214803.021	TP15(0.0-0.2) SOIL - 8/12/2020 SE214803.023	TP16(0.0-0.2) SOIL - 9/12/2020 SE214803.024	BH17(0.0-0.2) SOIL - 8/12/2020 SE214803.026	BH18(0.4-0.6) SOIL - 8/12/2020 SE214803.029
Total Sample Weight*	g	1	250	647	730	688	669
Bonded ACM in >7mm Sample*	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

Gravimetric Determination of Asbestos in Soil [AN605] Tested: 18/12/2020 (continued)

PARAMETER	UOM	LOR	BH19(0.8-1.0) SOIL - 8/12/2020 SE214803.031
Total Sample Weight*	g	1	583
Bonded ACM in >7mm Sample*	g	0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001
Fibre Type*	No unit	-	-

METHOD	METHODOLOGY SUMMARY
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples , Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602	The sample can be reported “no asbestos found at the reporting limit of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable ’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.
AN605	This technique gravimetrically determines the mass of Bonded 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. Any fibrous asbestos (FA) found in this fraction will be added to the 2-7mm fraction and its mass recorded there.
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/respirable fibres which are only observed by standard trace analysis as per AN602.
AN605	Bonded asbestos containing material (Bonded ACM) comprises asbestos-containing-material which is sound in condition. Fibrous asbestos (FA) comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. Asbestos fines (AF) includes free fibres, small fibre bundles and also small fragments of bonded ACM that passes through a 7mm sieve - which implies that the bonded ACM fragments have a substantial degree of damage which increases the potential for fibre release.
AN-605	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 and NEPM 1999 (2013) schedule B1 section 4..

FOOTNOTES

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

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

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

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

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos-containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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This test report shall not be reproduced, except in full.

STATEMENT OF QA/QC PERFORMANCE

SE214803 R0

CLIENT DETAILS

Contact	Ben Kendon
Client	Robson Environmental Pty Ltd
Address	140 Gladstone Street, FYSHWICK PO Box 112, FYSHWICK ACT 2609
Telephone	(02) 6239 5656
Facsimile	(02) 6239 5669
Email	ben@robsonenviro.com.au
Project	**11213 DSI 6339 Kosciuszko Rd Jindabyne**
Order Number	(Not specified)
Samples	41

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	**SE214803 R0**
Date Received	11 Dec 2020
Date Reported	29 Dec 2020

COMMENTS

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

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

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

Extraction Date	pH in soil (1:5)	5 items
Analysis Date	Moisture Content	39 items
Surrogate	VOC's in Soil	1 item
	Volatile Petroleum Hydrocarbons in Soil	1 item
Matrix Spike	TRH (Total Recoverable Hydrocarbons) in Soil	1 item

SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	41 Soil
Date documentation received	11/12/2020	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	9.7°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

HOLDING TIME SUMMARY

SE214803 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)-[ENV]AN122

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP01(0.4-0.6)	SE214803.002	LB216139	08 Dec 2020	11 Dec 2020	05 Jan 2021	21 Dec 2020	05 Jan 2021	21 Dec 2020
TP03(0.0-0.2)	SE214803.004	LB216139	08 Dec 2020	11 Dec 2020	05 Jan 2021	21 Dec 2020	05 Jan 2021	21 Dec 2020
TP09(0.4-0.6)	SE214803.015	LB216139	09 Dec 2020	11 Dec 2020	06 Jan 2021	21 Dec 2020	06 Jan 2021	21 Dec 2020
TP12(0.0-0.2)	SE214803.018	LB216139	08 Dec 2020	11 Dec 2020	05 Jan 2021	21 Dec 2020	05 Jan 2021	21 Dec 2020
TP14(0.0-0.2)	SE214803.021	LB216139	09 Dec 2020	11 Dec 2020	06 Jan 2021	21 Dec 2020	06 Jan 2021	21 Dec 2020

Fibre Identification in soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP01(0.0-0.2)	SE214803.001	LB216000	08 Dec 2020	11 Dec 2020	08 Dec 2021	18 Dec 2020	08 Dec 2021	22 Dec 2020
TP02(0.0-0.2)	SE214803.003	LB216000	08 Dec 2020	11 Dec 2020	08 Dec 2021	18 Dec 2020	08 Dec 2021	22 Dec 2020
TP03(0.0-0.2)	SE214803.004	LB216000	08 Dec 2020	11 Dec 2020	08 Dec 2021	18 Dec 2020	08 Dec 2021	22 Dec 2020
TP04(0.0-0.2)	SE214803.006	LB216000	09 Dec 2020	11 Dec 2020	09 Dec 2021	18 Dec 2020	09 Dec 2021	22 Dec 2020
TP04(0.8-1.0)	SE214803.007	LB216000	09 Dec 2020	11 Dec 2020	09 Dec 2021	18 Dec 2020	09 Dec 2021	22 Dec 2020
TP05(0.0-0.2)	SE214803.008	LB216000	09 Dec 2020	11 Dec 2020	09 Dec 2021	18 Dec 2020	09 Dec 2021	22 Dec 2020
TP06(0.0-0.2)	SE214803.009	LB216000	08 Dec 2020	11 Dec 2020	08 Dec 2021	18 Dec 2020	08 Dec 2021	22 Dec 2020
TP07(0.4-0.6)	SE214803.010	LB216000	09 Dec 2020	11 Dec 2020	09 Dec 2021	18 Dec 2020	09 Dec 2021	22 Dec 2020
TP08(0.0-0.2)	SE214803.012	LB216000	09 Dec 2020	11 Dec 2020	09 Dec 2021	18 Dec 2020	09 Dec 2021	22 Dec 2020
TP08(0.4-0.6)	SE214803.013	LB216000	09 Dec 2020	11 Dec 2020	09 Dec 2021	18 Dec 2020	09 Dec 2021	22 Dec 2020
TP09(0.0-0.2)	SE214803.014	LB216000	09 Dec 2020	11 Dec 2020	09 Dec 2021	18 Dec 2020	09 Dec 2021	22 Dec 2020
TP10(0.0-0.2)	SE214803.016	LB216000	09 Dec 2020	11 Dec 2020	09 Dec 2021	18 Dec 2020	09 Dec 2021	22 Dec 2020
TP11(0.0-0.2)	SE214803.017	LB216000	09 Dec 2020	11 Dec 2020	09 Dec 2021	18 Dec 2020	09 Dec 2021	22 Dec 2020
TP12(0.0-0.2)	SE214803.018	LB216000	08 Dec 2020	11 Dec 2020	08 Dec 2021	18 Dec 2020	08 Dec 2021	22 Dec 2020
TP13(0.0-0.2)	SE214803.019	LB216000	09 Dec 2020	11 Dec 2020	09 Dec 2021	18 Dec 2020	09 Dec 2021	22 Dec 2020
TP14(0.0-0.2)	SE214803.021	LB216000	09 Dec 2020	11 Dec 2020	09 Dec 2021	18 Dec 2020	09 Dec 2021	22 Dec 2020
TP15(0.0-0.2)	SE214803.023	LB216000	08 Dec 2020	11 Dec 2020	08 Dec 2021	18 Dec 2020	08 Dec 2021	22 Dec 2020
TP16(0.0-0.2)	SE214803.024	LB216000	09 Dec 2020	11 Dec 2020	09 Dec 2021	18 Dec 2020	09 Dec 2021	22 Dec 2020
BH17(0.0-0.2)	SE214803.026	LB216000	08 Dec 2020	11 Dec 2020	08 Dec 2021	18 Dec 2020	08 Dec 2021	22 Dec 2020
BH18(0.4-0.6)	SE214803.029	LB216000	08 Dec 2020	11 Dec 2020	08 Dec 2021	18 Dec 2020	08 Dec 2021	22 Dec 2020
BH19(0.8-1.0)	SE214803.031	LB216000	08 Dec 2020	11 Dec 2020	08 Dec 2021	18 Dec 2020	08 Dec 2021	22 Dec 2020

Gravimetric Determination of Asbestos in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP01(0.0-0.2)	SE214803.001	LB216000	08 Dec 2020	11 Dec 2020	06 Jun 2021	18 Dec 2020	06 Jun 2021	22 Dec 2020
TP02(0.0-0.2)	SE214803.003	LB216000	08 Dec 2020	11 Dec 2020	06 Jun 2021	18 Dec 2020	06 Jun 2021	22 Dec 2020
TP03(0.0-0.2)	SE214803.004	LB216000	08 Dec 2020	11 Dec 2020	06 Jun 2021	18 Dec 2020	06 Jun 2021	22 Dec 2020
TP04(0.0-0.2)	SE214803.006	LB216000	09 Dec 2020	11 Dec 2020	07 Jun 2021	18 Dec 2020	07 Jun 2021	22 Dec 2020
TP04(0.8-1.0)	SE214803.007	LB216000	09 Dec 2020	11 Dec 2020	07 Jun 2021	18 Dec 2020	07 Jun 2021	22 Dec 2020
TP05(0.0-0.2)	SE214803.008	LB216000	09 Dec 2020	11 Dec 2020	07 Jun 2021	18 Dec 2020	07 Jun 2021	22 Dec 2020
TP06(0.0-0.2)	SE214803.009	LB216000	08 Dec 2020	11 Dec 2020	06 Jun 2021	18 Dec 2020	06 Jun 2021	22 Dec 2020
TP07(0.4-0.6)	SE214803.010	LB216000	09 Dec 2020	11 Dec 2020	07 Jun 2021	18 Dec 2020	07 Jun 2021	22 Dec 2020
TP08(0.0-0.2)	SE214803.012	LB216000	09 Dec 2020	11 Dec 2020	07 Jun 2021	18 Dec 2020	07 Jun 2021	22 Dec 2020
TP08(0.4-0.6)	SE214803.013	LB216000	09 Dec 2020	11 Dec 2020	07 Jun 2021	18 Dec 2020	07 Jun 2021	22 Dec 2020
TP09(0.0-0.2)	SE214803.014	LB216000	09 Dec 2020	11 Dec 2020	07 Jun 2021	18 Dec 2020	07 Jun 2021	22 Dec 2020
TP10(0.0-0.2)	SE214803.016	LB216000	09 Dec 2020	11 Dec 2020	07 Jun 2021	18 Dec 2020	07 Jun 2021	22 Dec 2020
TP11(0.0-0.2)	SE214803.017	LB216000	09 Dec 2020	11 Dec 2020	07 Jun 2021	18 Dec 2020	07 Jun 2021	22 Dec 2020
TP12(0.0-0.2)	SE214803.018	LB216000	08 Dec 2020	11 Dec 2020	06 Jun 2021	18 Dec 2020	06 Jun 2021	22 Dec 2020
TP13(0.0-0.2)	SE214803.019	LB216000	09 Dec 2020	11 Dec 2020	07 Jun 2021	18 Dec 2020	07 Jun 2021	22 Dec 2020
TP14(0.0-0.2)	SE214803.021	LB216000	09 Dec 2020	11 Dec 2020	07 Jun 2021	18 Dec 2020	07 Jun 2021	22 Dec 2020
TP14(0.8-1.0)	SE214803.022	LB216000	09 Dec 2020	11 Dec 2020	07 Jun 2021	18 Dec 2020	07 Jun 2021	22 Dec 2020
TP15(0.0-0.2)	SE214803.023	LB216000	08 Dec 2020	11 Dec 2020	06 Jun 2021	18 Dec 2020	06 Jun 2021	22 Dec 2020
TP16(0.0-0.2)	SE214803.024	LB216000	09 Dec 2020	11 Dec 2020	07 Jun 2021	18 Dec 2020	07 Jun 2021	22 Dec 2020
BH17(0.0-0.2)	SE214803.026	LB216000	08 Dec 2020	11 Dec 2020	06 Jun 2021	18 Dec 2020	06 Jun 2021	22 Dec 2020
BH18(0.4-0.6)	SE214803.029	LB216000	08 Dec 2020	11 Dec 2020	06 Jun 2021	18 Dec 2020	06 Jun 2021	22 Dec 2020
BH19(0.8-1.0)	SE214803.031	LB216000	08 Dec 2020	11 Dec 2020	06 Jun 2021	18 Dec 2020	06 Jun 2021	22 Dec 2020

Mercury in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP01(0.0-0.2)	SE214803.001	LB215911	08 Dec 2020	11 Dec 2020	05 Jan 2021	17 Dec 2020	05 Jan 2021	21 Dec 2020
TP01(0.4-0.6)	SE214803.002	LB215911	08 Dec 2020	11 Dec 2020	05 Jan 2021	17 Dec 2020	05 Jan 2021	21 Dec 2020
TP02(0.0-0.2)	SE214803.003	LB215911	08 Dec 2020	11 Dec 2020	05 Jan 2021	17 Dec 2020	05 Jan 2021	21 Dec 2020
TP03(0.0-0.2)	SE214803.004	LB215911	08 Dec 2020	11 Dec 2020	05 Jan 2021	17 Dec 2020	05 Jan 2021	21 Dec 2020

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
TP03(1.4-1.6)	SE214803.005	LB215911	08 Dec 2020	11 Dec 2020	05 Jan 2021	17 Dec 2020	05 Jan 2021	21 Dec 2020
TP04(0.0-0.2)	SE214803.006	LB215911	09 Dec 2020	11 Dec 2020	06 Jan 2021	17 Dec 2020	06 Jan 2021	21 Dec 2020
TP04(0.8-1.0)	SE214803.007	LB215911	09 Dec 2020	11 Dec 2020	06 Jan 2021	17 Dec 2020	06 Jan 2021	21 Dec 2020
TP05(0.0-0.2)	SE214803.008	LB215911	09 Dec 2020	11 Dec 2020	06 Jan 2021	17 Dec 2020	06 Jan 2021	21 Dec 2020
TP06(0.0-0.2)	SE214803.009	LB215911	08 Dec 2020	11 Dec 2020	05 Jan 2021	17 Dec 2020	05 Jan 2021	21 Dec 2020
TP07(0.4-0.6)	SE214803.010	LB215911	09 Dec 2020	11 Dec 2020	06 Jan 2021	17 Dec 2020	06 Jan 2021	21 Dec 2020
TP07(0.0-0.2)	SE214803.011	LB215911	09 Dec 2020	11 Dec 2020	06 Jan 2021	17 Dec 2020	06 Jan 2021	21 Dec 2020
TP08(0.0-0.2)	SE214803.012	LB215911	09 Dec 2020	11 Dec 2020	06 Jan 2021	17 Dec 2020	06 Jan 2021	21 Dec 2020
TP08(0.4-0.6)	SE214803.013	LB215911	09 Dec 2020	11 Dec 2020	06 Jan 2021	17 Dec 2020	06 Jan 2021	21 Dec 2020
TP09(0.0-0.2)	SE214803.014	LB215911	09 Dec 2020	11 Dec 2020	06 Jan 2021	17 Dec 2020	06 Jan 2021	21 Dec 2020
TP09(0.4-0.6)	SE214803.015	LB215911	09 Dec 2020	11 Dec 2020	06 Jan 2021	17 Dec 2020	06 Jan 2021	21 Dec 2020
TP10(0.0-0.2)	SE214803.016	LB215911	09 Dec 2020	11 Dec 2020	06 Jan 2021	17 Dec 2020	06 Jan 2021	21 Dec 2020
TP11(0.0-0.2)	SE214803.017	LB215911	09 Dec 2020	11 Dec 2020	06 Jan 2021	17 Dec 2020	06 Jan 2021	21 Dec 2020
TP12(0.0-0.2)	SE214803.018	LB215911	08 Dec 2020	11 Dec 2020	05 Jan 2021	17 Dec 2020	05 Jan 2021	21 Dec 2020
TP13(0.0-0.2)	SE214803.019	LB215911	09 Dec 2020	11 Dec 2020	06 Jan 2021	17 Dec 2020	06 Jan 2021	21 Dec 2020
TP13(0.4-0.6)	SE214803.020	LB215913	09 Dec 2020	11 Dec 2020	06 Jan 2021	17 Dec 2020	06 Jan 2021	21 Dec 2020
TP14(0.0-0.2)	SE214803.021	LB215913	09 Dec 2020	11 Dec 2020	06 Jan 2021	17 Dec 2020	06 Jan 2021	21 Dec 2020
TP14(0.8-1.0)	SE214803.022	LB215913	09 Dec 2020	11 Dec 2020	06 Jan 2021	17 Dec 2020	06 Jan 2021	21 Dec 2020
TP15(0.0-0.2)	SE214803.023	LB215913	08 Dec 2020	11 Dec 2020	05 Jan 2021	17 Dec 2020	05 Jan 2021	21 Dec 2020
TP16(0.0-0.2)	SE214803.024	LB215913	09 Dec 2020	11 Dec 2020	06 Jan 2021	17 Dec 2020	06 Jan 2021	21 Dec 2020
TP16(0.4-0.6)	SE214803.025	LB215913	09 Dec 2020	11 Dec 2020	06 Jan 2021	17 Dec 2020	06 Jan 2021	21 Dec 2020
BH17(0.0-0.2)	SE214803.026	LB215913	08 Dec 2020	11 Dec 2020	05 Jan 2021	17 Dec 2020	05 Jan 2021	21 Dec 2020
BH17(0.8-1.0)	SE214803.027	LB215913	08 Dec 2020	11 Dec 2020	05 Jan 2021	17 Dec 2020	05 Jan 2021	21 Dec 2020
BH17(2.8-3.0)	SE214803.028	LB215913	08 Dec 2020	11 Dec 2020	05 Jan 2021	17 Dec 2020	05 Jan 2021	21 Dec 2020
BH18(0.4-0.6)	SE214803.029	LB215913	08 Dec 2020	11 Dec 2020	05 Jan 2021	17 Dec 2020	05 Jan 2021	21 Dec 2020
BH18(1.8-2.0)	SE214803.030	LB215913	08 Dec 2020	11 Dec 2020	05 Jan 2021	17 Dec 2020	05 Jan 2021	21 Dec 2020
BH19(0.8-1.0)	SE214803.031	LB215913	08 Dec 2020	11 Dec 2020	05 Jan 2021	17 Dec 2020	05 Jan 2021	21 Dec 2020
BH19(2.8-3.0)	SE214803.032	LB215913	08 Dec 2020	11 Dec 2020	05 Jan 2021	17 Dec 2020	05 Jan 2021	21 Dec 2020
BH20(0.8-1.0)	SE214803.033	LB215913	08 Dec 2020	11 Dec 2020	05 Jan 2021	17 Dec 2020	05 Jan 2021	21 Dec 2020
BH20(2.8-3.0)	SE214803.034	LB215913	08 Dec 2020	11 Dec 2020	05 Jan 2021	17 Dec 2020	05 Jan 2021	21 Dec 2020
QC01	SE214803.035	LB215913	08 Dec 2020	11 Dec 2020	05 Jan 2021	17 Dec 2020	05 Jan 2021	21 Dec 2020
QC03	SE214803.036	LB215913	08 Dec 2020	11 Dec 2020	05 Jan 2021	17 Dec 2020	05 Jan 2021	21 Dec 2020
QC05	SE214803.037	LB215913	09 Dec 2020	11 Dec 2020	06 Jan 2021	17 Dec 2020	06 Jan 2021	21 Dec 2020

Moisture Content — Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP01(0.0-0.2)	SE214803.001	LB215685	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP01(0.4-0.6)	SE214803.002	LB215685	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP02(0.0-0.2)	SE214803.003	LB215685	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP03(0.0-0.2)	SE214803.004	LB215685	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP03(1.4-1.6)	SE214803.005	LB215685	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP04(0.0-0.2)	SE214803.006	LB215685	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP04(0.8-1.0)	SE214803.007	LB215685	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP05(0.0-0.2)	SE214803.008	LB215685	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP06(0.0-0.2)	SE214803.009	LB215685	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP07(0.4-0.6)	SE214803.010	LB215685	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP07(0.0-0.2)	SE214803.011	LB215685	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP08(0.0-0.2)	SE214803.012	LB215685	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP08(0.4-0.6)	SE214803.013	LB215685	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP09(0.0-0.2)	SE214803.014	LB215685	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP09(0.4-0.6)	SE214803.015	LB215685	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP10(0.0-0.2)	SE214803.016	LB215685	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP11(0.0-0.2)	SE214803.017	LB215685	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP12(0.0-0.2)	SE214803.018	LB215685	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP13(0.0-0.2)	SE214803.019	LB215685	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP13(0.4-0.6)	SE214803.020	LB215685	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP14(0.0-0.2)	SE214803.021	LB215686	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP14(0.8-1.0)	SE214803.022	LB215686	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP15(0.0-0.2)	SE214803.023	LB215686	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TP16(0.0-0.2)	SE214803.024	LB215686	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†

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

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

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

Moisture Content (continued) — Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP16(0.4-0.6)	SE214803.025	LB215686	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
BH17(0.0-0.2)	SE214803.026	LB215686	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
BH17(0.8-1.0)	SE214803.027	LB215686	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
BH17(2.8-3.0)	SE214803.028	LB215686	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
BH18(0.4-0.6)	SE214803.029	LB215686	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
BH18(1.8-2.0)	SE214803.030	LB215686	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
BH19(0.8-1.0)	SE214803.031	LB215686	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
BH19(2.8-3.0)	SE214803.032	LB215686	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
BH20(0.8-1.0)	SE214803.033	LB215686	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
BH20(2.8-3.0)	SE214803.034	LB215686	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
QC01	SE214803.035	LB215686	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
QC03	SE214803.036	LB215686	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
QC05	SE214803.037	LB215686	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TB01	SE214803.038	LB215686	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†
TB02	SE214803.040	LB215686	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	20 Dec 2020	21 Dec 2020†

OC Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP01(0.0-0.2)	SE214803.001	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP01(0.4-0.6)	SE214803.002	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP02(0.0-0.2)	SE214803.003	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP03(0.0-0.2)	SE214803.004	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP03(1.4-1.6)	SE214803.005	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP04(0.0-0.2)	SE214803.006	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP04(0.8-1.0)	SE214803.007	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP05(0.0-0.2)	SE214803.008	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP06(0.0-0.2)	SE214803.009	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP07(0.4-0.6)	SE214803.010	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP07(0.0-0.2)	SE214803.011	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP08(0.0-0.2)	SE214803.012	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP08(0.4-0.6)	SE214803.013	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP09(0.0-0.2)	SE214803.014	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP09(0.4-0.6)	SE214803.015	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP10(0.0-0.2)	SE214803.016	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP11(0.0-0.2)	SE214803.017	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP12(0.0-0.2)	SE214803.018	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP13(0.0-0.2)	SE214803.019	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP13(0.4-0.6)	SE214803.020	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP14(0.0-0.2)	SE214803.021	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP14(0.8-1.0)	SE214803.022	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP15(0.0-0.2)	SE214803.023	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP16(0.0-0.2)	SE214803.024	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP16(0.4-0.6)	SE214803.025	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH17(0.0-0.2)	SE214803.026	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH17(0.8-1.0)	SE214803.027	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH17(2.8-3.0)	SE214803.028	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH18(0.4-0.6)	SE214803.029	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH18(1.8-2.0)	SE214803.030	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH19(0.8-1.0)	SE214803.031	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH19(2.8-3.0)	SE214803.032	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH20(0.8-1.0)	SE214803.033	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH20(2.8-3.0)	SE214803.034	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
QC01	SE214803.035	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
QC03	SE214803.036	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
QC05	SE214803.037	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020

OP Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP01(0.0-0.2)	SE214803.001	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP01(0.4-0.6)	SE214803.002	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP02(0.0-0.2)	SE214803.003	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020

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.

OP Pesticides in Soil (continued) Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP03(0.0-0.2)	SE214803.004	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP03(1.4-1.6)	SE214803.005	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP04(0.0-0.2)	SE214803.006	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP04(0.8-1.0)	SE214803.007	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP05(0.0-0.2)	SE214803.008	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP06(0.0-0.2)	SE214803.009	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP07(0.4-0.6)	SE214803.010	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP07(0.0-0.2)	SE214803.011	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP08(0.0-0.2)	SE214803.012	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP08(0.4-0.6)	SE214803.013	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP09(0.0-0.2)	SE214803.014	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP09(0.4-0.6)	SE214803.015	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP10(0.0-0.2)	SE214803.016	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP11(0.0-0.2)	SE214803.017	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP12(0.0-0.2)	SE214803.018	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP13(0.0-0.2)	SE214803.019	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP13(0.4-0.6)	SE214803.020	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP14(0.0-0.2)	SE214803.021	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP14(0.8-1.0)	SE214803.022	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP15(0.0-0.2)	SE214803.023	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP16(0.0-0.2)	SE214803.024	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP16(0.4-0.6)	SE214803.025	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH17(0.0-0.2)	SE214803.026	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH17(0.8-1.0)	SE214803.027	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH17(2.8-3.0)	SE214803.028	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH18(0.4-0.6)	SE214803.029	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH18(1.8-2.0)	SE214803.030	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH19(0.8-1.0)	SE214803.031	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH19(2.8-3.0)	SE214803.032	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH20(0.8-1.0)	SE214803.033	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH20(2.8-3.0)	SE214803.034	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
QC01	SE214803.035	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
QC03	SE214803.036	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
QC05	SE214803.037	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020

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
TP01(0.0-0.2)	SE214803.001	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP01(0.4-0.6)	SE214803.002	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP02(0.0-0.2)	SE214803.003	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP03(0.0-0.2)	SE214803.004	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP03(1.4-1.6)	SE214803.005	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP04(0.0-0.2)	SE214803.006	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP04(0.8-1.0)	SE214803.007	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP05(0.0-0.2)	SE214803.008	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP06(0.0-0.2)	SE214803.009	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP07(0.4-0.6)	SE214803.010	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP07(0.0-0.2)	SE214803.011	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP08(0.0-0.2)	SE214803.012	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP08(0.4-0.6)	SE214803.013	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP09(0.0-0.2)	SE214803.014	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP09(0.4-0.6)	SE214803.015	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP10(0.0-0.2)	SE214803.016	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP11(0.0-0.2)	SE214803.017	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP12(0.0-0.2)	SE214803.018	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP13(0.0-0.2)	SE214803.019	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP13(0.4-0.6)	SE214803.020	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP14(0.0-0.2)	SE214803.021	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP14(0.8-1.0)	SE214803.022	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP15(0.0-0.2)	SE214803.023	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020

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
TP16(0.0-0.2)	SE214803.024	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP16(0.4-0.6)	SE214803.025	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH17(0.0-0.2)	SE214803.026	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH17(0.8-1.0)	SE214803.027	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH17(2.8-3.0)	SE214803.028	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH18(0.4-0.6)	SE214803.029	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH18(1.8-2.0)	SE214803.030	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH19(0.8-1.0)	SE214803.031	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH19(2.8-3.0)	SE214803.032	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH20(0.8-1.0)	SE214803.033	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH20(2.8-3.0)	SE214803.034	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
QC01	SE214803.035	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
QC03	SE214803.036	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
QC05	SE214803.037	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020

PCBs in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP01(0.0-0.2)	SE214803.001	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP01(0.4-0.6)	SE214803.002	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP02(0.0-0.2)	SE214803.003	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP03(0.0-0.2)	SE214803.004	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP03(1.4-1.6)	SE214803.005	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP04(0.0-0.2)	SE214803.006	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP04(0.8-1.0)	SE214803.007	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP05(0.0-0.2)	SE214803.008	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP06(0.0-0.2)	SE214803.009	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP07(0.4-0.6)	SE214803.010	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP07(0.0-0.2)	SE214803.011	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP08(0.0-0.2)	SE214803.012	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP08(0.4-0.6)	SE214803.013	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP09(0.0-0.2)	SE214803.014	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP09(0.4-0.6)	SE214803.015	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP10(0.0-0.2)	SE214803.016	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP11(0.0-0.2)	SE214803.017	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP12(0.0-0.2)	SE214803.018	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP13(0.0-0.2)	SE214803.019	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP13(0.4-0.6)	SE214803.020	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP14(0.0-0.2)	SE214803.021	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP14(0.8-1.0)	SE214803.022	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP15(0.0-0.2)	SE214803.023	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP16(0.0-0.2)	SE214803.024	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP16(0.4-0.6)	SE214803.025	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH17(0.0-0.2)	SE214803.026	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH17(0.8-1.0)	SE214803.027	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH17(2.8-3.0)	SE214803.028	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH18(0.4-0.6)	SE214803.029	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH18(1.8-2.0)	SE214803.030	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH19(0.8-1.0)	SE214803.031	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH19(2.8-3.0)	SE214803.032	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH20(0.8-1.0)	SE214803.033	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH20(2.8-3.0)	SE214803.034	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
QC01	SE214803.035	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
QC03	SE214803.036	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
QC05	SE214803.037	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020

pH in soil (1:5)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP01(0.4-0.6)	SE214803.002	LB216153	08 Dec 2020	11 Dec 2020	15 Dec 2020	21 Dec 2020†	22 Dec 2020	21 Dec 2020
TP03(0.0-0.2)	SE214803.004	LB216153	08 Dec 2020	11 Dec 2020	15 Dec 2020	21 Dec 2020†	22 Dec 2020	21 Dec 2020
TP09(0.4-0.6)	SE214803.015	LB216153	09 Dec 2020	11 Dec 2020	16 Dec 2020	21 Dec 2020†	22 Dec 2020	21 Dec 2020
TP12(0.0-0.2)	SE214803.018	LB216153	08 Dec 2020	11 Dec 2020	15 Dec 2020	21 Dec 2020†	22 Dec 2020	21 Dec 2020

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

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

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

pH in soil (1:5) (continued)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP14(0.0-0.2)	SE214803.021	LB216153	09 Dec 2020	11 Dec 2020	16 Dec 2020	21 Dec 2020†	22 Dec 2020	21 Dec 2020

Speciated Phenols in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP01(0.0-0.2)	SE214803.001	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP01(0.4-0.6)	SE214803.002	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP02(0.0-0.2)	SE214803.003	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP03(0.0-0.2)	SE214803.004	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP03(1.4-1.6)	SE214803.005	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP04(0.0-0.2)	SE214803.006	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP04(0.8-1.0)	SE214803.007	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP05(0.0-0.2)	SE214803.008	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP06(0.0-0.2)	SE214803.009	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP07(0.4-0.6)	SE214803.010	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP07(0.0-0.2)	SE214803.011	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP08(0.0-0.2)	SE214803.012	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP08(0.4-0.6)	SE214803.013	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP09(0.0-0.2)	SE214803.014	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP09(0.4-0.6)	SE214803.015	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP10(0.0-0.2)	SE214803.016	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP11(0.0-0.2)	SE214803.017	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP12(0.0-0.2)	SE214803.018	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP13(0.0-0.2)	SE214803.019	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP13(0.4-0.6)	SE214803.020	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP14(0.0-0.2)	SE214803.021	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP14(0.8-1.0)	SE214803.022	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP15(0.0-0.2)	SE214803.023	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP16(0.0-0.2)	SE214803.024	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP16(0.4-0.6)	SE214803.025	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH17(0.0-0.2)	SE214803.026	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH17(0.8-1.0)	SE214803.027	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH17(2.8-3.0)	SE214803.028	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH18(0.4-0.6)	SE214803.029	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH18(1.8-2.0)	SE214803.030	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH19(0.8-1.0)	SE214803.031	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH19(2.8-3.0)	SE214803.032	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH20(0.8-1.0)	SE214803.033	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH20(2.8-3.0)	SE214803.034	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
QC01	SE214803.035	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
QC03	SE214803.036	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
QC05	SE214803.037	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020

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

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP01(0.0-0.2)	SE214803.001	LB215901	08 Dec 2020	11 Dec 2020	06 Jun 2021	17 Dec 2020	06 Jun 2021	21 Dec 2020
TP01(0.4-0.6)	SE214803.002	LB215901	08 Dec 2020	11 Dec 2020	06 Jun 2021	17 Dec 2020	06 Jun 2021	21 Dec 2020
TP02(0.0-0.2)	SE214803.003	LB215901	08 Dec 2020	11 Dec 2020	06 Jun 2021	17 Dec 2020	06 Jun 2021	21 Dec 2020
TP03(0.0-0.2)	SE214803.004	LB215901	08 Dec 2020	11 Dec 2020	06 Jun 2021	17 Dec 2020	06 Jun 2021	21 Dec 2020
TP03(1.4-1.6)	SE214803.005	LB215901	08 Dec 2020	11 Dec 2020	06 Jun 2021	17 Dec 2020	06 Jun 2021	21 Dec 2020
TP04(0.0-0.2)	SE214803.006	LB215901	09 Dec 2020	11 Dec 2020	07 Jun 2021	17 Dec 2020	07 Jun 2021	21 Dec 2020
TP04(0.8-1.0)	SE214803.007	LB215901	09 Dec 2020	11 Dec 2020	07 Jun 2021	17 Dec 2020	07 Jun 2021	21 Dec 2020
TP05(0.0-0.2)	SE214803.008	LB215901	09 Dec 2020	11 Dec 2020	07 Jun 2021	17 Dec 2020	07 Jun 2021	21 Dec 2020
TP06(0.0-0.2)	SE214803.009	LB215901	08 Dec 2020	11 Dec 2020	06 Jun 2021	17 Dec 2020	06 Jun 2021	21 Dec 2020
TP07(0.4-0.6)	SE214803.010	LB215901	09 Dec 2020	11 Dec 2020	07 Jun 2021	17 Dec 2020	07 Jun 2021	21 Dec 2020
TP07(0.0-0.2)	SE214803.011	LB215901	09 Dec 2020	11 Dec 2020	07 Jun 2021	17 Dec 2020	07 Jun 2021	21 Dec 2020
TP08(0.0-0.2)	SE214803.012	LB215901	09 Dec 2020	11 Dec 2020	07 Jun 2021	17 Dec 2020	07 Jun 2021	21 Dec 2020
TP08(0.4-0.6)	SE214803.013	LB215901	09 Dec 2020	11 Dec 2020	07 Jun 2021	17 Dec 2020	07 Jun 2021	21 Dec 2020
TP09(0.0-0.2)	SE214803.014	LB215901	09 Dec 2020	11 Dec 2020	07 Jun 2021	17 Dec 2020	07 Jun 2021	21 Dec 2020
TP09(0.4-0.6)	SE214803.015	LB215901	09 Dec 2020	11 Dec 2020	07 Jun 2021	17 Dec 2020	07 Jun 2021	21 Dec 2020
TP10(0.0-0.2)	SE214803.016	LB215901	09 Dec 2020	11 Dec 2020	07 Jun 2021	17 Dec 2020	07 Jun 2021	21 Dec 2020
TP11(0.0-0.2)	SE214803.017	LB215901	09 Dec 2020	11 Dec 2020	07 Jun 2021	17 Dec 2020	07 Jun 2021	21 Dec 2020

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

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

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

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP12(0.0-0.2)	SE214803.018	LB215901	08 Dec 2020	11 Dec 2020	06 Jun 2021	17 Dec 2020	06 Jun 2021	21 Dec 2020
TP13(0.0-0.2)	SE214803.019	LB215901	09 Dec 2020	11 Dec 2020	07 Jun 2021	17 Dec 2020	07 Jun 2021	21 Dec 2020
TP13(0.4-0.6)	SE214803.020	LB215902	09 Dec 2020	11 Dec 2020	07 Jun 2021	17 Dec 2020	07 Jun 2021	21 Dec 2020
TP14(0.0-0.2)	SE214803.021	LB215902	09 Dec 2020	11 Dec 2020	07 Jun 2021	17 Dec 2020	07 Jun 2021	21 Dec 2020
TP14(0.8-1.0)	SE214803.022	LB215902	09 Dec 2020	11 Dec 2020	07 Jun 2021	17 Dec 2020	07 Jun 2021	21 Dec 2020
TP15(0.0-0.2)	SE214803.023	LB215902	08 Dec 2020	11 Dec 2020	06 Jun 2021	17 Dec 2020	06 Jun 2021	21 Dec 2020
TP16(0.0-0.2)	SE214803.024	LB215902	09 Dec 2020	11 Dec 2020	07 Jun 2021	17 Dec 2020	07 Jun 2021	21 Dec 2020
TP16(0.4-0.6)	SE214803.025	LB215902	09 Dec 2020	11 Dec 2020	07 Jun 2021	17 Dec 2020	07 Jun 2021	21 Dec 2020
BH17(0.0-0.2)	SE214803.026	LB215902	08 Dec 2020	11 Dec 2020	06 Jun 2021	17 Dec 2020	06 Jun 2021	21 Dec 2020
BH17(0.8-1.0)	SE214803.027	LB215902	08 Dec 2020	11 Dec 2020	06 Jun 2021	17 Dec 2020	06 Jun 2021	21 Dec 2020
BH17(2.8-3.0)	SE214803.028	LB215902	08 Dec 2020	11 Dec 2020	06 Jun 2021	17 Dec 2020	06 Jun 2021	21 Dec 2020
BH18(0.4-0.6)	SE214803.029	LB215902	08 Dec 2020	11 Dec 2020	06 Jun 2021	17 Dec 2020	06 Jun 2021	21 Dec 2020
BH18(1.8-2.0)	SE214803.030	LB215902	08 Dec 2020	11 Dec 2020	06 Jun 2021	17 Dec 2020	06 Jun 2021	21 Dec 2020
BH19(0.8-1.0)	SE214803.031	LB215902	08 Dec 2020	11 Dec 2020	06 Jun 2021	17 Dec 2020	06 Jun 2021	21 Dec 2020
BH19(2.8-3.0)	SE214803.032	LB215902	08 Dec 2020	11 Dec 2020	06 Jun 2021	17 Dec 2020	06 Jun 2021	21 Dec 2020
BH20(0.8-1.0)	SE214803.033	LB215902	08 Dec 2020	11 Dec 2020	06 Jun 2021	17 Dec 2020	06 Jun 2021	21 Dec 2020
BH20(2.8-3.0)	SE214803.034	LB215902	08 Dec 2020	11 Dec 2020	06 Jun 2021	17 Dec 2020	06 Jun 2021	21 Dec 2020
QC01	SE214803.035	LB215902	08 Dec 2020	11 Dec 2020	06 Jun 2021	17 Dec 2020	06 Jun 2021	21 Dec 2020
QC03	SE214803.036	LB215902	08 Dec 2020	11 Dec 2020	06 Jun 2021	17 Dec 2020	06 Jun 2021	21 Dec 2020
QC05	SE214803.037	LB215902	09 Dec 2020	11 Dec 2020	07 Jun 2021	17 Dec 2020	07 Jun 2021	21 Dec 2020

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
TP01(0.0-0.2)	SE214803.001	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP01(0.4-0.6)	SE214803.002	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP02(0.0-0.2)	SE214803.003	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP03(0.0-0.2)	SE214803.004	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP03(1.4-1.6)	SE214803.005	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP04(0.0-0.2)	SE214803.006	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP04(0.8-1.0)	SE214803.007	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP05(0.0-0.2)	SE214803.008	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP06(0.0-0.2)	SE214803.009	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP07(0.4-0.6)	SE214803.010	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP07(0.0-0.2)	SE214803.011	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP08(0.0-0.2)	SE214803.012	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP08(0.4-0.6)	SE214803.013	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP09(0.0-0.2)	SE214803.014	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP09(0.4-0.6)	SE214803.015	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP10(0.0-0.2)	SE214803.016	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP11(0.0-0.2)	SE214803.017	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP12(0.0-0.2)	SE214803.018	LB215676	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP13(0.0-0.2)	SE214803.019	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP13(0.4-0.6)	SE214803.020	LB215676	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP14(0.0-0.2)	SE214803.021	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP14(0.8-1.0)	SE214803.022	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP15(0.0-0.2)	SE214803.023	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP16(0.0-0.2)	SE214803.024	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
TP16(0.4-0.6)	SE214803.025	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH17(0.0-0.2)	SE214803.026	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH17(0.8-1.0)	SE214803.027	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH17(2.8-3.0)	SE214803.028	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH18(0.4-0.6)	SE214803.029	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH18(1.8-2.0)	SE214803.030	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH19(0.8-1.0)	SE214803.031	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH19(2.8-3.0)	SE214803.032	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH20(0.8-1.0)	SE214803.033	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
BH20(2.8-3.0)	SE214803.034	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
QC01	SE214803.035	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
QC03	SE214803.036	LB215677	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020
QC05	SE214803.037	LB215677	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	21 Dec 2020

HOLDING TIME SUMMARY

SE214803 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.

VOC's in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP01(0.0-0.2)	SE214803.001	LB215665	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP01(0.4-0.6)	SE214803.002	LB215665	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP02(0.0-0.2)	SE214803.003	LB215665	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP03(0.0-0.2)	SE214803.004	LB215665	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP03(1.4-1.6)	SE214803.005	LB215665	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP04(0.0-0.2)	SE214803.006	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP04(0.8-1.0)	SE214803.007	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP05(0.0-0.2)	SE214803.008	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP06(0.0-0.2)	SE214803.009	LB215665	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP07(0.4-0.6)	SE214803.010	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP07(0.0-0.2)	SE214803.011	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP08(0.0-0.2)	SE214803.012	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP08(0.4-0.6)	SE214803.013	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP09(0.0-0.2)	SE214803.014	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP09(0.4-0.6)	SE214803.015	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP10(0.0-0.2)	SE214803.016	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP11(0.0-0.2)	SE214803.017	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP12(0.0-0.2)	SE214803.018	LB215665	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP13(0.0-0.2)	SE214803.019	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP13(0.4-0.6)	SE214803.020	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP14(0.0-0.2)	SE214803.021	LB215666	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
TP14(0.8-1.0)	SE214803.022	LB215666	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
TP15(0.0-0.2)	SE214803.023	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
TP16(0.0-0.2)	SE214803.024	LB215666	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
TP16(0.4-0.6)	SE214803.025	LB215666	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
BH17(0.0-0.2)	SE214803.026	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
BH17(0.8-1.0)	SE214803.027	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
BH17(2.8-3.0)	SE214803.028	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
BH18(0.4-0.6)	SE214803.029	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
BH18(1.8-2.0)	SE214803.030	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
BH19(0.8-1.0)	SE214803.031	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
BH19(2.8-3.0)	SE214803.032	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
BH20(0.8-1.0)	SE214803.033	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
BH20(2.8-3.0)	SE214803.034	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
QC01	SE214803.035	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
QC03	SE214803.036	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
QC05	SE214803.037	LB215666	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
TB01	SE214803.038	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
TS01	SE214803.039	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
TB02	SE214803.040	LB215666	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
TS02	SE214803.041	LB215666	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020

Volatile Petroleum Hydrocarbons in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP01(0.0-0.2)	SE214803.001	LB215665	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP01(0.4-0.6)	SE214803.002	LB215665	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP02(0.0-0.2)	SE214803.003	LB215665	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP03(0.0-0.2)	SE214803.004	LB215665	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP03(1.4-1.6)	SE214803.005	LB215665	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP04(0.0-0.2)	SE214803.006	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP04(0.8-1.0)	SE214803.007	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP05(0.0-0.2)	SE214803.008	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP06(0.0-0.2)	SE214803.009	LB215665	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP07(0.4-0.6)	SE214803.010	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP07(0.0-0.2)	SE214803.011	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP08(0.0-0.2)	SE214803.012	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP08(0.4-0.6)	SE214803.013	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP09(0.0-0.2)	SE214803.014	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP09(0.4-0.6)	SE214803.015	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP10(0.0-0.2)	SE214803.016	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020

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

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

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

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP11(0.0-0.2)	SE214803.017	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP12(0.0-0.2)	SE214803.018	LB215665	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP13(0.0-0.2)	SE214803.019	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP13(0.4-0.6)	SE214803.020	LB215665	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	24 Dec 2020
TP14(0.0-0.2)	SE214803.021	LB215666	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
TP14(0.8-1.0)	SE214803.022	LB215666	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
TP15(0.0-0.2)	SE214803.023	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
TP16(0.0-0.2)	SE214803.024	LB215666	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
TP16(0.4-0.6)	SE214803.025	LB215666	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
BH17(0.0-0.2)	SE214803.026	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
BH17(0.8-1.0)	SE214803.027	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
BH17(2.8-3.0)	SE214803.028	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
BH18(0.4-0.6)	SE214803.029	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
BH18(1.8-2.0)	SE214803.030	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
BH19(0.8-1.0)	SE214803.031	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
BH19(2.8-3.0)	SE214803.032	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
BH20(0.8-1.0)	SE214803.033	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
BH20(2.8-3.0)	SE214803.034	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
QC01	SE214803.035	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
QC03	SE214803.036	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
QC05	SE214803.037	LB215666	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
TB01	SE214803.038	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
TS01	SE214803.039	LB215666	08 Dec 2020	11 Dec 2020	22 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
TB02	SE214803.040	LB215666	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020
TS02	SE214803.041	LB215666	09 Dec 2020	11 Dec 2020	23 Dec 2020	15 Dec 2020	24 Jan 2021	29 Dec 2020

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 identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	TP01(0.0-0.2)	SE214803.001	%	60 - 130%	99
	TP01(0.4-0.6)	SE214803.002	%	60 - 130%	96
	TP02(0.0-0.2)	SE214803.003	%	60 - 130%	98
	TP03(0.0-0.2)	SE214803.004	%	60 - 130%	105
	TP03(1.4-1.6)	SE214803.005	%	60 - 130%	99
	TP04(0.0-0.2)	SE214803.006	%	60 - 130%	97
	TP04(0.8-1.0)	SE214803.007	%	60 - 130%	102
	TP05(0.0-0.2)	SE214803.008	%	60 - 130%	100
	TP06(0.0-0.2)	SE214803.009	%	60 - 130%	97
	TP07(0.4-0.6)	SE214803.010	%	60 - 130%	91
	TP07(0.0-0.2)	SE214803.011	%	60 - 130%	101
	TP08(0.0-0.2)	SE214803.012	%	60 - 130%	95
	TP08(0.4-0.6)	SE214803.013	%	60 - 130%	99
	TP09(0.0-0.2)	SE214803.014	%	60 - 130%	89
	TP09(0.4-0.6)	SE214803.015	%	60 - 130%	103
	TP10(0.0-0.2)	SE214803.016	%	60 - 130%	97
	TP11(0.0-0.2)	SE214803.017	%	60 - 130%	98
	TP12(0.0-0.2)	SE214803.018	%	60 - 130%	102
	TP13(0.0-0.2)	SE214803.019	%	60 - 130%	95
	TP13(0.4-0.6)	SE214803.020	%	60 - 130%	100
	TP14(0.0-0.2)	SE214803.021	%	60 - 130%	96
	TP14(0.8-1.0)	SE214803.022	%	60 - 130%	93
	TP15(0.0-0.2)	SE214803.023	%	60 - 130%	97
	TP16(0.0-0.2)	SE214803.024	%	60 - 130%	93
	TP16(0.4-0.6)	SE214803.025	%	60 - 130%	93
	BH17(0.0-0.2)	SE214803.026	%	60 - 130%	95
	BH17(0.8-1.0)	SE214803.027	%	60 - 130%	92
	BH17(2.8-3.0)	SE214803.028	%	60 - 130%	95
	BH18(0.4-0.6)	SE214803.029	%	60 - 130%	96
	BH18(1.8-2.0)	SE214803.030	%	60 - 130%	90
	BH19(0.8-1.0)	SE214803.031	%	60 - 130%	97
	BH19(2.8-3.0)	SE214803.032	%	60 - 130%	90
	BH20(0.8-1.0)	SE214803.033	%	60 - 130%	88
	BH20(2.8-3.0)	SE214803.034	%	60 - 130%	92
	QC01	SE214803.035	%	60 - 130%	80
	QC03	SE214803.036	%	60 - 130%	91
	QC05	SE214803.037	%	60 - 130%	90

OP Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	TP01(0.0-0.2)	SE214803.001	%	60 - 130%	82
	TP01(0.4-0.6)	SE214803.002	%	60 - 130%	101
	TP02(0.0-0.2)	SE214803.003	%	60 - 130%	84
	TP03(0.0-0.2)	SE214803.004	%	60 - 130%	97
	TP03(1.4-1.6)	SE214803.005	%	60 - 130%	86
	TP04(0.0-0.2)	SE214803.006	%	60 - 130%	92
	TP04(0.8-1.0)	SE214803.007	%	60 - 130%	82
	TP05(0.0-0.2)	SE214803.008	%	60 - 130%	90
	TP06(0.0-0.2)	SE214803.009	%	60 - 130%	79
	TP07(0.4-0.6)	SE214803.010	%	60 - 130%	73
	TP07(0.0-0.2)	SE214803.011	%	60 - 130%	79
	TP08(0.0-0.2)	SE214803.012	%	60 - 130%	80
	TP08(0.4-0.6)	SE214803.013	%	60 - 130%	74
	TP09(0.0-0.2)	SE214803.014	%	60 - 130%	98
	TP09(0.4-0.6)	SE214803.015	%	60 - 130%	73
	TP10(0.0-0.2)	SE214803.016	%	60 - 130%	87
	TP11(0.0-0.2)	SE214803.017	%	60 - 130%	92
	TP12(0.0-0.2)	SE214803.018	%	60 - 130%	89
	TP13(0.0-0.2)	SE214803.019	%	60 - 130%	75
	TP13(0.4-0.6)	SE214803.020	%	60 - 130%	100
	TP14(0.0-0.2)	SE214803.021	%	60 - 130%	83

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 identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OP Pesticides in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	TP14(0.8-1.0)	SE214803.022	%	60 - 130%	89
	TP15(0.0-0.2)	SE214803.023	%	60 - 130%	85
	TP16(0.0-0.2)	SE214803.024	%	60 - 130%	89
	TP16(0.4-0.6)	SE214803.025	%	60 - 130%	90
	BH17(0.0-0.2)	SE214803.026	%	60 - 130%	89
	BH17(0.8-1.0)	SE214803.027	%	60 - 130%	89
	BH17(2.8-3.0)	SE214803.028	%	60 - 130%	82
	BH18(0.4-0.6)	SE214803.029	%	60 - 130%	88
	BH18(1.8-2.0)	SE214803.030	%	60 - 130%	70
	BH19(0.8-1.0)	SE214803.031	%	60 - 130%	79
	BH19(2.8-3.0)	SE214803.032	%	60 - 130%	84
	BH20(0.8-1.0)	SE214803.033	%	60 - 130%	75
	BH20(2.8-3.0)	SE214803.034	%	60 - 130%	88
	QC01	SE214803.035	%	60 - 130%	70
	QC03	SE214803.036	%	60 - 130%	80
	QC05	SE214803.037	%	60 - 130%	90
d14-p-terphenyl (Surrogate)	TP01(0.0-0.2)	SE214803.001	%	60 - 130%	99
	TP01(0.4-0.6)	SE214803.002	%	60 - 130%	85
	TP02(0.0-0.2)	SE214803.003	%	60 - 130%	111
	TP03(0.0-0.2)	SE214803.004	%	60 - 130%	97
	TP03(1.4-1.6)	SE214803.005	%	60 - 130%	77
	TP04(0.0-0.2)	SE214803.006	%	60 - 130%	91
	TP04(0.8-1.0)	SE214803.007	%	60 - 130%	84
	TP05(0.0-0.2)	SE214803.008	%	60 - 130%	93
	TP06(0.0-0.2)	SE214803.009	%	60 - 130%	77
	TP07(0.4-0.6)	SE214803.010	%	60 - 130%	85
	TP07(0.0-0.2)	SE214803.011	%	60 - 130%	82
	TP08(0.0-0.2)	SE214803.012	%	60 - 130%	81
	TP08(0.4-0.6)	SE214803.013	%	60 - 130%	78
	TP09(0.0-0.2)	SE214803.014	%	60 - 130%	92
	TP09(0.4-0.6)	SE214803.015	%	60 - 130%	79
	TP10(0.0-0.2)	SE214803.016	%	60 - 130%	105
	TP11(0.0-0.2)	SE214803.017	%	60 - 130%	98
	TP12(0.0-0.2)	SE214803.018	%	60 - 130%	84
	TP13(0.0-0.2)	SE214803.019	%	60 - 130%	93
	TP13(0.4-0.6)	SE214803.020	%	60 - 130%	83
	TP14(0.0-0.2)	SE214803.021	%	60 - 130%	89
	TP14(0.8-1.0)	SE214803.022	%	60 - 130%	76
	TP15(0.0-0.2)	SE214803.023	%	60 - 130%	92
	TP16(0.0-0.2)	SE214803.024	%	60 - 130%	86
	TP16(0.4-0.6)	SE214803.025	%	60 - 130%	83
	BH17(0.0-0.2)	SE214803.026	%	60 - 130%	93
	BH17(0.8-1.0)	SE214803.027	%	60 - 130%	81
	BH17(2.8-3.0)	SE214803.028	%	60 - 130%	80
	BH18(0.4-0.6)	SE214803.029	%	60 - 130%	108
	BH18(1.8-2.0)	SE214803.030	%	60 - 130%	81
	BH19(0.8-1.0)	SE214803.031	%	60 - 130%	80
	BH19(2.8-3.0)	SE214803.032	%	60 - 130%	79
	BH20(0.8-1.0)	SE214803.033	%	60 - 130%	84
	BH20(2.8-3.0)	SE214803.034	%	60 - 130%	78
	QC01	SE214803.035	%	60 - 130%	75
	QC03	SE214803.036	%	60 - 130%	82
	QC05	SE214803.037	%	60 - 130%	82

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	TP01(0.0-0.2)	SE214803.001	%	70 - 130%	82
	TP01(0.4-0.6)	SE214803.002	%	70 - 130%	101
	TP02(0.0-0.2)	SE214803.003	%	70 - 130%	84
	TP03(0.0-0.2)	SE214803.004	%	70 - 130%	97
	TP03(1.4-1.6)	SE214803.005	%	70 - 130%	86

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 identifer 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)	TP04(0.0-0.2)	SE214803.006	%	70 - 130%	92
	TP04(0.8-1.0)	SE214803.007	%	70 - 130%	82
	TP05(0.0-0.2)	SE214803.008	%	70 - 130%	90
	TP06(0.0-0.2)	SE214803.009	%	70 - 130%	79
	TP07(0.4-0.6)	SE214803.010	%	70 - 130%	73
	TP07(0.0-0.2)	SE214803.011	%	70 - 130%	79
	TP08(0.0-0.2)	SE214803.012	%	70 - 130%	80
	TP08(0.4-0.6)	SE214803.013	%	70 - 130%	74
	TP09(0.0-0.2)	SE214803.014	%	70 - 130%	98
	TP09(0.4-0.6)	SE214803.015	%	70 - 130%	73
	TP10(0.0-0.2)	SE214803.016	%	70 - 130%	87
	TP11(0.0-0.2)	SE214803.017	%	70 - 130%	92
	TP12(0.0-0.2)	SE214803.018	%	70 - 130%	89
	TP13(0.0-0.2)	SE214803.019	%	70 - 130%	75
	TP13(0.4-0.6)	SE214803.020	%	70 - 130%	100
	TP14(0.0-0.2)	SE214803.021	%	70 - 130%	83
	TP14(0.8-1.0)	SE214803.022	%	70 - 130%	89
	TP15(0.0-0.2)	SE214803.023	%	70 - 130%	85
	TP16(0.0-0.2)	SE214803.024	%	70 - 130%	89
	TP16(0.4-0.6)	SE214803.025	%	70 - 130%	90
	BH17(0.0-0.2)	SE214803.026	%	70 - 130%	89
	BH17(0.8-1.0)	SE214803.027	%	70 - 130%	89
	BH17(2.8-3.0)	SE214803.028	%	70 - 130%	82
	BH18(0.4-0.6)	SE214803.029	%	70 - 130%	88
	BH18(1.8-2.0)	SE214803.030	%	70 - 130%	70
	BH19(0.8-1.0)	SE214803.031	%	70 - 130%	79
	BH19(2.8-3.0)	SE214803.032	%	70 - 130%	84
	BH20(0.8-1.0)	SE214803.033	%	70 - 130%	75
	BH20(2.8-3.0)	SE214803.034	%	70 - 130%	88
	QC01	SE214803.035	%	70 - 130%	70
	QC03	SE214803.036	%	70 - 130%	80
	QC05	SE214803.037	%	70 - 130%	90
d14-p-terphenyl (Surrogate)	TP01(0.0-0.2)	SE214803.001	%	70 - 130%	99
	TP01(0.4-0.6)	SE214803.002	%	70 - 130%	85
	TP02(0.0-0.2)	SE214803.003	%	70 - 130%	111
	TP03(0.0-0.2)	SE214803.004	%	70 - 130%	97
	TP03(1.4-1.6)	SE214803.005	%	70 - 130%	77
	TP04(0.0-0.2)	SE214803.006	%	70 - 130%	91
	TP04(0.8-1.0)	SE214803.007	%	70 - 130%	84
	TP05(0.0-0.2)	SE214803.008	%	70 - 130%	93
	TP06(0.0-0.2)	SE214803.009	%	70 - 130%	77
	TP07(0.4-0.6)	SE214803.010	%	70 - 130%	85
	TP07(0.0-0.2)	SE214803.011	%	70 - 130%	82
	TP08(0.0-0.2)	SE214803.012	%	70 - 130%	81
	TP08(0.4-0.6)	SE214803.013	%	70 - 130%	78
	TP09(0.0-0.2)	SE214803.014	%	70 - 130%	92
	TP09(0.4-0.6)	SE214803.015	%	70 - 130%	79
	TP10(0.0-0.2)	SE214803.016	%	70 - 130%	105
	TP11(0.0-0.2)	SE214803.017	%	70 - 130%	98
	TP12(0.0-0.2)	SE214803.018	%	70 - 130%	84
	TP13(0.0-0.2)	SE214803.019	%	70 - 130%	93
	TP13(0.4-0.6)	SE214803.020	%	70 - 130%	83
	TP14(0.0-0.2)	SE214803.021	%	70 - 130%	89
	TP14(0.8-1.0)	SE214803.022	%	70 - 130%	76
	TP15(0.0-0.2)	SE214803.023	%	70 - 130%	92
	TP16(0.0-0.2)	SE214803.024	%	70 - 130%	86
	TP16(0.4-0.6)	SE214803.025	%	70 - 130%	83
	BH17(0.0-0.2)	SE214803.026	%	70 - 130%	93
	BH17(0.8-1.0)	SE214803.027	%	70 - 130%	81
	BH17(2.8-3.0)	SE214803.028	%	70 - 130%	80
	BH18(0.4-0.6)	SE214803.029	%	70 - 130%	108

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 identifer 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)	BH18(1.8-2.0)	SE214803.030	%	70 - 130%	81
	BH19(0.8-1.0)	SE214803.031	%	70 - 130%	80
	BH19(2.8-3.0)	SE214803.032	%	70 - 130%	79
	BH20(0.8-1.0)	SE214803.033	%	70 - 130%	84
	BH20(2.8-3.0)	SE214803.034	%	70 - 130%	78
	QC01	SE214803.035	%	70 - 130%	75
	QC03	SE214803.036	%	70 - 130%	82
	QC05	SE214803.037	%	70 - 130%	82
d5-nitrobenzene (Surrogate)	TP01(0.0-0.2)	SE214803.001	%	70 - 130%	91
	TP01(0.4-0.6)	SE214803.002	%	70 - 130%	93
	TP02(0.0-0.2)	SE214803.003	%	70 - 130%	87
	TP03(0.0-0.2)	SE214803.004	%	70 - 130%	93
	TP03(1.4-1.6)	SE214803.005	%	70 - 130%	89
	TP04(0.0-0.2)	SE214803.006	%	70 - 130%	97
	TP04(0.8-1.0)	SE214803.007	%	70 - 130%	85
	TP05(0.0-0.2)	SE214803.008	%	70 - 130%	88
	TP06(0.0-0.2)	SE214803.009	%	70 - 130%	81
	TP07(0.4-0.6)	SE214803.010	%	70 - 130%	86
	TP07(0.0-0.2)	SE214803.011	%	70 - 130%	87
	TP08(0.0-0.2)	SE214803.012	%	70 - 130%	78
	TP08(0.4-0.6)	SE214803.013	%	70 - 130%	74
	TP09(0.0-0.2)	SE214803.014	%	70 - 130%	92
	TP09(0.4-0.6)	SE214803.015	%	70 - 130%	70
	TP10(0.0-0.2)	SE214803.016	%	70 - 130%	88
	TP11(0.0-0.2)	SE214803.017	%	70 - 130%	97
	TP12(0.0-0.2)	SE214803.018	%	70 - 130%	88
	TP13(0.0-0.2)	SE214803.019	%	70 - 130%	89
	TP13(0.4-0.6)	SE214803.020	%	70 - 130%	95
	TP14(0.0-0.2)	SE214803.021	%	70 - 130%	85
	TP14(0.8-1.0)	SE214803.022	%	70 - 130%	87
	TP15(0.0-0.2)	SE214803.023	%	70 - 130%	90
	TP16(0.0-0.2)	SE214803.024	%	70 - 130%	86
	TP16(0.4-0.6)	SE214803.025	%	70 - 130%	84
	BH17(0.0-0.2)	SE214803.026	%	70 - 130%	88
	BH17(0.8-1.0)	SE214803.027	%	70 - 130%	85
	BH17(2.8-3.0)	SE214803.028	%	70 - 130%	88
	BH18(0.4-0.6)	SE214803.029	%	70 - 130%	83
	BH18(1.8-2.0)	SE214803.030	%	70 - 130%	87
	BH19(0.8-1.0)	SE214803.031	%	70 - 130%	80
	BH19(2.8-3.0)	SE214803.032	%	70 - 130%	82
	BH20(0.8-1.0)	SE214803.033	%	70 - 130%	89
	BH20(2.8-3.0)	SE214803.034	%	70 - 130%	77
	QC01	SE214803.035	%	70 - 130%	71
	QC03	SE214803.036	%	70 - 130%	82
	QC05	SE214803.037	%	70 - 130%	86

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	TP01(0.0-0.2)	SE214803.001	%	60 - 130%	99
	TP01(0.4-0.6)	SE214803.002	%	60 - 130%	96
	TP02(0.0-0.2)	SE214803.003	%	60 - 130%	98
	TP03(0.0-0.2)	SE214803.004	%	60 - 130%	105
	TP03(1.4-1.6)	SE214803.005	%	60 - 130%	99
	TP04(0.0-0.2)	SE214803.006	%	60 - 130%	97
	TP04(0.8-1.0)	SE214803.007	%	60 - 130%	102
	TP05(0.0-0.2)	SE214803.008	%	60 - 130%	100
	TP06(0.0-0.2)	SE214803.009	%	60 - 130%	97
	TP07(0.4-0.6)	SE214803.010	%	60 - 130%	91
	TP07(0.0-0.2)	SE214803.011	%	60 - 130%	101
	TP08(0.0-0.2)	SE214803.012	%	60 - 130%	95
	TP08(0.4-0.6)	SE214803.013	%	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 identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PCBs in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	TP09(0.0-0.2)	SE214803.014	%	60 - 130%	89
	TP09(0.4-0.6)	SE214803.015	%	60 - 130%	103
	TP10(0.0-0.2)	SE214803.016	%	60 - 130%	97
	TP11(0.0-0.2)	SE214803.017	%	60 - 130%	98
	TP12(0.0-0.2)	SE214803.018	%	60 - 130%	102
	TP13(0.0-0.2)	SE214803.019	%	60 - 130%	95
	TP13(0.4-0.6)	SE214803.020	%	60 - 130%	100
	TP14(0.0-0.2)	SE214803.021	%	60 - 130%	96
	TP14(0.8-1.0)	SE214803.022	%	60 - 130%	93
	TP15(0.0-0.2)	SE214803.023	%	60 - 130%	97
	TP16(0.0-0.2)	SE214803.024	%	60 - 130%	93
	TP16(0.4-0.6)	SE214803.025	%	60 - 130%	93
	BH17(0.0-0.2)	SE214803.026	%	60 - 130%	95
	BH17(0.8-1.0)	SE214803.027	%	60 - 130%	92
	BH17(2.8-3.0)	SE214803.028	%	60 - 130%	95
	BH18(0.4-0.6)	SE214803.029	%	60 - 130%	96
	BH18(1.8-2.0)	SE214803.030	%	60 - 130%	90
	BH19(0.8-1.0)	SE214803.031	%	60 - 130%	97
	BH19(2.8-3.0)	SE214803.032	%	60 - 130%	90
	BH20(0.8-1.0)	SE214803.033	%	60 - 130%	88
	BH20(2.8-3.0)	SE214803.034	%	60 - 130%	92
	QC01	SE214803.035	%	60 - 130%	80
	QC03	SE214803.036	%	60 - 130%	91
	QC05	SE214803.037	%	60 - 130%	90

Speciated Phenols in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2,4,6-Tribromophenol (Surrogate)	TP01(0.0-0.2)	SE214803.001	%	70 - 130%	100
	TP01(0.4-0.6)	SE214803.002	%	70 - 130%	98
	TP02(0.0-0.2)	SE214803.003	%	70 - 130%	97
	TP03(0.0-0.2)	SE214803.004	%	70 - 130%	100
	TP03(1.4-1.6)	SE214803.005	%	70 - 130%	104
	TP04(0.0-0.2)	SE214803.006	%	70 - 130%	99
	TP04(0.8-1.0)	SE214803.007	%	70 - 130%	102
	TP05(0.0-0.2)	SE214803.008	%	70 - 130%	100
	TP06(0.0-0.2)	SE214803.009	%	70 - 130%	91
	TP07(0.4-0.6)	SE214803.010	%	70 - 130%	103
	TP07(0.0-0.2)	SE214803.011	%	70 - 130%	105
	TP08(0.0-0.2)	SE214803.012	%	70 - 130%	101
	TP08(0.4-0.6)	SE214803.013	%	70 - 130%	100
	TP09(0.0-0.2)	SE214803.014	%	70 - 130%	95
	TP09(0.4-0.6)	SE214803.015	%	70 - 130%	100
	TP10(0.0-0.2)	SE214803.016	%	70 - 130%	96
	TP11(0.0-0.2)	SE214803.017	%	70 - 130%	101
	TP12(0.0-0.2)	SE214803.018	%	70 - 130%	103
	TP13(0.0-0.2)	SE214803.019	%	70 - 130%	102
	TP13(0.4-0.6)	SE214803.020	%	70 - 130%	106
	TP14(0.0-0.2)	SE214803.021	%	70 - 130%	85
	TP14(0.8-1.0)	SE214803.022	%	70 - 130%	85
	TP15(0.0-0.2)	SE214803.023	%	70 - 130%	89
	TP16(0.0-0.2)	SE214803.024	%	70 - 130%	88
	TP16(0.4-0.6)	SE214803.025	%	70 - 130%	84
	BH17(0.0-0.2)	SE214803.026	%	70 - 130%	81
	BH17(0.8-1.0)	SE214803.027	%	70 - 130%	84
	BH17(2.8-3.0)	SE214803.028	%	70 - 130%	83
	BH18(0.4-0.6)	SE214803.029	%	70 - 130%	81
	BH18(1.8-2.0)	SE214803.030	%	70 - 130%	82
	BH19(0.8-1.0)	SE214803.031	%	70 - 130%	94
	BH19(2.8-3.0)	SE214803.032	%	70 - 130%	88
	BH20(0.8-1.0)	SE214803.033	%	70 - 130%	89
	BH20(2.8-3.0)	SE214803.034	%	70 - 130%	86

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 identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Speciated Phenols in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2,4,6-Tribromophenol (Surrogate)	QC01	SE214803.035	%	70 - 130%	86
	QC03	SE214803.036	%	70 - 130%	88
	QC05	SE214803.037	%	70 - 130%	93
d5-phenol (Surrogate)	TP01(0.0-0.2)	SE214803.001	%	50 - 130%	76
	TP01(0.4-0.6)	SE214803.002	%	50 - 130%	70
	TP02(0.0-0.2)	SE214803.003	%	50 - 130%	70
	TP03(0.0-0.2)	SE214803.004	%	50 - 130%	78
	TP03(1.4-1.6)	SE214803.005	%	50 - 130%	78
	TP04(0.0-0.2)	SE214803.006	%	50 - 130%	80
	TP04(0.8-1.0)	SE214803.007	%	50 - 130%	71
	TP05(0.0-0.2)	SE214803.008	%	50 - 130%	75
	TP06(0.0-0.2)	SE214803.009	%	50 - 130%	71
	TP07(0.4-0.6)	SE214803.010	%	50 - 130%	90
	TP07(0.0-0.2)	SE214803.011	%	50 - 130%	91
	TP08(0.0-0.2)	SE214803.012	%	50 - 130%	79
	TP08(0.4-0.6)	SE214803.013	%	50 - 130%	86
	TP09(0.0-0.2)	SE214803.014	%	50 - 130%	71
	TP09(0.4-0.6)	SE214803.015	%	50 - 130%	81
	TP10(0.0-0.2)	SE214803.016	%	50 - 130%	81
	TP11(0.0-0.2)	SE214803.017	%	50 - 130%	87
	TP12(0.0-0.2)	SE214803.018	%	50 - 130%	86
	TP13(0.0-0.2)	SE214803.019	%	50 - 130%	85
	TP13(0.4-0.6)	SE214803.020	%	50 - 130%	92
	TP14(0.0-0.2)	SE214803.021	%	50 - 130%	87
	TP14(0.8-1.0)	SE214803.022	%	50 - 130%	90
	TP15(0.0-0.2)	SE214803.023	%	50 - 130%	92
	TP16(0.0-0.2)	SE214803.024	%	50 - 130%	93
	TP16(0.4-0.6)	SE214803.025	%	50 - 130%	90
	BH17(0.0-0.2)	SE214803.026	%	50 - 130%	92
	BH17(0.8-1.0)	SE214803.027	%	50 - 130%	90
	BH17(2.8-3.0)	SE214803.028	%	50 - 130%	91
	BH18(0.4-0.6)	SE214803.029	%	50 - 130%	88
	BH18(1.8-2.0)	SE214803.030	%	50 - 130%	89
	BH19(0.8-1.0)	SE214803.031	%	50 - 130%	102
	BH19(2.8-3.0)	SE214803.032	%	50 - 130%	94
	BH20(0.8-1.0)	SE214803.033	%	50 - 130%	94
	BH20(2.8-3.0)	SE214803.034	%	50 - 130%	93
	QC01	SE214803.035	%	50 - 130%	94
	QC03	SE214803.036	%	50 - 130%	96
	QC05	SE214803.037	%	50 - 130%	93

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	TP01(0.0-0.2)	SE214803.001	%	60 - 130%	105
	TP01(0.4-0.6)	SE214803.002	%	60 - 130%	98
	TP02(0.0-0.2)	SE214803.003	%	60 - 130%	96
	TP03(0.0-0.2)	SE214803.004	%	60 - 130%	108
	TP03(1.4-1.6)	SE214803.005	%	60 - 130%	93
	TP04(0.0-0.2)	SE214803.006	%	60 - 130%	107
	TP04(0.8-1.0)	SE214803.007	%	60 - 130%	99
	TP05(0.0-0.2)	SE214803.008	%	60 - 130%	108
	TP06(0.0-0.2)	SE214803.009	%	60 - 130%	103
	TP07(0.4-0.6)	SE214803.010	%	60 - 130%	102
	TP07(0.0-0.2)	SE214803.011	%	60 - 130%	76
	TP08(0.0-0.2)	SE214803.012	%	60 - 130%	73
	TP08(0.4-0.6)	SE214803.013	%	60 - 130%	73
	TP09(0.0-0.2)	SE214803.014	%	60 - 130%	73
	TP09(0.4-0.6)	SE214803.015	%	60 - 130%	69
	TP10(0.0-0.2)	SE214803.016	%	60 - 130%	71
	TP11(0.0-0.2)	SE214803.017	%	60 - 130%	73
	TP12(0.0-0.2)	SE214803.018	%	60 - 130%	72

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 identifer 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)	TP13(0.0-0.2)	SE214803.019	%	60 - 130%	72
	TP13(0.4-0.6)	SE214803.020	%	60 - 130%	66
	TP14(0.0-0.2)	SE214803.021	%	60 - 130%	109
	TP14(0.8-1.0)	SE214803.022	%	60 - 130%	105
	TP15(0.0-0.2)	SE214803.023	%	60 - 130%	103
	TP16(0.0-0.2)	SE214803.024	%	60 - 130%	101
	TP16(0.4-0.6)	SE214803.025	%	60 - 130%	106
	BH17(0.0-0.2)	SE214803.026	%	60 - 130%	99
	BH17(0.8-1.0)	SE214803.027	%	60 - 130%	102
	BH17(2.8-3.0)	SE214803.028	%	60 - 130%	101
	BH18(0.4-0.6)	SE214803.029	%	60 - 130%	102
	BH18(1.8-2.0)	SE214803.030	%	60 - 130%	101
	BH19(0.8-1.0)	SE214803.031	%	60 - 130%	98
	BH19(2.8-3.0)	SE214803.032	%	60 - 130%	104
	BH20(0.8-1.0)	SE214803.033	%	60 - 130%	93
	BH20(2.8-3.0)	SE214803.034	%	60 - 130%	90
	QC01	SE214803.035	%	60 - 130%	99
	QC03	SE214803.036	%	60 - 130%	106
	QC05	SE214803.037	%	60 - 130%	98
	TB01	SE214803.038	%	60 - 130%	101
	TS01	SE214803.039	%	60 - 130%	110
	TB02	SE214803.040	%	60 - 130%	105
	TS02	SE214803.041	%	60 - 130%	94
d4-1,2-dichloroethane (Surrogate)	TP01(0.0-0.2)	SE214803.001	%	60 - 130%	101
	TP01(0.4-0.6)	SE214803.002	%	60 - 130%	95
	TP02(0.0-0.2)	SE214803.003	%	60 - 130%	91
	TP03(0.0-0.2)	SE214803.004	%	60 - 130%	133 ①
	TP03(1.4-1.6)	SE214803.005	%	60 - 130%	111
	TP04(0.0-0.2)	SE214803.006	%	60 - 130%	121
	TP04(0.8-1.0)	SE214803.007	%	60 - 130%	100
	TP05(0.0-0.2)	SE214803.008	%	60 - 130%	108
	TP06(0.0-0.2)	SE214803.009	%	60 - 130%	104
	TP07(0.4-0.6)	SE214803.010	%	60 - 130%	99
	TP07(0.0-0.2)	SE214803.011	%	60 - 130%	86
	TP08(0.0-0.2)	SE214803.012	%	60 - 130%	87
	TP08(0.4-0.6)	SE214803.013	%	60 - 130%	87
	TP09(0.0-0.2)	SE214803.014	%	60 - 130%	89
	TP09(0.4-0.6)	SE214803.015	%	60 - 130%	85
	TP10(0.0-0.2)	SE214803.016	%	60 - 130%	88
	TP11(0.0-0.2)	SE214803.017	%	60 - 130%	88
	TP12(0.0-0.2)	SE214803.018	%	60 - 130%	89
	TP13(0.0-0.2)	SE214803.019	%	60 - 130%	89
	TP13(0.4-0.6)	SE214803.020	%	60 - 130%	82
	TP14(0.0-0.2)	SE214803.021	%	60 - 130%	116
	TP14(0.8-1.0)	SE214803.022	%	60 - 130%	109
	TP15(0.0-0.2)	SE214803.023	%	60 - 130%	105
	TP16(0.0-0.2)	SE214803.024	%	60 - 130%	90
	TP16(0.4-0.6)	SE214803.025	%	60 - 130%	109
	BH17(0.0-0.2)	SE214803.026	%	60 - 130%	104
	BH17(0.8-1.0)	SE214803.027	%	60 - 130%	110
	BH17(2.8-3.0)	SE214803.028	%	60 - 130%	99
	BH18(0.4-0.6)	SE214803.029	%	60 - 130%	106
	BH18(1.8-2.0)	SE214803.030	%	60 - 130%	104
	BH19(0.8-1.0)	SE214803.031	%	60 - 130%	98
	BH19(2.8-3.0)	SE214803.032	%	60 - 130%	103
	BH20(0.8-1.0)	SE214803.033	%	60 - 130%	92
	BH20(2.8-3.0)	SE214803.034	%	60 - 130%	94
	QC01	SE214803.035	%	60 - 130%	101
	QC03	SE214803.036	%	60 - 130%	110
	QC05	SE214803.037	%	60 - 130%	107
	TB01	SE214803.038	%	60 - 130%	100

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 identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d4-1,2-dichloroethane (Surrogate)	TS01	SE214803.039	%	60 - 130%	118
	TB02	SE214803.040	%	60 - 130%	113
	TS02	SE214803.041	%	60 - 130%	107
d8-toluene (Surrogate)	TP01(0.0-0.2)	SE214803.001	%	60 - 130%	98
	TP01(0.4-0.6)	SE214803.002	%	60 - 130%	91
	TP02(0.0-0.2)	SE214803.003	%	60 - 130%	89
	TP03(0.0-0.2)	SE214803.004	%	60 - 130%	130
	TP03(1.4-1.6)	SE214803.005	%	60 - 130%	105
	TP04(0.0-0.2)	SE214803.006	%	60 - 130%	120
	TP04(0.8-1.0)	SE214803.007	%	60 - 130%	95
	TP05(0.0-0.2)	SE214803.008	%	60 - 130%	108
	TP06(0.0-0.2)	SE214803.009	%	60 - 130%	101
	TP07(0.4-0.6)	SE214803.010	%	60 - 130%	96
	TP07(0.0-0.2)	SE214803.011	%	60 - 130%	85
	TP08(0.0-0.2)	SE214803.012	%	60 - 130%	86
	TP08(0.4-0.6)	SE214803.013	%	60 - 130%	85
	TP09(0.0-0.2)	SE214803.014	%	60 - 130%	88
	TP09(0.4-0.6)	SE214803.015	%	60 - 130%	84
	TP10(0.0-0.2)	SE214803.016	%	60 - 130%	87
	TP11(0.0-0.2)	SE214803.017	%	60 - 130%	87
	TP12(0.0-0.2)	SE214803.018	%	60 - 130%	88
	TP13(0.0-0.2)	SE214803.019	%	60 - 130%	88
	TP13(0.4-0.6)	SE214803.020	%	60 - 130%	80
	TP14(0.0-0.2)	SE214803.021	%	60 - 130%	114
	TP14(0.8-1.0)	SE214803.022	%	60 - 130%	106
	TP15(0.0-0.2)	SE214803.023	%	60 - 130%	104
	TP16(0.0-0.2)	SE214803.024	%	60 - 130%	92
	TP16(0.4-0.6)	SE214803.025	%	60 - 130%	107
	BH17(0.0-0.2)	SE214803.026	%	60 - 130%	99
	BH17(0.8-1.0)	SE214803.027	%	60 - 130%	105
	BH17(2.8-3.0)	SE214803.028	%	60 - 130%	99
	BH18(0.4-0.6)	SE214803.029	%	60 - 130%	101
	BH18(1.8-2.0)	SE214803.030	%	60 - 130%	102
	BH19(0.8-1.0)	SE214803.031	%	60 - 130%	96
	BH19(2.8-3.0)	SE214803.032	%	60 - 130%	100
	BH20(0.8-1.0)	SE214803.033	%	60 - 130%	90
	BH20(2.8-3.0)	SE214803.034	%	60 - 130%	92
	QC01	SE214803.035	%	60 - 130%	101
	QC03	SE214803.036	%	60 - 130%	109
	QC05	SE214803.037	%	60 - 130%	104
	TB01	SE214803.038	%	60 - 130%	105
	TS01	SE214803.039	%	60 - 130%	117
	TB02	SE214803.040	%	60 - 130%	113
	TS02	SE214803.041	%	60 - 130%	106

Volatile Petroleum Hydrocarbons in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	TP01(0.0-0.2)	SE214803.001	%	60 - 130%	105
	TP01(0.4-0.6)	SE214803.002	%	60 - 130%	98
	TP02(0.0-0.2)	SE214803.003	%	60 - 130%	96
	TP03(0.0-0.2)	SE214803.004	%	60 - 130%	108
	TP03(1.4-1.6)	SE214803.005	%	60 - 130%	93
	TP04(0.0-0.2)	SE214803.006	%	60 - 130%	107
	TP04(0.8-1.0)	SE214803.007	%	60 - 130%	99
	TP05(0.0-0.2)	SE214803.008	%	60 - 130%	108
	TP06(0.0-0.2)	SE214803.009	%	60 - 130%	103
	TP07(0.4-0.6)	SE214803.010	%	60 - 130%	102
	TP07(0.0-0.2)	SE214803.011	%	60 - 130%	76
	TP08(0.0-0.2)	SE214803.012	%	60 - 130%	73
	TP08(0.4-0.6)	SE214803.013	%	60 - 130%	73
	TP09(0.0-0.2)	SE214803.014	%	60 - 130%	73

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 identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	TP09(0.4-0.6)	SE214803.015	%	60 - 130%	69
	TP10(0.0-0.2)	SE214803.016	%	60 - 130%	71
	TP11(0.0-0.2)	SE214803.017	%	60 - 130%	73
	TP12(0.0-0.2)	SE214803.018	%	60 - 130%	72
	TP13(0.0-0.2)	SE214803.019	%	60 - 130%	72
	TP13(0.4-0.6)	SE214803.020	%	60 - 130%	66
	TP14(0.0-0.2)	SE214803.021	%	60 - 130%	109
	TP14(0.8-1.0)	SE214803.022	%	60 - 130%	105
	TP15(0.0-0.2)	SE214803.023	%	60 - 130%	103
	TP16(0.0-0.2)	SE214803.024	%	60 - 130%	101
	TP16(0.4-0.6)	SE214803.025	%	60 - 130%	106
	BH17(0.0-0.2)	SE214803.026	%	60 - 130%	99
	BH17(0.8-1.0)	SE214803.027	%	60 - 130%	102
	BH17(2.8-3.0)	SE214803.028	%	60 - 130%	101
	BH18(0.4-0.6)	SE214803.029	%	60 - 130%	102
	BH18(1.8-2.0)	SE214803.030	%	60 - 130%	101
	BH19(0.8-1.0)	SE214803.031	%	60 - 130%	98
	BH19(2.8-3.0)	SE214803.032	%	60 - 130%	104
	BH20(0.8-1.0)	SE214803.033	%	60 - 130%	93
	BH20(2.8-3.0)	SE214803.034	%	60 - 130%	90
	QC01	SE214803.035	%	60 - 130%	99
	QC03	SE214803.036	%	60 - 130%	106
	QC05	SE214803.037	%	60 - 130%	98
	TB01	SE214803.038	%	60 - 130%	101
	TB02	SE214803.040	%	60 - 130%	105
d4-1,2-dichloroethane (Surrogate)	TP01(0.0-0.2)	SE214803.001	%	60 - 130%	101
	TP01(0.4-0.6)	SE214803.002	%	60 - 130%	95
	TP02(0.0-0.2)	SE214803.003	%	60 - 130%	91
	TP03(0.0-0.2)	SE214803.004	%	60 - 130%	133 ①
	TP03(1.4-1.6)	SE214803.005	%	60 - 130%	111
	TP04(0.0-0.2)	SE214803.006	%	60 - 130%	121
	TP04(0.8-1.0)	SE214803.007	%	60 - 130%	100
	TP05(0.0-0.2)	SE214803.008	%	60 - 130%	108
	TP06(0.0-0.2)	SE214803.009	%	60 - 130%	104
	TP07(0.4-0.6)	SE214803.010	%	60 - 130%	99
	TP07(0.0-0.2)	SE214803.011	%	60 - 130%	86
	TP08(0.0-0.2)	SE214803.012	%	60 - 130%	87
	TP08(0.4-0.6)	SE214803.013	%	60 - 130%	87
	TP09(0.0-0.2)	SE214803.014	%	60 - 130%	89
	TP09(0.4-0.6)	SE214803.015	%	60 - 130%	85
	TP10(0.0-0.2)	SE214803.016	%	60 - 130%	88
	TP11(0.0-0.2)	SE214803.017	%	60 - 130%	88
	TP12(0.0-0.2)	SE214803.018	%	60 - 130%	89
	TP13(0.0-0.2)	SE214803.019	%	60 - 130%	89
	TP13(0.4-0.6)	SE214803.020	%	60 - 130%	82
	TP14(0.0-0.2)	SE214803.021	%	60 - 130%	116
	TP14(0.8-1.0)	SE214803.022	%	60 - 130%	109
	TP15(0.0-0.2)	SE214803.023	%	60 - 130%	105
	TP16(0.0-0.2)	SE214803.024	%	60 - 130%	90
	TP16(0.4-0.6)	SE214803.025	%	60 - 130%	109
	BH17(0.0-0.2)	SE214803.026	%	60 - 130%	104
	BH17(0.8-1.0)	SE214803.027	%	60 - 130%	110
	BH17(2.8-3.0)	SE214803.028	%	60 - 130%	99
	BH18(0.4-0.6)	SE214803.029	%	60 - 130%	106
	BH18(1.8-2.0)	SE214803.030	%	60 - 130%	104
	BH19(0.8-1.0)	SE214803.031	%	60 - 130%	98
	BH19(2.8-3.0)	SE214803.032	%	60 - 130%	103
	BH20(0.8-1.0)	SE214803.033	%	60 - 130%	92
	BH20(2.8-3.0)	SE214803.034	%	60 - 130%	94
	QC01	SE214803.035	%	60 - 130%	101
	QC03	SE214803.036	%	60 - 130%	110

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 identifer 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)	QC05	SE214803.037	%	60 - 130%	107
	TB01	SE214803.038	%	60 - 130%	100
	TB02	SE214803.040	%	60 - 130%	113
d8-toluene (Surrogate)	TP01(0.0-0.2)	SE214803.001	%	60 - 130%	98
	TP01(0.4-0.6)	SE214803.002	%	60 - 130%	91
	TP02(0.0-0.2)	SE214803.003	%	60 - 130%	89
	TP03(0.0-0.2)	SE214803.004	%	60 - 130%	130
	TP03(1.4-1.6)	SE214803.005	%	60 - 130%	105
	TP04(0.0-0.2)	SE214803.006	%	60 - 130%	120
	TP04(0.8-1.0)	SE214803.007	%	60 - 130%	95
	TP05(0.0-0.2)	SE214803.008	%	60 - 130%	108
	TP06(0.0-0.2)	SE214803.009	%	60 - 130%	101
	TP07(0.4-0.6)	SE214803.010	%	60 - 130%	96
	TP07(0.0-0.2)	SE214803.011	%	60 - 130%	85
	TP08(0.0-0.2)	SE214803.012	%	60 - 130%	86
	TP08(0.4-0.6)	SE214803.013	%	60 - 130%	85
	TP09(0.0-0.2)	SE214803.014	%	60 - 130%	88
	TP09(0.4-0.6)	SE214803.015	%	60 - 130%	84
	TP10(0.0-0.2)	SE214803.016	%	60 - 130%	87
	TP11(0.0-0.2)	SE214803.017	%	60 - 130%	87
	TP12(0.0-0.2)	SE214803.018	%	60 - 130%	88
	TP13(0.0-0.2)	SE214803.019	%	60 - 130%	88
	TP13(0.4-0.6)	SE214803.020	%	60 - 130%	80
	TP14(0.0-0.2)	SE214803.021	%	60 - 130%	114
	TP14(0.8-1.0)	SE214803.022	%	60 - 130%	106
	TP15(0.0-0.2)	SE214803.023	%	60 - 130%	104
	TP16(0.0-0.2)	SE214803.024	%	60 - 130%	92
	TP16(0.4-0.6)	SE214803.025	%	60 - 130%	107
	BH17(0.0-0.2)	SE214803.026	%	60 - 130%	99
	BH17(0.8-1.0)	SE214803.027	%	60 - 130%	105
	BH17(2.8-3.0)	SE214803.028	%	60 - 130%	99
	BH18(0.4-0.6)	SE214803.029	%	60 - 130%	101
	BH18(1.8-2.0)	SE214803.030	%	60 - 130%	102
	BH19(0.8-1.0)	SE214803.031	%	60 - 130%	96
	BH19(2.8-3.0)	SE214803.032	%	60 - 130%	100
	BH20(0.8-1.0)	SE214803.033	%	60 - 130%	90
	BH20(2.8-3.0)	SE214803.034	%	60 - 130%	92
	QC01	SE214803.035	%	60 - 130%	101
	QC03	SE214803.036	%	60 - 130%	109
	QC05	SE214803.037	%	60 - 130%	104
	TB01	SE214803.038	%	60 - 130%	105
	TB02	SE214803.040	%	60 - 130%	113

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

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

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

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

Sample Number	Parameter	Units	LOR	Result
LB216139.001	Exchangeable Sodium, Na	mg/kg	2	0
	Exchangeable Potassium, K	mg/kg	2	0
	Exchangeable Calcium, Ca	mg/kg	2	0
	Exchangeable Magnesium, Mg	mg/kg	2	0

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB215911.001	Mercury	mg/kg	0.05	<0.05
LB215913.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB215676.001		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	0.2	<0.2
		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)	%	-	97
LB215677.001		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	0.2	<0.2
		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)	%	-	92

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

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

OP Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB215676.001		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	92
		d14-p-terphenyl (Surrogate)	%	-	80
LB215677.001		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	75
		d14-p-terphenyl (Surrogate)	%	-	110

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

Sample Number		Parameter	Units	LOR	Result
LB215676.001		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)	%	-	95
		2-fluorobiphenyl (Surrogate)	%	-	92
		d14-p-terphenyl (Surrogate)	%	-	80
LB215677.001		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

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result
LB215677.001		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)	%	-	74
		2-fluorobiphenyl (Surrogate)	%	-	75
		d14-p-terphenyl (Surrogate)	%	-	110

PCBs in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB215676.001		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)	%	-	97
LB215677.001		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)	%	-	92

Speciated Phenols in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB215676.001		Phenol	mg/kg	0.5	<0.5
		2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5
		3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1
		2-chlorophenol	mg/kg	0.5	<0.5
		2,4-dimethylphenol	mg/kg	0.5	<0.5
		2,6-dichlorophenol	mg/kg	0.5	<0.5
		2,4-dichlorophenol	mg/kg	0.5	<0.5
		2,4,6-trichlorophenol	mg/kg	0.5	<0.5
		2-nitrophenol	mg/kg	0.5	<0.5
		4-nitrophenol	mg/kg	1	<1
		2,4,5-trichlorophenol	mg/kg	0.5	<0.5
		2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1
		Pentachlorophenol	mg/kg	0.5	<0.5
		2,4-dinitrophenol	mg/kg	2	<2
		4-chloro-3-methylphenol	mg/kg	2	<2
	Surrogates	2,4,6-Tribromophenol (Surrogate)	%	-	103
		d5-phenol (Surrogate)	%	-	90
LB215677.001		Phenol	mg/kg	0.5	<0.5
		2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5
		3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1
		2-chlorophenol	mg/kg	0.5	<0.5
		2,4-dimethylphenol	mg/kg	0.5	<0.5
		2,6-dichlorophenol	mg/kg	0.5	<0.5
		2,4-dichlorophenol	mg/kg	0.5	<0.5
		2,4,6-trichlorophenol	mg/kg	0.5	<0.5
		2-nitrophenol	mg/kg	0.5	<0.5

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

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

Speciated Phenols in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result
LB215677.001		4-nitrophenol	mg/kg	1	<1
		2,4,5-trichlorophenol	mg/kg	0.5	<0.5
		2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1
		Pentachlorophenol	mg/kg	0.5	<0.5
		2,4-dinitrophenol	mg/kg	2	<2
		4-chloro-3-methylphenol	mg/kg	2	<2
	Surrogates	2,4,6-Tribromophenol (Surrogate)	%	-	84
		d5-phenol (Surrogate)	%	-	93

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

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

Sample Number		Parameter	Units	LOR	Result
LB215901.001		Arsenic, As	mg/kg	1	<1
		Cadmium, Cd	mg/kg	0.3	<0.3
		Chromium, Cr	mg/kg	0.5	<0.5
		Copper, Cu	mg/kg	0.5	<0.5
		Nickel, Ni	mg/kg	0.5	<0.5
		Lead, Pb	mg/kg	1	<1
		Zinc, Zn	mg/kg	2	<2.0
LB215902.001		Arsenic, As	mg/kg	1	<1
		Cadmium, Cd	mg/kg	0.3	<0.3
		Chromium, Cr	mg/kg	0.5	<0.5
		Copper, Cu	mg/kg	0.5	<0.5
		Nickel, Ni	mg/kg	0.5	<0.5
		Lead, Pb	mg/kg	1	<1
		Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB215676.001		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
LB215677.001		TRH C10-C14	mg/kg	20	<20
		TRH C15-C28	mg/kg	45	<45
		TRH C29-C36	mg/kg	45	<45
		TRH C37-C40	mg/kg	100	<100
		TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB215665.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	125
		d8-toluene (Surrogate)	%	-	118
		Bromofluorobenzene (Surrogate)	%	-	102
	Totals	Total BTEX	mg/kg	0.6	<0.6
LB215666.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	108
		d8-toluene (Surrogate)	%	-	106
		Bromofluorobenzene (Surrogate)	%	-	106
	Totals	Total BTEX	mg/kg	0.6	<0.6

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

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

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB215665.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	125
LB215666.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	108

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / 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 x SDL / Mean + 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 identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214803.010	LB215911.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE214803.019	LB215911.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE214803.029	LB215913.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE214803.037	LB215913.023	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Moisture Content

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214803.010	LB215685.011	% Moisture	%w/w	1	5.0	5.6	49	12
SE214803.020	LB215685.022	% Moisture	%w/w	1	6.6	6.9	45	6
SE214803.030	LB215686.011	% Moisture	%w/w	1	5.9	5.3	48	10
SE214803.040	LB215686.021	% Moisture	%w/w	1	<1.0	<1.0	200	0

OC Pesticides in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214803.010	LB215676.014		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	0.2	<0.2	<0.2	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
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.14	30	6
SE214803.020	LB215676.027		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	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / 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 x SDL / Mean + 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 identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214803.020	LB215676.027		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
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	30	0
SE214803.030	LB215677.014		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	0.2	<0.2	<0.2	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
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.13	30	3
SE214803.037	LB215677.022		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	0.2	<0.2	<0.2	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

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / 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 x SDL / Mean + 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 identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214803.037	LB215677.022		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
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.13	30	1

OP Pesticides in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214803.010	LB215676.014		Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	12
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	2
SE214803.020	LB215676.027		Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	24
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	5
SE214803.030	LB215677.014		Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	20
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	1
SE214803.037	LB215677.022		Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / 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 x SDL / Mean + 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 identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OP Pesticides in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214803.037	LB215677.022		Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	11
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	12

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214803.010	LB215676.014		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	30	4
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	12
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	2
SE214803.020	LB215676.027		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.4	30	12
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	24
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	5
SE214803.030	LB215677.014		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / 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 x SDL / Mean + 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 identifer 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 %
SE214803.030	LB215677.014		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	30	3
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	20
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	1
SE214803.037	LB215677.022		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	30	4
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	11
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	12

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214803.010	LB215676.014		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	6

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / 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 x SDL / Mean + 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 identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PCBs in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214803.020	LB215676.027		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
SE214803.030	LB215677.014		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	3
SE214803.037	LB215677.022		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	177	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	1

pH in soil (1:5)

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214646.010	LB216153.014	pH	pH Units	0.1	8.9	8.9	31	0
SE214803.021	LB216153.025	pH	pH Units	0.1	7.1	6.9	31	3

Speciated Phenols in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214803.010	LB215676.014		Phenol	mg/kg	0.5	<0.5	<0.5	200	0
			2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	200	0
			3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	200	0
			Total Cresol	mg/kg	1.5	<1.5	<1.5	200	0
			2-chlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2-nitrophenol	mg/kg	0.5	<0.5	<0.5	200	0
			4-nitrophenol	mg/kg	1	<1	<1	200	0
			2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	200	0
			Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dinitrophenol	mg/kg	2	<2	<2	200	0
			4-chloro-3-methylphenol	mg/kg	2	<2	<2	200	0
		Surrogates	2,4,6-Tribromophenol (Surrogate)	mg/kg	-	5.2	5.5	30	6
			d5-phenol (Surrogate)	mg/kg	-	1.8	1.9	30	4
SE214803.020	LB215676.027		Phenol	mg/kg	0.5	<0.5	<0.5	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / 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 x SDL / Mean + 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 identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Speciated Phenols in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214803.020	LB215676.027		2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	200	0
			3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	200	0
			Total Cresol	mg/kg	1.5	<1.5	<1.5	200	0
			2-chlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2-nitrophenol	mg/kg	0.5	<0.5	<0.5	200	0
			4-nitrophenol	mg/kg	1	<1	<1	200	0
			2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	200	0
			Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dinitrophenol	mg/kg	2	<2	<2	200	0
			4-chloro-3-methylphenol	mg/kg	2	<2	<2	200	0
		Surrogates	2,4,6-Tribromophenol (Surrogate)	mg/kg	-	5.3	5.3	30	0
			d5-phenol (Surrogate)	mg/kg	-	1.8	1.8	30	1
SE214803.030	LB215677.014		Phenol	mg/kg	0.5	<0.5	<0.5	200	0
			2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	200	0
			3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	200	0
			Total Cresol	mg/kg	1.5	<1.5	<1.5	200	0
			2-chlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2-nitrophenol	mg/kg	0.5	<0.5	<0.5	200	0
			4-nitrophenol	mg/kg	1	<1	<1	200	0
			2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	200	0
			Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dinitrophenol	mg/kg	2	<2	<2	200	0
			4-chloro-3-methylphenol	mg/kg	2	<2	<2	200	0
		Surrogates	2,4,6-Tribromophenol (Surrogate)	mg/kg	-	4.1	4.1	30	1
			d5-phenol (Surrogate)	mg/kg	-	1.8	1.8	30	1
SE214803.037	LB215677.022		Phenol	mg/kg	0.5	<0.5	<0.5	200	0
			2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	200	0
			3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	200	0
			Total Cresol	mg/kg	1.5	<1.5	<1.5	200	0
			2-chlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2-nitrophenol	mg/kg	0.5	<0.5	<0.5	200	0
			4-nitrophenol	mg/kg	1	<1	<1	200	0
			2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	200	0
			Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dinitrophenol	mg/kg	2	<2	<2	200	0
			4-chloro-3-methylphenol	mg/kg	2	<2	<2	200	0
		Surrogates	2,4,6-Tribromophenol (Surrogate)	mg/kg	-	4.6	4.7	30	1
			d5-phenol (Surrogate)	mg/kg	-	1.9	1.9	30	2

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

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214803.010	LB215901.014	Arsenic, As	mg/kg	1	2	1	97	9
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	12	13	34	6
		Copper, Cu	mg/kg	0.5	17	18	33	8
		Nickel, Ni	mg/kg	0.5	6.4	6.9	38	7

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / 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 x SDL / Mean + 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 identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

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

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214803.010	LB215901.014		Lead, Pb	mg/kg	1	3	3	60	5
			Zinc, Zn	mg/kg	2	43	47	34	9
SE214803.019	LB215901.024		Arsenic, As	mg/kg	1	1	1	110	4
			Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
			Chromium, Cr	mg/kg	0.5	10	11	35	3
			Copper, Cu	mg/kg	0.5	11	12	34	2
			Nickel, Ni	mg/kg	0.5	4.5	4.6	41	0
			Lead, Pb	mg/kg	1	4	4	56	2
			Zinc, Zn	mg/kg	2	33	33	36	0
SE214803.029	LB215902.014		Arsenic, As	mg/kg	1	7	6	46	14
			Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
			Chromium, Cr	mg/kg	0.5	11	11	34	6
			Copper, Cu	mg/kg	0.5	15	15	33	4
			Nickel, Ni	mg/kg	0.5	7.5	7.6	37	1
			Lead, Pb	mg/kg	1	6	6	48	1
			Zinc, Zn	mg/kg	2	48	48	34	1
SE214803.037	LB215902.023		Arsenic, As	mg/kg	1	1	1	110	15
			Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
			Chromium, Cr	mg/kg	0.5	12	12	34	1
			Copper, Cu	mg/kg	0.5	12	13	34	6
			Nickel, Ni	mg/kg	0.5	5.0	4.9	40	1
			Lead, Pb	mg/kg	1	5	5	50	4
			Zinc, Zn	mg/kg	2	31	32	36	2

TRH (Total Recoverable Hydrocarbons) in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214803.010	LB215676.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE214803.020	LB215676.027		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE214803.030	LB215677.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE214803.037	LB215677.022		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

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / 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 x SDL / Mean + 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 identifer 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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214803.037	LB215677.022		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214803.010	LB215665.014	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	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.9	10.1	50	2
			d8-toluene (Surrogate)	mg/kg	-	9.6	9.7	50	2
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.2	10.3	50	1
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE214803.020	LB215665.025	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	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.2	8.7	50	6
			d8-toluene (Surrogate)	mg/kg	-	8.0	8.6	50	7
			Bromofluorobenzene (Surrogate)	mg/kg	-	6.6	7.0	50	7
		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
SE214803.030	LB215666.015	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	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.4	10.6	50	2
			d8-toluene (Surrogate)	mg/kg	-	10.2	10.3	50	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.1	10.1	50	0
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE214803.037	LB215666.031	Monocyclic	Benzene	mg/kg	0.1	<0.1	0	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	0.0022502291	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	0.0004039364	200	0
			m/p-xylene	mg/kg	0.2	<0.2	0.0012493790	200	0
			o-xylene	mg/kg	0.1	<0.1	0.0006264227	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	0.0007715285	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.7	10.979791278	50	3
			d8-toluene (Surrogate)	mg/kg	-	10.4	11.2035168248	50	7
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.8	10.4173345637	50	6
		Totals	Total Xylenes	mg/kg	0.3	<0.3	0.0018758018	200	0
			Total BTEX	mg/kg	0.6	<0.6	0	200	0

Volatile Petroleum Hydrocarbons in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214803.010	LB215665.014		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.9	10.1	30	2
			d8-toluene (Surrogate)	mg/kg	-	9.6	9.7	30	2
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.2	10.3	30	1
		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

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / 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 x SDL / Mean + 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 identifer 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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214803.020	LB215665.025		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.2	8.7	30	6
			d8-toluene (Surrogate)	mg/kg	-	8.0	8.6	30	7
			Bromofluorobenzene (Surrogate)	mg/kg	-	6.6	7.0	30	7
		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
SE214803.030	LB215666.015		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.4	10.6	30	2
			d8-toluene (Surrogate)	mg/kg	-	10.2	10.3	30	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.1	10.1	30	0
		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
SE214803.037	LB215666.031		TRH C6-C10	mg/kg	25	<25	0	200	0
			TRH C6-C9	mg/kg	20	<20	0	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.7	10.9797912786	30	3
			d8-toluene (Surrogate)	mg/kg	-	10.4	11.2035168248	30	7
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.8	10.4173345637	30	6
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	0	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	0	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 %
LB216139.002		Exchangeable Sodium, Na	meq/100g	0.01	0.19	0.194	80 - 120	100
		Exchangeable Potassium, K	meq/100g	0.01	0.62	0.63	80 - 120	98
		Exchangeable Calcium, Ca	meq/100g	0.01	6.3	6.3	80 - 120	100
		Exchangeable Magnesium, Mg	meq/100g	0.02	1.1	1.11	80 - 120	98

Mercury in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215911.002		Mercury	mg/kg	0.05	0.20	0.2	70 - 130	102
LB215913.002		Mercury	mg/kg	0.05	0.22	0.2	70 - 130	110

OC Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215676.002		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	91
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	93
		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	93
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	94
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	94
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	85
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	40 - 130	97
LB215677.002		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	96
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	96
		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	95
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	96
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	96
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	85
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.15	40 - 130	96

OP Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215676.002		Dichlorvos	mg/kg	0.5	1.5	2	60 - 140	73
		Diazinon (Dimpylate)	mg/kg	0.5	1.9	2	60 - 140	93
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.7	2	60 - 140	84
		Ethion	mg/kg	0.2	1.5	2	60 - 140	74
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	91
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	78
LB215677.002		Dichlorvos	mg/kg	0.5	1.5	2	60 - 140	75
		Diazinon (Dimpylate)	mg/kg	0.5	1.6	2	60 - 140	78
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.6	2	60 - 140	79
		Ethion	mg/kg	0.2	1.4	2	60 - 140	71
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	85
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	75

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215676.002		Naphthalene	mg/kg	0.1	4.2	4	60 - 140	106
		Acenaphthylene	mg/kg	0.1	4.4	4	60 - 140	110
		Acenaphthene	mg/kg	0.1	4.4	4	60 - 140	109
		Phenanthrene	mg/kg	0.1	3.3	4	60 - 140	83
		Anthracene	mg/kg	0.1	4.8	4	60 - 140	119
		Fluoranthene	mg/kg	0.1	4.4	4	60 - 140	110
		Pyrene	mg/kg	0.1	4.3	4	60 - 140	108
		Benzo(a)pyrene	mg/kg	0.1	3.9	4	60 - 140	98
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	91
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	91
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	78
LB215677.002		Naphthalene	mg/kg	0.1	4.1	4	60 - 140	102
		Acenaphthylene	mg/kg	0.1	4.4	4	60 - 140	109
		Acenaphthene	mg/kg	0.1	4.5	4	60 - 140	112
		Phenanthrene	mg/kg	0.1	3.3	4	60 - 140	81
		Anthracene	mg/kg	0.1	4.7	4	60 - 140	117
		Fluoranthene	mg/kg	0.1	4.3	4	60 - 140	108
		Pyrene	mg/kg	0.1	4.2	4	60 - 140	106

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 %
LB215677.002		Benzo(a)pyrene	mg/kg	0.1	3.7	4	60 - 140	91
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	80
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	85
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	75

PCBs in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215676.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	101
LB215677.002	Arochlor 1260	mg/kg	0.2	0.5	0.4	60 - 140	115

pH in soil (1:5)

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB216153.003	pH	pH Units	0.1	7.4	7.415	98 - 102	100

Speciated Phenols in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215676.002		Phenol	mg/kg	0.5	0.8	1	70 - 130	84
		2,4-dichlorophenol	mg/kg	0.5	0.8	1	70 - 130	76
		2,4,6-trichlorophenol	mg/kg	0.5	0.8	1	70 - 130	84
		Pentachlorophenol	mg/kg	0.5	0.8	1	70 - 130	77
	Surrogates	2,4,6-Tribromophenol (Surrogate)	mg/kg	-	5.2	5	40 - 130	103
		d5-phenol (Surrogate)	mg/kg	-	1.8	2	40 - 130	90
LB215677.002		Phenol	mg/kg	0.5	1.0	1	70 - 130	103
		2,4-dichlorophenol	mg/kg	0.5	1.0	1	70 - 130	99
		2,4,6-trichlorophenol	mg/kg	0.5	0.8	1	70 - 130	82
		Pentachlorophenol	mg/kg	0.5	0.8	1	70 - 130	77
	Surrogates	2,4,6-Tribromophenol (Surrogate)	mg/kg	-	4.2	5	40 - 130	84
		d5-phenol (Surrogate)	mg/kg	-	1.8	2	40 - 130	92

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

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215901.002	Arsenic, As	mg/kg	1	360	318.22	80 - 120	114
	Cadmium, Cd	mg/kg	0.3	4.4	5.41	80 - 120	82
	Chromium, Cr	mg/kg	0.5	42	38.31	80 - 120	109
	Copper, Cu	mg/kg	0.5	320	290	80 - 120	112
	Nickel, Ni	mg/kg	0.5	200	187	80 - 120	105
	Lead, Pb	mg/kg	1	95	89.9	80 - 120	105
	Zinc, Zn	mg/kg	2	290	273	80 - 120	106
LB215902.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	110
	Cadmium, Cd	mg/kg	0.3	4.7	5.41	80 - 120	87
	Chromium, Cr	mg/kg	0.5	36	38.31	80 - 120	94
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	108
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	100
	Lead, Pb	mg/kg	1	93	89.9	80 - 120	103
	Zinc, Zn	mg/kg	2	280	273	80 - 120	101

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215676.002		TRH C10-C14	mg/kg	20	39	40	60 - 140	98
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	80
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	73
	TRH F Bands	TRH >C10-C16	mg/kg	25	37	40	60 - 140	93
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	75
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	75
LB215677.002		TRH C10-C14	mg/kg	20	37	40	60 - 140	93
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	90
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	78
	TRH F Bands	TRH >C10-C16	mg/kg	25	38	40	60 - 140	95
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	83
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	80

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 — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215665.002	Monocyclic Aromatic	Benzene	mg/kg	0.1	4.5	5	60 - 140	90
		Toluene	mg/kg	0.1	4.6	5	60 - 140	93
		Ethylbenzene	mg/kg	0.1	4.9	5	60 - 140	97
		m/p-xylene	mg/kg	0.2	9.8	10	60 - 140	98
		o-xylene	mg/kg	0.1	4.9	5	60 - 140	99
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.2	10	70 - 130	102
		d8-toluene (Surrogate)	mg/kg	-	9.8	10	70 - 130	98
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.9	10	70 - 130	99
LB215666.002	Monocyclic Aromatic	Benzene	mg/kg	0.1	6.0	5	60 - 140	120
		Toluene	mg/kg	0.1	5.1	5	60 - 140	102
		Ethylbenzene	mg/kg	0.1	5.2	5	60 - 140	104
		m/p-xylene	mg/kg	0.2	10	10	60 - 140	104
		o-xylene	mg/kg	0.1	5.3	5	60 - 140	105
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.9	10	70 - 130	109
		d8-toluene (Surrogate)	mg/kg	-	10.6	10	70 - 130	106
		Bromofluorobenzene (Surrogate)	mg/kg	-	10.5	10	70 - 130	105

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215665.002		TRH C6-C10	mg/kg	25	110	92.5	60 - 140	118
		TRH C6-C9	mg/kg	20	97	80	60 - 140	121
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.2	10	70 - 130	102
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.9	10	70 - 130	99
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	80	62.5	60 - 140	129
LB215666.002		TRH C6-C10	mg/kg	25	110	92.5	60 - 140	118
		TRH C6-C9	mg/kg	20	97	80	60 - 140	121
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.9	10	70 - 130	109
		Bromofluorobenzene (Surrogate)	mg/kg	-	10.5	10	70 - 130	105
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	77	62.5	60 - 140	124

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

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

Mercury in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214803.001	LB215911.004	Mercury	mg/kg	0.05	0.18	<0.05	0.2	86
SE214803.020	LB215913.004	Mercury	mg/kg	0.05	0.19	<0.05	0.2	91

OC Pesticides in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214803.001	LB215676.004		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane	mg/kg	0.1	<0.1	<0.1	-	-
			Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	99
			Aldrin	mg/kg	0.1	0.2	<0.1	0.2	101
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	103
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Dieldrin	mg/kg	0.2	0.2	<0.2	0.2	101
			Endrin	mg/kg	0.2	0.2	<0.2	0.2	100
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	-	-
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	91
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	-	-
			Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
			Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			Total CLP OC Pesticides	mg/kg	1	1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	-	101
SE214803.021	LB215677.004		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane	mg/kg	0.1	<0.1	<0.1	-	-
			Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	105
			Aldrin	mg/kg	0.1	0.2	<0.1	0.2	103
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	93
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Dieldrin	mg/kg	0.2	0.2	<0.2	0.2	104
			Endrin	mg/kg	0.2	0.2	<0.2	0.2	106
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	-	-
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	98
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	-	-
			Isodrin	mg/kg	0.1	<0.1	<0.1	-	-

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 identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil (continued)

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214803.021	LB215677.004		Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			Total CLP OC Pesticides	mg/kg	1	1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.14	-	97

OP Pesticides in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214803.001	LB215676.004		Dichlorvos	mg/kg	0.5	1.2	<0.5	2	60
			Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
			Diazinon (Dimpylate)	mg/kg	0.5	1.9	<0.5	2	92
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
			Malathion	mg/kg	0.2	<0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.6	<0.2	2	80
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
			Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
			Ethion	mg/kg	0.2	1.6	<0.2	2	79
			Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
			Total OP Pesticides*	mg/kg	1.7	6.3	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	87
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	-	71
SE214803.021	LB215677.004		Dichlorvos	mg/kg	0.5	1.3	<0.5	2	64
			Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
			Diazinon (Dimpylate)	mg/kg	0.5	1.7	<0.5	2	84
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
			Malathion	mg/kg	0.2	<0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.4	<0.2	2	69
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
			Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
			Ethion	mg/kg	0.2	1.6	<0.2	2	79
			Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
			Total OP Pesticides*	mg/kg	1.7	6.0	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	87
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	85

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214803.001	LB215676.004		Naphthalene	mg/kg	0.1	4.3	<0.1	4	107
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			Acenaphthylene	mg/kg	0.1	4.4	<0.1	4	111
			Acenaphthene	mg/kg	0.1	4.4	<0.1	4	110
			Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
			Phenanthrene	mg/kg	0.1	3.5	<0.1	4	86
			Anthracene	mg/kg	0.1	4.7	<0.1	4	118
			Fluoranthene	mg/kg	0.1	4.5	<0.1	4	113
			Pyrene	mg/kg	0.1	4.4	<0.1	4	110
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	4.2	<0.1	4	104
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	4.2	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	4.3	<0.3	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	4.3	<0.2	-	-
			Total PAH (18)	mg/kg	0.8	34	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	-	85
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	87
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	-	71

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 identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214803.021	LB215677.004		Naphthalene	mg/kg	0.1	4.2	<0.1	4	106
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			Acenaphthylene	mg/kg	0.1	4.3	<0.1	4	108
			Acenaphthene	mg/kg	0.1	4.4	<0.1	4	109
			Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
			Phenanthrene	mg/kg	0.1	4.1	<0.1	4	102
			Anthracene	mg/kg	0.1	4.9	<0.1	4	121
			Fluoranthene	mg/kg	0.1	3.5	<0.1	4	87
			Pyrene	mg/kg	0.1	4.7	<0.1	4	116
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	4.1	<0.1	4	103
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	4.1	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	4.3	<0.3	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	4.2	<0.2	-	-
			Total PAH (18)	mg/kg	0.8	34	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	-	88
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	87
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	85

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214803.001	LB215676.004		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1260	mg/kg	0.2	0.5	<0.2	0.4	127
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	-	-
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	-	101
SE214803.021	LB215677.004		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1260	mg/kg	0.2	0.5	<0.2	0.4	99
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	-	-
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	-	97

Speciated Phenols in Soil — Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214803.001	LB215676.004	Phenol	mg/kg	0.5	0.8	<0.5	1	77
		2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	-	-
		3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	-	-
		Total Cresol	mg/kg	1.5	<1.5	<1.5	-	-
		2-chlorophenol	mg/kg	0.5	<0.5	<0.5	-	-
		2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	-	-
		2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	-	-
		2,4-dichlorophenol	mg/kg	0.5	0.7	<0.5	1	72
		2,4,6-trichlorophenol	mg/kg	0.5	0.8	<0.5	1	83

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 identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Speciated Phenols in Soil (continued)

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214803.001	LB215676.004		2-nitrophenol	mg/kg	0.5	<0.5	<0.5	-	-
			4-nitrophenol	mg/kg	1	<1	<1	-	-
			2,4,5-trichlorophenol	mg/kg	0.5	0.8	<0.5	-	-
			2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	-	-
			Pentachlorophenol	mg/kg	0.5	0.8	<0.5	1	76
			2,4-dinitrophenol	mg/kg	2	<2	<2	-	-
			4-chloro-3-methylphenol	mg/kg	2	<2	<2	-	-
		Surrogates	2,4,6-Tribromophenol (Surrogate)	mg/kg	-	5.0	5.0	-	101
			d5-phenol (Surrogate)	mg/kg	-	1.6	1.5	-	79
SE214803.021	LB215677.004		Phenol	mg/kg	0.5	1.0	<0.5	1	101
			2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	-	-
			3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	-	-
			Total Cresol	mg/kg	1.5	<1.5	<1.5	-	-
			2-chlorophenol	mg/kg	0.5	<0.5	<0.5	-	-
			2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	-	-
			2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	-	-
			2,4-dichlorophenol	mg/kg	0.5	1.1	<0.5	1	102
			2,4,6-trichlorophenol	mg/kg	0.5	0.9	<0.5	1	84
			2-nitrophenol	mg/kg	0.5	<0.5	<0.5	-	-
			4-nitrophenol	mg/kg	1	<1	<1	-	-
			2,4,5-trichlorophenol	mg/kg	0.5	0.7	<0.5	-	-
			2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	-	-
			Pentachlorophenol	mg/kg	0.5	0.7	<0.5	1	72
			2,4-dinitrophenol	mg/kg	2	<2	<2	-	-
			4-chloro-3-methylphenol	mg/kg	2	<2	<2	-	-
		Surrogates	2,4,6-Tribromophenol (Surrogate)	mg/kg	-	4.3	4.3	-	86
			d5-phenol (Surrogate)	mg/kg	-	1.8	1.7	-	90

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

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214803.001	LB215901.004	Arsenic, As	mg/kg	1	44	1	50	87
		Cadmium, Cd	mg/kg	0.3	42	<0.3	50	85
		Chromium, Cr	mg/kg	0.5	54	9.3	50	89
		Copper, Cu	mg/kg	0.5	52	6.5	50	91
		Nickel, Ni	mg/kg	0.5	46	4.8	50	83
		Lead, Pb	mg/kg	1	46	6	50	81
		Zinc, Zn	mg/kg	2	68	25	50	86
SE214803.020	LB215902.004	Arsenic, As	mg/kg	1	47	1	50	92
		Cadmium, Cd	mg/kg	0.3	46	<0.3	50	93
		Chromium, Cr	mg/kg	0.5	59	13	50	92
		Copper, Cu	mg/kg	0.5	58	11	50	95
		Nickel, Ni	mg/kg	0.5	51	5.6	50	91
		Lead, Pb	mg/kg	1	49	5	50	90
		Zinc, Zn	mg/kg	2	78	36	50	84

TRH (Total Recoverable Hydrocarbons) in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214803.001	LB215676.004		TRH C10-C14	mg/kg	20	34	<20	40	85
			TRH C15-C28	mg/kg	45	<45	<45	40	70
			TRH C29-C36	mg/kg	45	<45	<45	40	68
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	<110	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	32	<25	40	80
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	28	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	70
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-
SE214803.021	LB215677.004		TRH C10-C14	mg/kg	20	49	<20	40	88
			TRH C15-C28	mg/kg	45	98	70	40	70
			TRH C29-C36	mg/kg	45	59	<45	40	70
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	210	<110	-	-

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 identifer 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	Result	Original	Spike	Recovery%
SE214803.021	LB215677.004		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	65	32	40	83
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	61	32	-	-
			TRH >C16-C34 (F3)	mg/kg	90	99	<90	40	168 ⑨
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214803.001	LB215665.004	Monocyclic	Benzene	mg/kg	0.1	4.4	<0.1	5	87
		Aromatic	Toluene	mg/kg	0.1	4.5	<0.1	5	90
			Ethylbenzene	mg/kg	0.1	4.8	<0.1	5	95
			m/p-xylene	mg/kg	0.2	9.6	<0.2	10	96
			o-xylene	mg/kg	0.1	4.8	<0.1	5	96
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.6	10.1	10	106
			d8-toluene (Surrogate)	mg/kg	-	10.2	9.8	10	102
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.4	10.5	10	104
		Totals	Total Xylenes	mg/kg	0.3	14	<0.3	-	-
			Total BTEX	mg/kg	0.6	28	<0.6	-	-
SE214803.021	LB215666.004	Monocyclic	Benzene	mg/kg	0.1	5.8	<0.1	5	117
		Aromatic	Toluene	mg/kg	0.1	5.3	<0.1	5	106
			Ethylbenzene	mg/kg	0.1	5.3	<0.1	5	105
			m/p-xylene	mg/kg	0.2	11	<0.2	10	106
			o-xylene	mg/kg	0.1	5.4	<0.1	5	107
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	12.2	11.6	10	122
			d8-toluene (Surrogate)	mg/kg	-	11.9	11.4	10	119
			Bromofluorobenzene (Surrogate)	mg/kg	-	11.3	10.9	10	113
		Totals	Total Xylenes	mg/kg	0.3	16	<0.3	-	-
			Total BTEX	mg/kg	0.6	32	<0.6	-	-

Volatile Petroleum Hydrocarbons in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214803.001	LB215665.004		TRH C6-C10	mg/kg	25	67	<25	92.5	72
			TRH C6-C9	mg/kg	20	59	<20	80	73
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.6	10.1	10	106
			d8-toluene (Surrogate)	mg/kg	-	10.2	9.8	10	102
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.4	10.5	-	104
		VPH F	Benzene (F0)	mg/kg	0.1	4.4	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	39	<25	62.5	62
SE214803.021	LB215666.004		TRH C6-C10	mg/kg	25	72	<25	92.5	77
			TRH C6-C9	mg/kg	20	62	<20	80	76
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	12.2	11.6	10	122
			d8-toluene (Surrogate)	mg/kg	-	11.9	11.4	10	119
			Bromofluorobenzene (Surrogate)	mg/kg	-	11.3	10.9	-	113
		VPH F	Benzene (F0)	mg/kg	0.1	5.8	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	40	<25	62.5	62

MATRIX SPIKE DUPLICATES

SE214803 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / 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 x SDL / Mean + 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 identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

QC Sample	Sample Number	Parameter	Units	LOR

Samples analysed as received.

Solid samples expressed on a dry weight basis.

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

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	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 relevant report comments for further information.

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Robson ENVIRONMENTAL

Occupational Hygiene Health Safety & Environmental Consulting

CHAIN OF CUSTODY FORM

Job No. : 11213

From: Robson Environmental Pty Ltd
PO Box 112 Fyshwick ACT 2609
140 Gladstone Street
Fyshwick ACT 2609
ABN: 55 008 660 900

Contact: Ben Kendon
Phone: (02) 6239 5656
Mobile:
Fax: (02) 6239 5669
Email: results@robsonenviro.com.au
andrey@robsonenviro.com.au

Client Information: Spectrum Property and Projects

Site Address: 6339 Kosciuszko Rd. Jindabyne NSW 2627

Sampled by: AS/AG

Job Name: DSI

ESDAT Files Required **YES**

Required Turnaround Time:
24hr [ ] 48hr [ ] 5-7 days [X]
36hr [ ] 72hr [ ]

To:
Envirolab
12 Ashley Street
Chatswood NSW 2607

Contact:Jacinta
Phone: (02) 9910 6200
Mobile:
Fax: (02) 9910 6201
Email:
ABN: 91 004 591 664

Analysis Required

Lab ID	Sample ID	Sample Depth	Date Sampled	Sample Location	No. of Sample Jars	Sample Type	Sample Preservation (Ice, Acid, Ambient)	Combo 8										Comments
1	QC-02		8/12/2020	QA/QC	1	Soil	Ice	X										
2	QC-04		8/12/2020	QA/QC	1	Soil	Ice	X										
3	QC-06		9/12/2020	QA/QC	1	Soil	Ice	X										

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

ENVIROLAB GROUP

Job No: 258031

Date Received: 11/12/2020
Time Received: 1040
Received By: TS
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Relinquished by:	A.Sarlija	Date: 20/10/2020	Time: 2pm	Received by: Ess (Ray	Time: 11/12/2020	
Relinquished by:		Date:	Time:	Received by:	Time:	
Relinquished by:		Date:	Time:	Received by:	Time:	

Combo 1: TRH, BTEX & Pb
Combo 5: TRH, BTEX, PAH, OC, PCB & 8 HM
Combo 7: TRH, BTEX, PAH, Phenols, OC, PCB & 8 Heavy Metals
Combo 7a: TRH, BTEX, PAH, Phenols, OC, PCB & 8 HM, Asbestos WA
Combo 8: TRH, BTEX, PAH, Phenols, OC, OP, PCB & 8 Heavy Metals

Envirolab Services Pty Ltd
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12 Ashley St Chatswood NSW 2067
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customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Robson Environmental Pty Ltd
Attention	Andrey

Sample Login Details

Your reference	11213, Jindabyne
Envirolab Reference	258031
Date Sample Received	11/12/2020
Date Instructions Received	11/12/2020
Date Results Expected to be Reported	18/12/2020

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	3 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	11.2
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

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@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg
QC-02	✓	✓	✓	✓	✓	✓	✓	✓
QC-04	✓	✓	✓	✓	✓	✓	✓	✓
QC-06	✓	✓	✓	✓	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

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CERTIFICATE OF ANALYSIS 258031

Client Details

Client	Robson Environmental Pty Ltd
Attention	Andrey
Address	PO Box 112, Fyshwick, ACT, 2609

Sample Details

Your Reference	**11213, Jindabyne**
Number of Samples	3 Soil
Date samples received	11/12/2020
Date completed instructions received	11/12/2020

Analysis Details

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

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

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

Report Details

Date results requested by	18/12/2020
Date of Issue	15/12/2020

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vTRH(C6-C10)/BTEXN in Soil				
Our Reference		258031-1	258031-2	258031-3
Your Reference	UNITS	QC-02	QC-04	QC-06
Date Sampled		08/12/2020	08/12/2020	08/12/2020
Type of sample		Soil	Soil	Soil
Date extracted	-	14/12/2020	14/12/2020	14/12/2020
Date analysed	-	15/12/2020	15/12/2020	15/12/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	105	104	108

svTRH (C10-C40) in Soil				
Our Reference		258031-1	258031-2	258031-3
Your Reference	UNITS	QC-02	QC-04	QC-06
Date Sampled		08/12/2020	08/12/2020	08/12/2020
Type of sample		Soil	Soil	Soil
Date extracted	-	14/12/2020	14/12/2020	14/12/2020
Date analysed	-	14/12/2020	14/12/2020	14/12/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50
Surrogate o-Terphenyl	%	94	92	95

PAHs in Soil				
Our Reference		258031-1	258031-2	258031-3
Your Reference	UNITS	QC-02	QC-04	QC-06
Date Sampled		08/12/2020	08/12/2020	08/12/2020
Type of sample		Soil	Soil	Soil
Date extracted	-	14/12/2020	14/12/2020	14/12/2020
Date analysed	-	14/12/2020	14/12/2020	14/12/2020
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	<0.1	<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+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.06	<0.05	<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
Total +ve PAH's	mg/kg	0.06	<0.05	<0.05
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
Surrogate p-Terphenyl-d14	%	118	77	68

Organochlorine Pesticides in soil				
Our Reference		258031-1	258031-2	258031-3
Your Reference	UNITS	QC-02	QC-04	QC-06
Date Sampled		08/12/2020	08/12/2020	08/12/2020
Type of sample		Soil	Soil	Soil
Date extracted	-	14/12/2020	14/12/2020	14/12/2020
Date analysed	-	14/12/2020	14/12/2020	14/12/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	91	94

Organophosphorus Pesticides in Soil				
Our Reference		258031-1	258031-2	258031-3
Your Reference	UNITS	QC-02	QC-04	QC-06
Date Sampled		08/12/2020	08/12/2020	08/12/2020
Type of sample		Soil	Soil	Soil
Date extracted	-	14/12/2020	14/12/2020	14/12/2020
Date analysed	-	14/12/2020	14/12/2020	14/12/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	91	94

PCBs in Soil				
Our Reference		258031-1	258031-2	258031-3
Your Reference	UNITS	QC-02	QC-04	QC-06
Date Sampled		08/12/2020	08/12/2020	08/12/2020
Type of sample		Soil	Soil	Soil
Date extracted	-	14/12/2020	14/12/2020	14/12/2020
Date analysed	-	14/12/2020	14/12/2020	14/12/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	91	94

Acid Extractable metals in soil				
Our Reference		258031-1	258031-2	258031-3
Your Reference	UNITS	QC-02	QC-04	QC-06
Date Sampled		08/12/2020	08/12/2020	08/12/2020
Type of sample		Soil	Soil	Soil
Date prepared	-	14/12/2020	14/12/2020	14/12/2020
Date analysed	-	14/12/2020	14/12/2020	14/12/2020
Arsenic	mg/kg	6	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4
Chromium	mg/kg	13	15	14
Copper	mg/kg	20	11	13
Lead	mg/kg	6	7	4
Mercury	mg/kg	<0.1	<0.1	<0.1
Nickel	mg/kg	9	6	5
Zinc	mg/kg	45	27	25

Misc Soil - Inorg				
Our Reference		258031-1	258031-2	258031-3
Your Reference	UNITS	QC-02	QC-04	QC-06
Date Sampled		08/12/2020	08/12/2020	08/12/2020
Type of sample		Soil	Soil	Soil
Date prepared	-	14/12/2020	14/12/2020	14/12/2020
Date analysed	-	14/12/2020	14/12/2020	14/12/2020
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5

Moisture				
Our Reference		258031-1	258031-2	258031-3
Your Reference	UNITS	QC-02	QC-04	QC-06
Date Sampled		08/12/2020	08/12/2020	08/12/2020
Type of sample		Soil	Soil	Soil
Date prepared	-	14/12/2020	14/12/2020	14/12/2020
Date analysed	-	15/12/2020	15/12/2020	15/12/2020
Moisture	%	7.4	7.1	6.9

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	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-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022	Determination of VOCs sampled onto coconut shell charcoal sorbent tubes, that can be desorbed using carbon disulphide, and analysed by GC-MS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ 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. 'EQ 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. 'EQ 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-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			14/12/2020	1	14/12/2020	14/12/2020		14/12/2020	[NT]
Date analysed	-			15/12/2020	1	15/12/2020	15/12/2020		15/12/2020	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	108	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	108	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	107	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	104	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	110	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	109	[NT]
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	108	[NT]
naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	107	1	105	110	5	108	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			14/12/2020	1	14/12/2020	14/12/2020		14/12/2020	[NT]
Date analysed	-			14/12/2020	1	14/12/2020	14/12/2020		14/12/2020	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	128	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	98	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	<100	<100	0	77	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	128	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	<100	<100	0	98	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	<100	0	77	[NT]
Surrogate o-Terphenyl	%		Org-020	99	1	94	91	3	97	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			14/12/2020	1	14/12/2020	14/12/2020		14/12/2020	[NT]
Date analysed	-			14/12/2020	1	14/12/2020	14/12/2020		14/12/2020	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	84	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	101	[NT]
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	89	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	95	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	124	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	0.06	<0.05	18	90	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	67	1	118	81	37	74	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			14/12/2020	1	14/12/2020	14/12/2020		14/12/2020	[NT]
Date analysed	-			14/12/2020	1	14/12/2020	14/12/2020		14/12/2020	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	87	[NT]
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	85	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	107	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	74	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	91	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	99	[NT]
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	118	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	94	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	76	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	94	1	90	93	3	91	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			14/12/2020	1	14/12/2020	14/12/2020		14/12/2020	[NT]
Date analysed	-			14/12/2020	1	14/12/2020	14/12/2020		14/12/2020	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	102	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	82	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	87	[NT]
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	108	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	117	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	108	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	97	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	94	1	90	93	3	91	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			14/12/2020	1	14/12/2020	14/12/2020		14/12/2020	[NT]
Date analysed	-			14/12/2020	1	14/12/2020	14/12/2020		14/12/2020	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	80	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	94	1	90	93	3	91	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date prepared	-			14/12/2020	1	14/12/2020	14/12/2020		14/12/2020	[NT]
Date analysed	-			14/12/2020	1	14/12/2020	14/12/2020		14/12/2020	[NT]
Arsenic	mg/kg	4	Metals-020	<4	1	6	6	0	100	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	96	[NT]
Chromium	mg/kg	1	Metals-020	<1	1	13	12	8	99	[NT]
Copper	mg/kg	1	Metals-020	<1	1	20	17	16	99	[NT]
Lead	mg/kg	1	Metals-020	<1	1	6	5	18	97	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	102	[NT]
Nickel	mg/kg	1	Metals-020	<1	1	9	8	12	99	[NT]
Zinc	mg/kg	1	Metals-020	<1	1	45	39	14	99	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date prepared	-			14/12/2020	1	14/12/2020	14/12/2020		14/12/2020	[NT]
Date analysed	-			14/12/2020	1	14/12/2020	14/12/2020		14/12/2020	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	101	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

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.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Appendix F

Upper Confidence Limit Results TRH F3 (C_{16}-C_{34})

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Uncensored Full Data Sets**											
2												
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.114/01/2021 2:48:30 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	**C16-C34 (F3)**											
12												
13	**General Statistics**											
14	Total Number of Observations					40	Number of Distinct Observations					3
15							Number of Missing Observations					0
16	Minimum					90	Mean					97.5
17	Maximum					360	Median					90
18	SD					42.65	Std. Error of Mean					6.744
19	Coefficient of Variation					0.437	Skewness					6.286
20												
21	**Normal GOF Test**											
22	Shapiro Wilk Test Statistic					0.184	**Shapiro Wilk GOF Test**					
23	5% Shapiro Wilk Critical Value					0.94	Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic					0.47	**Lilliefors GOF Test**					
25	5% Lilliefors Critical Value					0.139	Data Not Normal at 5% Significance Level					
26	**Data Not Normal at 5% Significance Level**											
27												
28	**Assuming Normal Distribution**											
29	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
30	95% Student's-t UCL					108.9	95% Adjusted-CLT UCL (Chen-1995)					115.8
31							95% Modified-t UCL (Johnson-1978)					110
32												
33	**Gamma GOF Test**											
34	A-D Test Statistic					13.67	**Anderson-Darling Gamma GOF Test**					
35	5% A-D Critical Value					0.748	Data Not Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic					0.479	**Kolmogorov-Smirnov Gamma GOF Test**					
37	5% K-S Critical Value					0.139	Data Not Gamma Distributed at 5% Significance Level					
38	**Data Not Gamma Distributed at 5% Significance Level**											
39												
40	**Gamma Statistics**											
41	k hat (MLE)					13.5	k star (bias corrected MLE)					12.51
42	Theta hat (MLE)					7.22	Theta star (bias corrected MLE)					7.795
43	nu hat (MLE)					1080	nu star (bias corrected)					1001
44	MLE Mean (bias corrected)					97.5	MLE Sd (bias corrected)					27.57
45							Approximate Chi Square Value (0.05)					928.2
46	Adjusted Level of Significance					0.044	Adjusted Chi Square Value					925.6
47												
48	**Assuming Gamma Distribution**											
49	95% Approximate Gamma UCL (use when n>=50))					105.1	95% Adjusted Gamma UCL (use when n<50)					105.4
50												
51	**Lognormal GOF Test**											
52	Shapiro Wilk Test Statistic					0.208	**Shapiro Wilk Lognormal GOF Test**					
53	5% Shapiro Wilk Critical Value					0.94	Data Not Lognormal at 5% Significance Level					
54	Lilliefors Test Statistic					0.477	**Lilliefors Lognormal GOF Test**					

	A	B	C	D	E	F	G	H	I	J	K	L
55					5% Lilliefors Critical Value	0.139	Data Not Lognormal at 5% Significance Level					
56	**Data Not Lognormal at 5% Significance Level**											
57												
58	**Lognormal Statistics**											
59					Minimum of Logged Data	4.5				Mean of logged Data		4.542
60					Maximum of Logged Data	5.886				SD of logged Data		0.22
61												
62	**Assuming Lognormal Distribution**											
63					95% H-UCL	102.3				90% Chebyshev (MVUE) UCL		106.3
64					95% Chebyshev (MVUE) UCL	110.8				97.5% Chebyshev (MVUE) UCL		117.2
65					99% Chebyshev (MVUE) UCL	129.7						
66												
67	**Nonparametric Distribution Free UCL Statistics**											
68	**Data do not follow a Discernible Distribution (0.05)**											
69												
70	**Nonparametric Distribution Free UCLs**											
71					95% CLT UCL	108.6				95% Jackknife UCL		108.9
72					95% Standard Bootstrap UCL	N/A				95% Bootstrap-t UCL		N/A
73					95% Hall's Bootstrap UCL	N/A				95% Percentile Bootstrap UCL		N/A
74					95% BCA Bootstrap UCL	N/A						
75					90% Chebyshev(Mean, Sd) UCL	117.7				95% Chebyshev(Mean, Sd) UCL		126.9
76					97.5% Chebyshev(Mean, Sd) UCL	139.6				99% Chebyshev(Mean, Sd) UCL		164.6
77												
78	**Suggested UCL to Use**											
79					95% Student's-t UCL	108.9				or 95% Modified-t UCL		110
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	Recommendations are based upon data size, data distribution, and skewness.											
83	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
84	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
85												